

PULCHRINODACEAE

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Pulchrinodaceae D.Quandt, N.Bell & Stech, *Beih. Nova Hedwigia* 131: 36 (2007).

Type: *Pulchrinodus* B.H.Allen

Dioicous(?). Plants perennial, acrocarpous, golden green to yellow-green, forming large, open to dense turfs or mats. Stems red-brown, unbranched to sparingly branched, lacking rhizoidal tomentum; central strand present; rhizoids absent, or rarely a few at the base of the stem; pseudoparaphyllia present, foliose; margins ciliate. Leaves dimorphic; small scale-like leaves at the stem base and along the stem, clasping, ovate-acuminate; upper stem and branch leaves larger, scariose or chartaceous, concave, undulate, clasping at the base, occasionally in interrupted groups, oval to oblong, acute, with a short to long hyaline apiculus; margins lacking a limbidium, denticulate distally, incurved proximally; costa short, double, often reduced or absent. Distal laminal cells short-hexagonal; median laminal cells elongate-fusiform, strongly incrassate, distinctly porose; proximal laminal cells red to orange, in a broad band across the leaf base; justacostal cells similar to cells above, porose; alar cells quadrate, inflated, thin-walled, red to red-brown.

Perigonia terminal, forming discoid splash cups; leaves obtuse, apiculate; laminal cells red-brown in the proximal half of the leaf; alar cells inflated, in bands extending along the distal margins; paraphyses absent. Perichaetia unknown. Sporophytes unknown.

This monotypic family includes *Pulchrinodus inflatus*, a large and attractive moss of wetlands in New Zealand, Tasmania and New Caledonia. The occurrence of conspicuous, enlarged perigonial cups is particularly distinctive, and the stem tips apparently break off easily, acting as a form of vegetative reproduction. Sporophytes have not been observed, and *Pulchrinodus* has been variously placed in the Dicranaceae, Dicnemonaceae, Lembophyllaceae and Pterobryaceae. Stech *et al.* (2003), using molecular markers, suggested that it is a diplolepidous acrocarp with affinities to the Rhizogoniales and Orthotrichales, while Quandt *et al.* (2007) and Cox *et al.* (2010) pointed to a close relationship with the Bryaceae.

A markedly isolated element in the moss flora of Australasia, the New Caledonian plants are subtly different and have been described as var. *neocaledonicus* Cardot.

References

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PULCHRINODUS

Pulchrinodus B.H.Allen, *New Zealand J. Bot.* 25: 339 (1987); from the Latin *pulcher* (beautiful), and *nodus* (a knot), in reference to the puzzling affinities of the genus.

Type: *P. inflatus* (Hook.f. & Wilson) B.H.Allen

Description as for the family.

Pulchrinodus inflatus (Hook.f. & Wilson) B.H.Allen, *New Zealand J. Bot.* 25: 339 (1987)

Hypnum inflatum Hook.f. & Wilson, *Fl. Nov.-Zel.* 2: 111 (1854); *Coelidium inflatum* (Hook.f. & Wilson) A.Jaeger, *Ber. Tätigk. St. Gallischen Naturwiss. Ges.* 1876–77: 318 (1878); *Eucamptodon inflatus* (Hook.f. & Wilson) Mitt., *Trans. & Proc. New Zealand Inst.* 25: 300 (1893); *Lembophyllum inflatum* (Hook.f. & Wilson) Paris, *Index. Bryol.* 718 (1897). T: Manawaki, Northern Island, New Zealand, *W.Colenso*; holotype: BM.

Illustrations: G.O.K.Sainsbury, *op. cit.* 142, fig. 1; B.H.Allen, *op. cit.* 339, fig. 2; 340, fig. 3; 341, fig. 4.

Stems 5–20 cm long. Scale leaves 1–3 mm long; upper stem and branch leaves 5–10 mm long. Distal laminal cells short-hexagonal, 22–35 × 12–25 µm; median laminal cells 60–90 × 12–24 µm.

Rare on wet soil or mud, in bogs, wet meadows, and along streams, at elevations of 700–850 m on remote peaks in south-western Tas.; also in New Zealand (North and South Islands) and in New Caledonia.

Tas.: Mt Hean, 25 Apr. 1985, *G.Kantvilas* & *S.J.Jarman* (CHR, HO, MO); Propsting Ra., 10 Apr. 1986, *G.Kantvilas* & *S.J.Jarman* (CHR, HO, MO).