

PLAGIOBRYUM

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Plagiobryum Lindb., Öfvers. Förh. Kongl. Svenska Vetensk.-Akad. 20: 392 (1863); from the Greek *plagios* (oblique) and *bryon* (a moss), in reference to the oblique, decurved capsules.

Type: *P. zieri* (Hedw.) Lindb.

Dioicous. Plants small, densely tufted on soil, silvery green or vinous pink. Stems 20–40 mm tall, with julaceous innovations below the apex or lower down; stem bases clothed in a red tomentum of papillose rhizoids. Leaves closely imbricate, soft, concave, ovate- or oblong-lanceolate, reddish when old; margin entire; costa percurrent or failing below apex; laminal cells very lax and thin-walled, rhomboidal-hexagonal above, oblong-hexagonal below. Gemmae not known.

Perichaetia and perigonia terminal; perichaetial leaves similar to vegetative leaves. Setae solitary, stout, almost cygneous. Capsules inclined to horizontal, large, pyriform, somewhat zygomorphic with a very long neck; urn gibbous; mouth oblique; annulus 2 rows of cells; operculum mammillose. Peristome double; exostome teeth 16; endostome segments 16, very narrow, almost as long as exostome teeth; basal membrane smooth; cilia rudimentary or absent. Spores large, densely papillose. $n = 10, 11$, *fide* R.Fritsch, *Bryophyt. Biblioth.* 40: 126, 219 (1991).

This genus of about ten species is highly distinctive and comparatively rare. It had been assumed that *Plagiobryum* was not present in Australia, although *Bryum wildii* (Broth.) Müll.Hal. was originally described as a *Plagiobryum* by Brotherus. The genus is characterised by lax laminal areolation and the unusual zygomorphic capsule that is asymmetrical and curved. These characters are also seen in Australian material of *B. cellulare*. Since that species is not related to other groups in *Bryum*, it is most appropriately accommodated in *Plagiobryum*.

Ochi (1968) first noted *B. wildii* from Australia, and he later placed it in the synonymy of *B. cellulare*. We have accepted this synonymy, but we recognise *Bryum cellulare* as being referable to *Plagiobryum*. Thus, *Plagiobryum* is represented in Australia by a single species.

References

Ochi, H. (1968), A revised list of the mosses of the family Bryaceae in Japan and adjacent regions, *J. Jap. Bot.* 20: 1–34.

Ochi, H. (1970), A revision of the subfamily Bryoideae in Australia, Tasmania, New Zealand and adjacent islands, *J. Fac. Educ. Tottori Univ., Nat. Sci.* 21: 7–67.

Plagiobryum cellulare (Hook.) J.R.Spence & H.P.Ramsay, *Fl. Australia* 51: 411 (2006)

Bryum cellulare Hook., *Sp. Musc. Frond.*, Suppl. 3, 1: 214 (1827); *Brachymenium cellulare* (Hook.) A.Jaeger, *Ber. Tätigk. St. Gallischen Naturwiss. Ges.* 1873–74: 111 (1875) (Ad. 1: 573, 1876). T: “in Nepalensi [Nepal] regno lectum dedit, Pr. Hooker”; holo: BM.

Plagiobryum wildii Broth., *Öfvers. Förh. Finska Vetensk.-Soc.* 37: 101 (1891); *Bryum wildii* (Broth.) Müll.Hal., *Genera Musc. Frond.* 204 (1901); *Zieria wildii* (Broth.) Kindb., *Enum. Bryin. Exot.* 108 (1901). T: Highfields, Qld, Dec. 1888, C.Wild s.n.; holo: H-BR; iso: BM, BRI, MEL, NSW.

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Brachymenium novaevalesiae Broth., in W.W.Watts & T.Whitelegge, *Proc. Linn. Soc. New South Wales* 30 (Suppl.): 124 (1906), *nom. nud.* (in synonym.). Based on: Skinners Head, Ballina, N.S.W., W.W.Watts 5370, 5372, 5700 (NSW).

Illustrations: A.Noguchi, *Illustr. Moss Fl. Japan* 457, fig. 199b (1988), as *Bryum cellulare*; A.Eddy, *Handb. Malesian Mosses* 3: 146, fig. 430 (1996), as *Bryum cellulare*.

Plants small and delicate, reddish to yellow-green. Stems short, to 30 mm tall; branches clavate in outline. Lower leaves small and remote; upper leaves erect-spreading, much larger and compact, ovate to oblong-ovate, 1.30–1.35 mm long, 0.7–1.0 mm wide, cymbiform, obtuse; margin incurved, entire; costa slender, reddish, short-excurrent or failing below apex; median laminal cells lax, rhomboidal- or elongate-hexagonal, with acute ends, $85\text{--}110 \times 20\text{--}30\text{ }\mu\text{m}$, thin-walled, forming an indistinct border of 2 rows of linear-rhomboidal cells; lower cells rectangular.

Setae 0.7–1.5 mm long, often flexuose below, reddish brown. Capsules inclined to horizontal 1.0–1.5 mm long; apophysis shorter than urn, tapering to the seta; operculum convex, mucronate. Peristome: exostome teeth broad at base, transversely striolate and orange in lower half, indistinctly papillose and pellucid above; endostome segments linear, somewhat shorter than exostome teeth, narrowly split; cilia absent; basal membrane smooth. Spores 20–26 μm diam. Chromosome number not known.

Occurs on wet rocks in W.A., eastern Qld and northern N.S.W.; possibly overlooked elsewhere as capsules are essential for positive identification. Also in Africa, Asia, Japan and Malesia.

W.A.: Winnana Springs, Marble Downs Stn, E Kimberley, 13 May 1984, J.H.Willis (MEL). Qld: Carnarvon Natl Park via Rolleston, Mar. 1983, W.Morley (MEL); Carnarvon Natl Park, I.G.Stone 20257 (MEL); Mickeys Ck, Carnarvon Gorge, I.G.Stone 5034 (MEL).

This species differs from *P. novae-seelandiae* Broth., a New Zealand endemic (G.O.K. Sainsbury, *Bull. Roy. Soc. New Zealand* 5: 245–246, 1955), which is more closely allied to the Northern Hemisphere type species *P. zieri* (Hedw.) Lindb. *Plagiobryum novae-seelandiae* has sharply acuminate leaves, the capsule neck is as long as or longer than the urn and is strongly asymmetrical, whereas *P. cellulare* has ovate to oblong-ovate leaves with obtuse apices; the capsule neck is shorter than the urn and is less asymmetrical.