

SHORT COMMUNICATION

Lectotypifications of five Australian species of floating-leaved *Potamogeton* (Potamogetonaceae)

Sabine E. Papassotiriou

The following lectotypifications are required for a forthcoming *Flora of Australia* treatment.

Potamogeton australiensis A. Bennett, *Journal of Botany* 48: 149 (1910).

Type: Merrigang [Merrigig] Creek, near Barwon River, Vic, *J.B. Wilson s.n.*, 1883 (BM, specimen reference no. 2500, **lectotype, selected here**), labelled *P. coloratus* var. *jamaicensis* Griseb.

Remaining syntypes: Merrigang [Merrigig] Creek, near Barwon River, Vic, *J.B. Wilson s.n.*, 1883 (NSW 3755), labelled *P. coloratus* var. *jamaicensis* Griseb.; New South Wales, *J.H. Maiden s.n.*, 25.7.1898 (NSW 3809), labelled *P. coloratus* var. *jamaicensis* Griseb.

Notes: In his description of *P. australiensis*, Arthur Bennett stated that 'Lately Mr. Maiden, the Director of the Sydney Botanic Gardens, has sent me numerous unnamed Australian specimens. Among them a good sheet of what has passed for *P. coloratus* Hornem. var. *jamaicensis* Griseb., containing many specimens.'

Both specimens at NSW are annotated as *P. australiensis* A. Bennett in Bennett's handwriting. Neither specimen matches the description completely, although both specimens clearly belong to the same species.

The collection at the BM also contains several specimens collected at 'Merrigang [Merrigig] Creek, near Barwon River, Vic', labelled *P. coloratus* var. *jamaicensis* Griseb. and also annotated by Arthur Bennett. Of these specimens, the specimen with reference no. 2500 is the most complete specimen and is a good match for the protologue. I have therefore selected this specimen as the lectotype.

Potamogeton reduncus Hagstrom, *Kungl. Sv. Vet. Akademiens Handlingar* Vol. 55(5): 172 (1916).

Type: S. Western Australia, *James Drummond ex Mueller s.n.*, s.d. (S, specimen no. 4255, **lectotype, selected here**), 'not been refound' F. v. Mueller written on a herbarium label of Arthur Bennett, F.L.S. England. Annotated by Hagstrom '! O.H. 07'.

Notes: Hagstrom described *P. reduncus* citing the following specimen: 'S. Western Australia (hb. Stockholm). On the label Mr. Ar. Bennett has noted: >not yet refound. f. Baron v. Mueller; leg. James Drummond ex Mueller< etc and has determined it as *P. drummondii* Benth.'

The Director of S kindly loaned a specimen that fits the label information given in the protologue. The annotation '! O.H. 07' above the label indicates that Hagstrom saw this sheet in 1907, prior to the publication of the description of this species in 1916. The herbarium label identifies it as a specimen from Arthur Bennett's herbarium, and it is therefore reasonable to assume that this is from Bennett's collection, which may also explain its poor condition. However, efforts to find another, better, specimen fitting Hagstrom's citation, in herbaria around Australia and Europe were fruitless. I have therefore selected the specimen no. 4255 from the herbarium at S as lectotype.

Potamogeton similis A. Bennett, *Journal of Botany* 40: 146 (1902).

Type: Swan River Colony (Nouvelle Hollande), *J. Drummond 117*, 1847 (G8006-1, **lectotype, selected here**).

Remaining syntypes: Swan River, *Mr Drummond 117*, 1847 (G806-2), Scripsit Boissier, Conservatoire botanique, Genève, Herbarium BOISSIER, séries n'ayant pas servi à la réduction du *Flora Orientalis*; *Mr Drummond*, 1847 (G8006-3), Conservatoire botanique, Genève, Herbarium BOISSIER, séries n'ayant pas servi à la réduction du *Flora Orientalis*.

Notes: Arthur Bennett described *P. similis* citing the following specimens from Western Australia as well as Tasmania: 'Swan River, W. Australia; Drummond, no. 117, 1847 and 1851; Tasmania: Swanport, Dr. Story, ex. F. Mueller; Lagoon, York Plains, near Oatlands, Herb. Boissier.'

The Director at K kindly lent a sheet filed as the type but labelled as 'Southport (Tasmania), Story, Herb. F. Mueller;'. It is possible that this is the specimen Bennett referred to as collected at 'Swanport'. Dr Story lived near Swansea, about 60 km north of Swanport. It also appears that there is no Southport in Tasmania. However, this sheet also contains a mixed collection of what appears to be *P. cheesemani*, the senior synonym to *P. similis*, and a fragment of *P. australiensis*, which was annotated by Bennett as *P. cheesemani*.

The three sheets at G, kindly on loan by the Director at G, match the protologue of *P. similis* well, are uniform and in good condition. Sheet G8006-1 is tied with a handwritten label bearing the number 117. Sheet G8006-2 has a herbarium label with the number 117, whereas sheet G8006-3 bears no collection number. I have selected the sheet G-8006-1 as the lectotype.

Potamogeton sulcatus A. Bennett, *Annalen des K. K. Naturhistorischen Hofmuseums, Vienna* 7: 294 (1892).

Type: Murray River, *Erkrit s.n.*, 1892 (BM, **lectotype, selected here**), copiously annotated by A. Bennett.

Remaining syntypes: New South Wales: Sydney (Port Jackson), *Robert Brown s.n.*, 1802-1805 (BM, 2 sheets) on the label of one the remark: 'Potamogeton sulcatus A. Bennett (Type collection)'.

Notes: *P. sulcatus* was described by Arthur Bennett citing four specimens: 'Australien, Victoria, Murray River l. Dr. v. Wawra (Reise des Prinzen Philipp August v. Sachsen-Coburg um die Welt, 1872-1873, Nr. 476); Murray River l. J.P. Erkrit 1892 ex Baron F. v. Mueller in herb. A. Bennett; Queensland, Brisbane l. Bayley in herb. A. Bennett; Port Jackson l. R. Brown in herb. Mus. Brit.'

Inquiries produced three potential lectotypes: The Murray River specimen collected by J.P. Erkrit in 1892 and two sheets collected by Robert Brown at Port Jackson. All specimens are located at BM. The best match for the description is the larger of the two Robert Brown specimens, which appears to have been regarded traditionally as the type.

Erkrit's Murray River specimen is the only specimen annotated by Arthur Bennett. It also appears to have come from Arthur Bennett's original herbarium. The Erkrit specimen at BM is not as complete as the larger R. Brown specimen and does not match the original description quite as well for some of the taxonomically less significant characters, e.g., length of stem and description of submerged leaves. However, due to its extensive annotation by Arthur Bennett, and because it is the best match for the (admittedly limited) past and current use of the name, I have selected the Erkrit 1892 specimen as the lectotype.

Potamogeton tenuicaulis F. Mueller, *Fragmenta Phytographiae Australiae*, Vol. 1: 90 (1859)

Type: Gulf of Carpentaria, *F. Mueller s.n.*, s.d. (MEL 1585739, **lectotype, selected here**), determined as *P. tenuicaulis* by F. Mueller.

Notes: When F. Mueller described *P. tenuicaulis* in 1859 he cited no specimens. Instead he gave the location 'in lacubus, fluviis stagnisque a sinu Carpentaria usque ad regiones Australiae orientales' [in lakes and stagnant rivers of the Gulf of Carpentaria as well as other regions of eastern Australia].

The collection at MEL contains one specimen (MEL 1585739) collected at the Gulf of Carpentaria and identified by F. Mueller as *P. tenuicaulis*. However, the specimen is not dated and bears no further annotations. This specimen is complete with both submersed and floating leaves, inflorescence and infructescence and is a good example of the species. I have selected it as the lectotype.

Potamogeton tepperi A. Bennett, *Journal of Botany* 25: 178 (June 1887).

Type: Pool 500 miles north of Brisbane, Queensland, *F.M. Bailey s.n.*, s.d. (BRI, **lectotype, selected here**).

Notes: *Potamogeton tepperi* was described by A. Bennett in 1887. Bennett cites two specimens in his description: 'Pool 500 miles north of Brisbane, Queensland, F.M. Bailey. Neighbourhood of Pioneer River?' & 'River Cygnet, Knicks [Kinch's Station], South Australia, J.G.O. Tepper'.

The specimens which could serve as types unfortunately belong to two different species. The protologue describes features from both specimens and therefore of both species. The description of the floating leaves refers to the species with southern distribution, now known as *P. cheesemanii*. On the other hand the description of the submersed leaves and the description of the fruit is clearly a mixture of both species while the description of the inflorescences fits the specimen from South Australia. The first part of the description of the fruit fits the Queensland specimen. The second half of the fruit description, however, mentions 'projecting processes irregularly distributed on the outer angles', which are not really present on either species, but on a third.

Potamogeton tepperi is a later name than *P. cheesemanii* and would be lost to synonymy under that species. Using the name *P. tepperi* for the northern species, which otherwise appears to lack a name, means no new name would be required. *P. tepperi* has been used only rarely. Where it has been used, however, it was misapplied to yet another species, *P. sulcatus*. By using *P. tepperi* for the northern species, I do not contradict current usage and avoid adding yet another name to the already long list of names for Australian species. I have, therefore, selected the F.M. Bailey specimen as the lectotype.

Potamogeton tricarinatus F. Mueller & A. Bennett, *Journal of Botany* 30: 229 (1892).

Type: Van Alpin River, Mueller s.n., s.d. (K, Herbarium Hookerianum no. 1897, **lectotype, selected here**). Annotations: 'P. tricarinatus Mueller, a good species, A.B.' [Arthur Bennett's handwriting], 'I shall compare this plant ?? carefully in Melbourne with my Europ. specimens' [F. Mueller's handwriting].

Remaining syntypes: MEL1585749, duplicate of the lectotype, with a remark that the Van Alpin River is now known as the Robinson River.

Notes: When Arthur Bennett described *P. tricarinatus* he cited two specimens: 'Australia. In the Yas [Yass] and Murambridge [Murrumbidgee] country, 1831, G. Bennett in Herb. Mus. Brit.! Van Alpin River, F. Mueller in Herb. Kew!'

Inquiries with BM and K yielded only one specimen, the Van Alpin River specimen of Mueller. This specimen has been annotated by Arthur Bennett as '*P. tricarinatus* Mueller' and has obviously been seen by both authors. It is an excellent match for the fairly lengthy type description.

The name *P. tricarinatus* has been used at some stage for all of the floating-leaved *Potamogeton* species in Australia, with the exception of *P. octandrus* [*P. javanicus*]. Selection of the Van Alpin River specimen requires no fewer changes to current usage than any other selection. It also means that no new names appear to be required for any of this group. I have, therefore, selected the specimen at K as the lectotype.

Sabine E. Papassotiriou
National Herbarium of New South Wales
Botanic Gardens Trust Sydney
Mrs Macquaries Road
Sydney, NSW 2000
Australia

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