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Studies on several Australian pottiaceous mosses, including some nomina nuda

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Abstract. *Barbula geminata* C. Muell. is *Barbula crinita* K.F. Schultz; *Barbula austroruralis* C. Muell. is *Tortula antarctica* (Hampe) Wils. in Hook. f.; *Hymenostomum olivaceum* C. Muell. ex Geheeb is *Weissia controversa* Hedw.; *Hymenostomum sullivanii* C. Muell. ex Geheeb is *Weissia patula* (Knight) A.J. Fife. Furthermore, comments are given on several nomina nuda.

Over the last years the author identified many Australian herbarium collections (pottiales). Most of this material is present in herbarium Canberra (CANB) with a set of duplicates in herb. L. In this context various type material was also studied. This resulted in new synonymy and the identification of several nomina nuda assignable to current taxa.

***Barbula crinita* K.F. Schultz**

Barbula geminata C. Muell., Gen. Musc. Frond. 454. 1900 (1901). syn. nov.

Type: (Australia), Victoria, Grampians, Mt William, fruiting, Mar. 1883, D. Sullivan, ex Nat. Herb. Victoria (no. 96 exch.), hb. G.O.K. Sainsbury, WELT!, iso.

Notes:

1.Original material (holotype) lost in herb. B.

2.In my opinion, this is a common state of *Barbula crinita* K.F. Schultz. Judging from the notes present in Sainsbury's herbarium he has the same opinion.

***Tortula antarctica* (Hampe) Wils. in Hook. f.**

Barbula austroruralis C. Muell., Hedwigia 37: 122. 1898. syn. nov.

Tortula austroruralis (C. Muell.) Broth., Nat. Pfl. 1 (3): 435. 1902.

Type: Australia borealis tropica, York Peninsula, fruiting, 1879, Tepper (with a loose number 2621), ex hb. Melbourne, hb. F. von Mueller, JE!, iso.

Notes:

1.Original material (holotype) lost in herb. B.

2.Other Tepper collections are from South Australia; see e.g. Watts & Whitelegge (1902: 67).

The label of the Jena isotype material gives ... Yorke Peninsula....

This region is located in South Australia, West of Adelaide. This taxon is more likely to occur there, than in Queensland (York Peninsula!).

In total, only two collections bearing this name were studied; compare also W. Kramer (1988: 84). The other collection is housed in herb. S -

J. Froehlich. The convolute has the same date as in the protologue -likely in the hand of J. Froehlich-, however, without the text 'n.sp.'.
3. Both fruiting collections are identical and belong to common material of *Tortula antarctica*.

***Weissia controversa* Hedw.**
Hymenostomum olivaceum C. Muell. ex Geheeb, Revue Bryol. Lichénol. 24: 66. 1897. syn. nov. Type: Australia, (Victoria), East Gippsland, 3000 ft, fruiting, 1889, W. Bäuerlen (562), ex hb. Melbourne, H-BR. 20.78.024!, iso.
Notes:
1. Original material (holotype) lost in herb. B.
2. The above collection contains small plants, with cylindrical capsules, wide mouthed, well developed peristome teeth, narrowly incurved leaves (when wet). Some capsule shape variation is present in this material. I consider the plants to belong to *Weissia controversa*.
3. However, some non-type collections studied, proved to belong to *Weissia patula* (Knight) A.J. Fife.

***Weissia patula* (Knight) A.J. Fife**
Hymenostomum sullivanii C. Muell. ex Geheeb, Revue Bryol. Lichénol. 24: 66. 1897. syn. nov. Type: Australia (New South Wales), Sydney, ad terram, fruiting, 1884, Whitelegge sub no. 236, ex hb. Melbourne, H-BR. 20.73.011!, lecto, (selected here).
Notes:
1. Original material (types) lost in herb. B.
2.The protologue cites two collections. The material above agrees well with the data in the type literature and is chosen here as lectotype.
3. Whitelegge sub no. 236.
This number was also used for *Hymenostomum amoenum* Geheeb nom. nud.
See also the text there.
For Whitelegge numbers, see also Sollman (2000-A:12).
4. My concept of *Weissia patula* (Knight) A.J. Fife follows Dixon (1923) and Sainsbury (1955).
5. This species is not endemic for New Zealand.
6. Some non-type collections studied, proved to belong to *Weissia controversa* Hedw., among other characters with a well developed peristome.

***Barbula austrounguiculata* Watts & Whitelegge,** Proc. Linn. Soc. New South Wales Suppl. 27: 69. 1902. nom. nud.
Material studied:
(Australia), Victoria, near Melbourne, Altrington, on the ground, (basaltic), non-fruiting, 8 June 1884, F.M. Reader, ex Nat. Herb. Victoria, (no. 97 exch.), hb. G.O.K. Sainsbury, WELT!
Notes:
1. This is a common state of *Barbula crinita* K.F. Schultz.
Sainsbury considers this taxon also to be *Barbula crinita*, judging from the notes present in his herbarium.
2. The collection agrees well with the data present in Watts & Whitelegge (1902: 69).

***Gymnostomum scabridorsum* Broth.,** Proc. Linn. Soc. N.S. Wales Suppl. 27: 65. 1902. nom. nud.
Material studied:
(Australia), New South Wales, Richmond R., Skinner's Head, on damp walls and roof of cave in sea cliff, non-fruiting, with gemmae, 16 April 1900, W.W. Watts 4122, H-BR. 18.85.010!
Notes:
1. Also present in this collection: *Racopilum* sp., *Bryum* sp.
2. The data agree well with that present in Watts & Whitelegge (1902: 65).
3. The material belongs to *Barbula consanguinea* (Thw. & Mitt.) Jaeg. sensu Eddy; see Eddy (1990), Sollman (2000-B).

Hymenostomum amoenum Geheeb, Proc. Linn. Soc. N.S. Wales Suppl. 27: 62. 1902. nom. nud.
Material studied:
(Australia), N.S. Wales, Central Coast, Ball's Head Bay, on earth, fruiting, Aug. 1884, Whitelegge sub no. 236, NSW 29.57.54!, H-BR. 20.73.008!
Notes:
1. Both collections are identical. They agree well with the data present in Watts & Whitelegge (1902: 62).
Although Watts & Whitelegge (1902: 62) state that the habitat is "on logs", the label of the

NSW material (above), gives “on earth”.
The H-convolute has no habitat information.
2. Both convolutes contain small plants, with about cupiformis capsules (short, broad, wide mouthed), without a peristome, an hymenium is present, leaves about plane (when wet), ripe spores c. 16-20 ìm, back of the costa low spiculose, excurrent part of the costa thin. Therefore, the plants are referred to *Weissia patula* (Knight) A.J. Fife. Some capsule shape variation is present.
3. See also the text below *Weissia patula*.
4. For Whitelegge numbers see Sollman (2000-A: 12). The H-collection bears no Whitelegge number.

***Hymenostomum angustatum* Broth.**, Proc. Linn. Soc. N.S. Wales Suppl. 27: 62. 1902. nom. nud.
Material studied:
Australia, N.S. Wales, North Coast, near Ballina, Three Mile Scrub, Byron Bay, fruiting, Sept. 1897, W.W. Watts 1483, NSW 29.57.55!, H-BR. 20.73.002!
Notes:
1. Two collections bearing this name were studied. The data on the labels are identical, and agree well with that in Watts & Whitelegge (1902: 62).
2. The material is identical. Leaf margins are plane (when wet), tapering towards apex; capsules are elliptical, no peristome is present; back of the costa low spiculose; spores about 16 ìm, often clustered; costa rather strong.
Therefore, I consider them to belong to *Weissia condensa* (Voit) Lindb.

***Hymenostomum subolivaceum* C. Muell.**, Proc. Linn. Soc. New South Wales Suppl. 27: 63. 1902. nom. nud.
Material studied:
(Australia), N.S. Wales, Sydney, Burwood Park, ground, fruiting, Mar. 1899., W.W. Watts 2513, H-BR. 20.78.218!
Notes:
1. This material agrees very well with the data present in Watts & Whitelegge (1902: 62). Only two convolutes bearing this name were available in herb. H for study.
2. The material above, has no peristome teeth, capsules are short, broad and wide mouthed (cupiformis), only open (without operculum) capsules were seen, leaves (when wet) rather broad, flaccid, leaf margins mostly plane.
Therefore, the material is referred to *Weissia patula* (Knight) A.J. Fife.

Tortula hystrichosa ..., Proc. Linn. Soc. New South Wales Suppl. 27: 77. 1902. nom. nud.
Material studied:
(Australioa, S.A., W. of Adelaide), Yorke Peninsula, non-fruiting, Tepper, NY-Mitten!
Notes:
1. Watts & Whitelegge (1902: 77) cite no authority for this taxon. The collection agrees well with the data present there.
2. Only one collection was sent on loan. The material is best referred to *Barbula crinita* K.F. Schultz.

Tortula oedineura Watts & Whitelegge, Proc. Linn. Soc. N.S. Wales Suppl. 27: 78. 1902. nom. nud.
Barbula oedineura Watts & Whitelegge, Proc. Linn. Soc. N.S. Wales Suppl. 27: 78. 1902. nom. nud.
Material studied:
(Australia), Victoria, Wimmera, Coker Dam, fruiting, on sandy soil, July 1896, F.M. Reader, NSW 29.75.11!
Notes:
1. The data on the convolute agree well with that present in Watts & Whitelegge (1902: 78).
2. The material is a mixture with three taxa. Also present are: *Didymodon australasiae* (Hook. & Grev.) Zand. and *Pottia starckeana* (Hedw.) C. Muell. c.fr.
3. This collection is best referred to *Desmatodon convolutus* (Brid.) Grout c.fr. (s.str.).

Tortula perbrevifolia C. Muell., Proc. Linn. Soc. N.S. Wales Suppl. 27: 78. 1902. nom. nud.
Material studied:
(Australia), Victoria, Dimboolashire, on sandy soil in woods, fruiting, 25 July 1896, F.M. Reader, H-BR. 42.07.021!
Notes:
1. In herbarium H present as *Barbula perbrevifolia* C. Muell. nom. nud.
2. The data of the studied material agree well

with that in Watts & Whitelegge (1902: 78).
3. Only one collection was sent on loan. The material belongs -in my opinion- to a common state of *Tortula antarctica* (Hampe) Wils. in Hook. f.

***Trichostomum albovaginatum* C. Muell.**, Gen. Musc. Fr. 412. 1901. nom. nud.
Material studied:
(Australia), Lord Howe Island, fruiting (no further data), BM!
Notes:
1. Only one collection was sent on loan from herb. BM.
2. In this material the lamina papillae are rather light, the lamina is rather hollow (incurved) especially near apex, no central strand is present in the stem, the peristome teeth are straight. All these characters agree well with *Tortella cirrhata* Broth.

***Triquetrella albicuspis* Broth.**, Bryologist 9: 35. 1906. nom. nud.
Material studied:
Australia, N.S. Wales, Adelong, SW slopes, in gully, non-fruiting, 23 Feb. 1904, W.W. Watts 7489, NSW 29. 76.77!
Australia, N.S. Wales, Yarrangobilly Caves, cliffs opposite Cabes House, on cliffs, non-fruiting, 17-22 Jan. 1906, W.W. Watts 8509, 8547, NSW 29.75.76!, 29.75.75!
Australia, N.S. Wales, Yarrangobilly Caves, S. Tablelands, between house and Hot Springs, non-fruiting, Jan. 1906, W.W. Watts 8624, det. V.F. Brotherus, NSW 29.75.72!
Notes:
1. These four collections are identical. I consider them to belong to *Anomodon tasmanicus* Broth. All Australian collections named *Anomodon tasmanicus* I studied, were non-fruiting.
3. Contrary to Granzow- de la Cerda (1989), I consider *Anomodon tasmanicus* Broth. more related to the Thuidiaceae than to the Pottiaceae (*Triquetrella*). For instance, stoloniform branches are often present on the material studied.

Weissia glauca Broth., Proc. Linn. Soc. N.S. Wales 57: 241. 1932. nom. nud.
Material studied:
Australia, N.S. Wales, C. Tablelands, near Tallong, gully near Barbers Creek, fruiting, Sep. 1899, W. Forsyth 426 + 449, NSW 29.75.79!, H-BR. 44.21.020!, 44.21.012!
Notes:
1. Three collections bearing this name were studied, all with the same data. The material is identical. They are rather typical plants belonging to *Weissia controversa* Hedw., with incurved leaves (when wet), well developed peristome teeth, cylindrical capsules, a short excurrent costa.
2. The data on the convolutes agree well with that present in the original literature (above).

***Weissia graciliseta* Broth. in Bailey**, Queensland Bot. Bull. 4: 21. 1891. nom. nud.
Material studied:
(Australia, Queensland, NW of Brisbane), Mt Perry, fruiting, J. Keys, com. F.M. Bailey (224), (no further data), H-BR. 44.21.013!
Notes:
1. Only one collection bearing this name was studied.
2. The data on the label agree rather well with that present in Bailey (1891: 21).
3. The material has cylindrical capsules, well developed peristome teeth, incurved leaves (when wet). These characters agree well with *Weissia controversa* Hedw. Some *Bryum* sp. and *Philonotis* sp. is also present.

***Weissia squarrosa* Broth. in Bailey**, Cat. Indig. Natural. Pl. Queensland 114. 1890. nom. nud. *Hyophila squarrosa* Broth., Proc. Linn. Soc. New South Wales Suppl. 27: 68. 1902. nom. nud.
Material studied:
(Australia, Queensland), Helidon, non-fruiting, Dec. 1888, C.J. Wild, BRI-Bailey!
Notes:
1. Two convolutes bearing this name were studied. They have the same data on the labels. The material is identical. Both are *Barbula subcalycina* C. Muell.
2. The two collections agree well with the data present in Bailey (1890: 114).

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