

GONIOBRYUM

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Goniobryum Lindb., *Öfvers. Förh. Kongl. Svenska Vetensk.-Akad.* 21: 606 (1865); from the Greek *gonion* (referring to the sporophyte) and *bryon* (a moss).

Type: *G. subbasilare* (Hook.) Lindb.

Monoicous. Plants tufted, bright green to yellow-green above, brown below. Stems simple to fastigiately branched, tomentose and somewhat matted below. Rhizoids weakly papillose, especially on large stems, red-pink. Propagula absent. Leaves complanate, rarely 2- or 3-ranked, erect-spreading, twisted when dry, oblong to linear-lanceolate, widest at mid-leaf; apex acuminate; margin singly or doubly toothed; costa narrow, ending below apex; laminal cells large, lax.

Perichaetia basal in rhizoids. Calyptra elongate, thin, entire at base. Capsules cernuous, long-cylindrical, widest at mouth, often arcuate; operculum bluntly rostrate; exothecal cells rectangular to isodiametric, with uniformly thin cell walls. Peristome double; endostome c. half the length of the exostome. Spores smooth, globose. Chromosome number not known.

Goniobryum is a monotypic genus found throughout the Southern Hemisphere.

Reference

Dixon, H.N. (1937), Notulae bryologicae, *J. Bot.* 1937: 123.

Goniobryum subbasilare (Hook.) Lindb., *Öfvers. Förh. Kongl. Svenska Vetensk.-Akad.* 21: 607 (1865)

Hypnum subbasilare Hook., *Musci Exot.* t. 10 (1818); *Rhizogonium subbasilare* (Hook.) Schimp., *Bot. Zeitung (Berlin)* 5: 803 (1847); *Trachyloma subbasilare* (Hook.) Mitt., *J. Proc. Linn. Soc., Bot.* 4: 86 (1860). T: Staten Is., near Cape Horn, *A.Menzies* 24; holo: BM.

Photinophyllum pellucidum Mitt., *J. Linn. Soc., Bot.* 10: 175 (1868); *Rhizogonium pellucidum* (Mitt.) A.Jaeger, *Ber. Tatigk. St. Gallischen Naturwiss. Ges.* 1873–74: 221 (1875); *Goniobryum pellucidum* (Mitt.) Broth., *Nat. Pflanzenfam.* I, 3: 621 (1904). T: 'Western Rivulet', Tas., *W.Archer*; syn: NY *n.v.*; Australia, *F.Mueller n.v.*; New Zealand, *C.Knight* 139; syn: BM.

Rhizogonium reticulatum Hampe, *Linnaea* 30: 636 (1860). T: Apollo Bay, [Vic.]; *n.v.*

Illustration: G.A.M.Scott & I.G.Stone, *The Mosses of Southern Australia* 319, pl. 58 (1976).

Plants tufted. Stems 10–45 mm tall, yellow-green to dark brown-red. Leaves oblong to linear-lanceolate, acuminate, 2.2–3.2 mm long, 0.5–1.0 mm wide; upper laminal cells long-hexagonal to rhomboidal, 30–120 × 14–25 µm; basal cells rectangular, 95–165 × 14–25 µm.

Perichaetial bracts broadly ovate, tapering to a hairpoint. Setae to 3 cm long, smooth, ±slightly twisted below capsule. Exostome teeth trabeculate, triangular-lanceolate, papillose; endostome with 2 or 3 papillose cilia. Spores 9–16 µm diam.

The species occurs in south-eastern N.S.W., Vic., and Tas.; also known from New Zealand, the Pacific islands and South America. Grows in moist areas on soil, wood, tree ferns and, rarely, on rocks.

N.S.W.: Macquarie Rd, *H.Streimann* 48927 [*Musci Australas. Exsicc.* 72] (CANB); Monga, 20 km SE of Braidwood, *H.Streimann* 5139 (CANB). Vic.: Results Ck, *H.Streimann* 36533 (CANB); Sassafra Ck, *H.Streimann* 39910 (CANB). Tas.: Upper Browns R., *A.V.Ratkowsky* H244 (CANB).

This species can be readily identified by the spotted appearance of its dry or recently wetted leaves due to the aggregation of chloroplasts at either end of the laminal cells. Cells at the

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edge of the leaves are thinner than other laminal cells, but they do not form a distinct border. The calyptra is very long (c. 2 mm), has an entire base and usually a thin, tubular structure; however, it can sometimes form a bubble-like base.