

## OCHIOBRYUM

John R. Spence<sup>1</sup> & Helen P. Ramsay<sup>2</sup>

*Ochiobryum* J.R.Spence & H.P.Ramsay, *Phytologia* 87: 68 (2005); named in honour of Harumi Ochi (1920–2002), Japanese bryologist and expert on the Bryaceae.

Type: *O. blandum* (Hook.f. & Wilson) J.R.Spence & H.P.Ramsay

Dioicous. Plants medium-sized, forming dense tufts 2–6 cm tall, red, pink, silver or sometimes green above, dark brown below. Stems simple or branched by short innovations, radiculose below. Rhizoids papillose, orange to crimson-brown. Leaves ovate, imbricate and appressed, concave, often complanate, suberect to erecto-patent, obtuse to broadly acute, little-altered when dry; margin entire; costa weak, not reaching the apex to short-excurrent in a slender point; laminal cells narrowly elongate (4–15: 1), often thicker-walled and narrower near margin, usually forming a distinct border, not much altered towards leaf base except at insertion where the cells are somewhat shorter. Gemmae lacking.

Perigonia and perichaetia terminal; Australian plants sterile. Setae solitary, slender, flexuose, reddish. Capsules 3–4 mm long, suberect or inclined, pyriform, with a distinctly tapered neck; annulus absent; operculum conical, apiculate. Peristome double; exostome and endostome well developed; cilia appendiculate. Spores small, 10–18 µm diam., smooth.

*Ochiobryum* appears to be most closely related to *Pohlia*, *Leptobryum*, *Plagiobryum* and their allies. It is typified by *O. blandum* and also includes the Chinese species *O. handelii* (Broth.) J.R.Spence & H.P.Ramsay, the two forming a species pair that is phylogenetically distinct from *Bryum*. The genus is characterised by frequently complanate foliation, shiny pink to red colouration, elongate, pohlioid laminal areolation with a distinct border, and inclined to pendulous pyriform capsules with complete peristomes and small spores. Gemmae have not been seen by us or reported elsewhere. A third species, *Bryum pseudoblandum* T.Kop. & Norris, possibly belongs in *Ochiobryum*, but it appears to be somewhat distant from the other two as it is not or only weakly complanate, has much shorter and broader laminal cells and produces small, irregular, reddish rhizoidal tubers 150–250 µm diam. These three taxa form an interesting, vicariant, biogeographic pattern from north to south, with *O. handelii* in SE Asia, *B. pseudoblandum* in New Guinea and *O. blandum* in Australasia. A fourth species, *Bryum lonchophyllum* Broth. from West Africa, which we have not seen, is said to be similar.

### References

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- Ochi, H. (1968), On the status of *Bryum handelii* Broth. (Musci), *J. Jap. Bot.* 43: 480–485.
- Sainsbury, G.O.K. (1955), *Bull. Roy. Soc. New Zealand* 5: 1–490.
- Spence, J.R. & Ramsay, H.P. (2005), New genera and combinations in the Bryaceae (Bryales, Musci) for Australia, *Phytologia* 87: 61–71.

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<sup>1</sup> Glen Canyon National Recreation Area, 691 Scenic View Drive, P.O. Box 1507, Page, Arizona 86040-1507, U.S.A.

<sup>2</sup> c/- National Herbarium of New South Wales, Royal Botanic Gardens and Domain, Mrs Macquaries Road, Sydney, New South Wales 2000, Australia.

**Ochiobryum blandum** (Hook.f. & Wilson) J.R.Spence & H.P.Ramsay, *Phytologia* 87: 69 (2005)

*Bryum blandum* Hook.f. & Wilson, *London J. Bot.* 3: 546 (1844); *Fl. Antarct.* 1: 134 (1844). T: Campbell Is., New Zealand, *W.Wilson* 22; iso: BM.

*Bryum blandum* Hook.f. & Wilson var. *luridum* Wilson, in J.D.Hooker, *Fl. Nov.-Zel.* 2: 83 ('1855') [1854]. T: Makororo, North Is., New Zealand, *W.Colenso*; holo: BM.

*Hypnum oblongifolium* Hampe, *Linnaea* 30: 641 (1860). T: South Esk R., Vic., *F.Mueller*; holo: BM; iso: BM.

*Bryum oblongifolium* (Mitt.) Müll.Hal., *Genera Musc. Frond.* 234 (1901), *nom. illeg.* (later homonym).

*Bryum virgatum* Müll.Hal. ex Watts & Whitel., *Proc. Linn. Soc. New South Wales* 30 (Suppl.): 143 (1906), *nom. nud.* (in synonym.). Based on: South Esk River, Vic., *F.Mueller s.n.* (MEL).

Illustrations: H.Ochi, *J. Jap. Bot.* 43: 193, fig. 1; 194, fig. 2 (1968), as *Bryum blandum*; W.R.Buck, D.H.Vitt & W.M.Malcolm, *Key to the Genera of Australian Mosses* 45 (2002), as "*Ochiobryum blandum*"; D.Meagher & B.Fuhrer, *Field Guide to the Mosses and Allied Plants of Southern Australia* 135 (2003), as *Bryum blandum*.

Plants forming dense tufts. Stems elongate, 1–6 cm tall, branched by short perichaetial innovations. Leaves glossy metallic pink or pinkish green, 1–3 mm long; upper leaves yellow-green or lurid green, moderately to clearly complanate, oblong, mostly obtuse, concave; costa not reaching apex or percurrent; laminal cells narrowly elongate (6–10: 1), at least 50–100 µm long, at the margin several rows of very narrow cells forming a distinct border; basal cells slightly shorter.

Capsules not known from Australian collections. "Seta 2–4.5 cm long, slender, flexuose, reddish. Capsules 3–4 mm long, suberect or inclined, dark brown, pyriform with a distinct tapered neck. Operculum conical, apiculate. Peristome teeth separate but close together, lanceolate, yellow, hyaline above, finely papillose on the dorsal face, median line almost straight or zig-zag; ventral lamellae about 25; basal membrane of endostome less than half the height of the teeth; processes (=) narrow, subulate, cracked but not split, cilia appendiculate. Spores 16–24 µm" (Sainsbury, 1955). *n* = 11 (New Zealand), *fide* H.P.Ramsay & J.R.Spence, *J. Hattori Bot. Lab.* 80: 259 (1996).

A mainly subalpine to alpine species in W.A., N.S.W., A.C.T., Vic. and Tas.; grows on splashed or damp rock or soil often along streams. Also in New Zealand and Campbell Island.

W.A.: Winnana Springs, Wable Downs Stn, E Kimberley, 13 May 1984, *J.H.Willis* (MEL). N.S.W.: Yarrangobilly, *W.W.Watts* 8690 (NSW). A.C.T.: Punchbowl Ck, Booroomba area, *N.T.Burbidge* 6817 (CANB). Vic.: Hoptown Falls, Otway Ra., *A.C.Beauglehole* 16821 (MEL). Tas.: Liffey Falls, *J.R.Spence* 4681 (NSW).

*Ochiobryum blandum* is a distinctive, hygrophilous species with shiny pinkish or reddish (rarely green), obtuse, bordered and usually concave leaves with a rounded apex and elongate laminal cells. It sometimes appears similar to *Gemmabryum laevigatum* which occurs in similar habitats, but it has finer areolation and stouter stems, and is typically complanate.