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## Studies on some Australian pottiaceous mosses, including several nomina nuda

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**Abstract.** *Barbula propingua* C. Muell. is *Tortula antarctica* (Hampe) Wils. in Hook. f.; *Barbula vesiculosa* C. Muell. is *Tortula papillosa* Wils.; *Tortula chlorotricha* Broth. & Geheeb is *Barbula crinita* K. F. Schultz; *Barbula chrysopus* C. Muell. is *Didymodon torquatus* (Tayl.) Catcheside. Furthermore, comments are given on several nomina nuda.

A considerable number of herbarium collections (including various types) were studied by the author in recent years while working on Australian Pottiales. This resulted in new synonymy and the identification of several nomina nuda assignable to current taxa. Most collections are held in herbarium CANB (previously CBG), with duplicates in hb. L, but also material from MELU-Stone and H-BR. was studied.

***Tortula antarctica* (Hampe) Wils. in Hook. f.,** Flora Tasman. 2: 175, tab. 172, fig. 8. 1859.  
*Barbula propingua* C. Muell., Hedwigia 37: 123. 1898, syn. nov. *Tortula propingua* (C. Muell.) Broth., Nat. Pfl. 1(3): 435. 1902.  
 Type: Australia, Victoria, Moyston, 19 Oct. 1883, D. Sullivan s.n., hb. C. Mueller, in H-BR. no. 42.27.011!, iso.  
 Australia, Victoria, Moyston, s.d., D. Sullivan 538, ex hb. Melbourne, 1893, H-BR. no. 42.07.004!

Notes:

1. Original material (holotype) lost in herb. B.
2. The first collection also includes 'mihi n. sp.'

on the label.

3. The second collection is annotated "*Tortula propingua*" C. Muell.

4. Both collections were studied by W. Kramer, 1983, while the second collection was also examined by G.A.M. Scott (14 May 1976).

5. Although type material is cited by Kramer (1988: 92) below *Tortula antarctica*, *Barbula propingua* was not formally synonymised, possibly because (l.c. p.84) too little material bearing this name was seen. In my opinion both collections are identical and common states of *Tortula antarctica*.

***Tortula papillosa* Wils. in Spruce**, London J. Bot. 4: 193. 1845.

*Barbula vesiculosa* C. Muell., Hedwigia 37: 120. 1898, syn. nov.

*Tortula vesiculosa* (C. Muell.) Broth., Nat. Pfl. 1 (3): 434. 1902.

Type: Australia, Victoria, Mt. Ararat, in Grampians, 1883, D. Sullivan s.n., hb. C. Mueller, in H-BR., no. 42.31.017!, iso.

Notes:

1. Original collection (holotype) lost in herb. B.  
2. This collection has also the text '*Barbula vesiculosa* mihi n. sp.'

3. This material was also studied by G.A.M. Scott (14 May 1976).

4. The plants are fertile, with gemmae, and agree well with *Tortula papillosa* Wils.

***Barbula crinita* K.F. Schultz**, Nov. Act. Acad. Leop. Car. 11(1): 226. 1823.

*Tortula chlorotricha* Broth. & Geheeb, Oefv. Förh. Finska Vet. Soc. (Foerh.) 35: 39. 1893, syn. nov.

*Barbula chlorotricha* (Broth. & Geheeb) Paris, Index Bryol. 67. 1894.

Type: (Australia), New South Wales, Tilba, sterilum, 1880 (year), Reader, (hb. Melbourne), ex hb. Geheeb, in hb. Bescherelle, BM!, iso.

Notes:

Type material was not localized in hb. H-BR. Several non-type collections bearing this name were also studied (hb. S). All this material is identical and best treated as *Barbula crinita* K.F. Schultz.

***Didymodon torquatus* (Tayl.) Catcheside**

*Barbula chrysopus* C. Mueller, Hedwigia 37: 127. 1898, syn. nov.

Type: (Australia), Tasmania, Blackmann's Bay, E. coast, roadside, 30 Oct. 1889, W.A. Weymouth, in hb. O. Burchard (245), HO 77.859!, H-BR.!, iso's.

Notes:

1. The original collection (holotype) lost in herb. B.

2. The type material studied contains two fruiting taxa, viz. *Weissia controversa* Hedw. and *Didymodon torquatus* (Tayl.) Catcheside.

3. The type literature/protologue refers to the *Didymodon* material.

4. One additional collection was present in H-BR. bearing the name: *Didymodon chrysopus* mihi sp. nov. The data are the same as on the label of the collection above, only with the text: O. Burchard no. 17. This number contains also two taxa (the same as above).

***Barbula angusticaulis* C. Muell. in Watts & Whitelegge**, Proc. Linn. Soc. New South Wales Suppl. 27: 66. 1902, nom. nud.

*Tortella angusticaulis* Watts & Whitelegge, Proc. Linn. Soc. New South Wales Suppl. 27: 66. 1902, nom. nud.

Material studied:

(Australia), N.S. Wales, Sydney, Moore Park, NE of Rifle Target, on earth, 33°54'S 151°13'E, Sep. 1884, T. Whitelegge (2626), NSW 39.39.04!

Notes:

1. This collection is best treated as *Barbula subcalycina* C. Muell., for the lamina papillae are very dense, tomentum is present, no colouring and points in the leaf base next to the costa were found, back of the costa papillate, the details of the sections through the stem. This taxon is well treated in Stone (1990: 265-266). In addition, isotype of *Barbula subcalycina* (BM) was also studied.

2. "Whitelegge usually used species numbers rather than collecting numbers so it is doubtful that (e.g., Whitelegge 4) is part of a sequential numbering system". E.A. Brown Dec. 1995. Typed note(s) on outer label present in herbarium NSW.

3. This collection agrees very well with the data present in Watts and Whitelegge (1902: 66), where, no Whitelegge number is present. However, the collection bears the number 2626 which is placed here in brackets.

***Barbula austro-unguiculata* C. Muell.**, Gen. Musc. Fr. 436. 1901, nom. nud.

Material studied:

(Australia), N.S. Wales, head of Double Bay, on earth, 33° 54' S 151° 12'E, July 1884, T. Whitelegge (29), NSW 29.54.51!

Notes:

1. This collection is best treated as *Barbula subcalycina* C. Muell.

2. The above data, agree well with that in Watts and Whitelegge (1902: 69), except for the

collecting number.

3. For Whitelegge numbers, see note 2 below *Barbula angusticaulis*.

***Barbula involucrata* C. Muell. in Geheeb**, Rev. Bryol. Lichénol. 24: 68. 1897, nom. nud.

*Tortula involucrata* C. Muell. in Watts & Whitelegge, Proc. Linn. Soc. N.S. Wales Suppl. 27: 77. 1902, nom. nud.

Material studied:

Australia, Victoria, Grampians, s.d., D. Sullivan s.n., hb. C. Mueller, in H-BR. no. 42.07.020!

Australia, Victoria, Mt. Ararat, Nov. 1887, D. Sullivan 21, F. (von) Mueller misit 1889, H-BR. no. 42.07.015!

Notes:

1. The first collection above also with the text '*Barbula involucrata* mihi'.

2. Both collections are identical. They are fruiting plants with gemmae and belong to *Tortula papillosa* Wils.

3. The first collection annotated by G.A.M. Scott (14 May 1976) "...this specimen is typical *T. (Tortula) papillosa* Wils.".

4. According to Index Muscorum (Wijk and al. 1959-1969) Appendix, p. 311, this name is a nom. nud. and not legitimately published.

5. Watts and Whitelegge (1902) treat this taxon as a *Tortula* without comment.

***Barbula nano-subulata* C. Muell.**, Gen. Musc. Fr. 429. 1901, nom. nud.

*Tortula nano-subulata* C. Muell. in Watts & Whitelegge, Proc. Linn. Soc. New South Wales Suppl. 27: 78. 1902, nom. nud.

Material studied:

Australia, N.S. Wales (in Sydney), between Cleveland S. and toll-bar Randwick Rd., on walls of culvert, 33°54'S 151°13'E, Aug. 1891, (T. Whitelegge (121; 2629)), NSW 29.57.09!, 39.38.52!

Australia, N.S. Wales, Sydney, Moore Park, walls of culvert, 33°54'S 151°13'E, Aug. 1891, (T. Whitelegge) s.n., NSW 39.38.46!

Notes:

1. All three collections are identical and best treated as common forms of *Tortula muralis* Hedw. Fruiting material was present.

2. Published by Watts and Whitelegge (1902: 78) without a Whitelegge number.

***Tortella aristatula* Broth. in Watts & Whitelegge**, Proc. Linn. Soc. N.S. Wales Suppl. 27: 66. 1902, nom. nud.

Material studied:

(Australia), N.S. Wales, in bank of Alstonville, Cutting 5 1/4 m. from Ballina, Richmond River, sterile, 11 April '98 ff (1898), W.W. Watts no. 1918, H-BR. no. 43.10.015!

(Australia), N.S. Wales, Ballina, Alstonville, Cutting, sterile, 25 Sept. 1900, W.W. Watts (4862), H-BR. no. 41.70.004!

Notes:

1. Watts no. 1918. This number was also used by Brotherus (1916), to describe *Trichostomum* (struck out: *Tortella aristatum* Broth. Norris and Koponen (1989: 96) made *Trichostomum aristatum* Broth. a synonym of *Trichostomum brachydontium* Br. After studying the lectotype, Watts no. 1918, I fully agree with them.

2. The cited collections, agree very well with the data given by Watts and Whitelegge (1902).

3. Both collections are best treated as *Trichostomum brachydontium* Br.

***Tortula acuminata* Broth.**, Proc. Linn. Soc. New South Wales 57: 242. 1932, nom. nud.

Material studied:

Australia, N.S. Wales, Mt. Duval, near Armidale, willow tree, 5 Nov. 1903, W.W. Watts 7477, H-BR. no. R. 4696!

Australia, N.S. Wales, Mayfield, near Nowra, 23 May 1901, W.W. Watts (6418), H-BR. no. 42.07.014!

Australia, N.S. Wales, Waverley, on tree, Oct. 1899, W.W. Watts(3137), H-BR. no. 42.08.008!

Notes:

1. The three collections are identical and best treated as *Tortula papillosa* Wils. These are sterile plants with gemmae present.

2. The last two collections agree well with the brief data present in the literature above.

***Tortula calodictyon* Broth.**, Proc. Linn. Soc. New South Wales 57: 242. 1932, nom. nud.

Material studied:

Australia, N.S. Wales, near Nowra, Mayfield, on sheoaks by creek, 27 May 1903, W.W. Watts (6433), H-BR. no. 42.08.009!

Notes:

1. This collection is best treated as *Tortula*

*papillosa* Wils.

The plants were growing on wood; gemmae are present.

2. The material also agrees well with the brief data present in the cited literature.

***Tortula crassinervioides* Broth. ex Ramsay**, Taxon 29: 468. 1980, nom. nud.

Material studied:

Australia, Victoria, Lorne, Teddy's Look Out, Nov. 1919, W.W. Watts (1074), H-BR. 41.88.004!

Note:

Only, old empty fruits were seen. No annulus was found. The cells near the mouth of the capsule were thin-walled. The collection is therefore *Desmatodon convolutus* (Brid.) Grout s.str. (see, Catcheside 1980: 48).

***Tortula rotundata* Geheeb in Watts & Whitelegge**, Proc. Linn. Soc. N.S. Wales Suppl. 27: 79. 1902, nom. nud.

Material studied:

Australia, N.S. Wales, Port Hacking, on rocks, 34°05'S 151° 10'E, Apr. 1885, T. Whitelegge (244), NSW 29.57.25!

Notes:

1. In NSW as *Barbula rotundata* Geheeb (nom. nud.).
2. Published without a number in Watts and Whitelegge (1902: 79).
3. This collection agrees with common forms of *Tortula laevipila* (Brid.) Schwägr. Gemmae leaves are present.

***Weissia pimpanae* C. Muell. in Kindb.**, Enum. Bryin. Exot. 96. 1889, nom. nud.

Material studied:

Australia, Queensland, Pimpana, 27° 49'S 153° 47'E, Aug. 1887, C.J. Wild s.n., NSW 29.75.80!

Notes:

1. The collection above agrees quite well with the data in the cited literature and also with Watts and Whitelegge (1902: 64).
2. No peristome was found, but a membrane was present.

These capsule features/characters indicate that the material is best treated as *Weissia edentula* Mitt.

***Weissia tortelloides* Broth. in Watts & Whitelegge**, Proc. Linn. Soc. New South Wales Suppl. 27: 64. 1902, nom. nud.

Material studied:

Australia, N.S. Wales, Uralba Rd., Richmond River, rocky bank, 28°52'S 153°29'E, Oct. 1898, W.W. Watts 2428, NSW 29.75.81!

Notes:

1. The collection is fertile with peristome teeth (also remnants), and therefore it is best treated as *Weissia controversa* Hedw.
2. The material above agrees well with the data present in the cited literature.

***Weissia truncata* C. Muell. in Watts & Whitelegge**, Proc. Linn. Soc. New South Wales Suppl. 27: 64. 1902, nom. nud.

Material studied:

Australia, N.S. Wales, Hurstville, on rocks and earth, 33°58'S 151°06'E, 18 Oct. 1884, T. Whitelegge (110), NSW 29.75.82!

Notes:

1. This collection is fertile with peristome teeth present. Some variation in capsule shape was observed. The plants are best treated as *Weissia controversa* Hedw.
2. The material agrees very well with the data present in Watts and Whitelegge (1902: 64).

***Weissia whiteleggiana* C. Muell. in Watts & Whitelegge**, Proc. Linn. Soc. New South Wales Suppl. 27: 65. 1902, nom. nud.

Material studied:

Australia, N.S. Wales, Sydney, Central Coast, North Shore, on earth, 33°53'S 151°13'E, Jul.-Aug. 1884, T. Whitelegge (4; 18), NSW 29.75.83! and 29.75.84!

Notes:

1. The two collections were studied and both identical. Both fertile collections had a peristome and the capsule showed some variation in shape. These observed features indicate that this taxon is best treated as *Weissia controversa* Hedw.
2. The material agrees rather well with the data present in the above literature.

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