

## GYMNOSTOMIELLA

*Bernard Goffinet*<sup>1</sup>

*Gymnostomiella* M.Fleisch., *Musc. Buitenzorg* 1: 309 (1904); from the generic name *Gymnostomum*, and the suffix *-ella* (a diminutive), i.e. resembling a small *Gymnostomum*.

Type: *G. vernicosa* (Harv.) M.Fleisch.

Plants erect, small, green to orange below. Stems orthotropic, sparsely foliate, with a central strand surrounded by rather large parenchymatous cells with orange walls. Rhizoids smooth, sparse, at the base of the stem. Branching sparse, subapical and sympodial. Leaves ovate, lingulate, spatulate; apex rounded to acute; margin plane to slightly reflexed, papillose-crenulate above; costa single, weakly to strongly differentiated, ending in upper half of leaf to shortly below apex. Laminal cells thin-walled, flat to slightly bulging; basal cells rectangular, smooth; upper cells irregularly isodiametric, with 1 or 2 small conical papillae. Gemmae multicellular, infrequent. Sporophytes not seen.

Variouly included in the Splachnaceae (subfam. Splachnoyoioideae, Brotherus, 1924), the Splachnobryaceae (Arts, 2001; Goffinet, 2006) and the Pottiaceae (Zander, 1993; Cox *et al.*, 2010; Goffinet *et al.*, 2012) following the reduction of the Splachnobryaceae to synonymy, *Gymnostomiella* was monographed by Arts (1998), who recognised five species and one variety. The genus is characterised by small, slender plants bearing unicostate leaves with the upper cells ornamented by one or more small conical papillae. The latter character distinguishes the genus from *Splachnobryum*. All taxa grow on calcareous rocks, and one species is known from northern Australia.

### References

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***Gymnostomiella vernicosa*** (Harv.) M.Fleisch., *Musc. Buitenzorg* 1: 310 (1904)

var. **vernica**

*Gymnostomum vernicosum* Harv., in J.D.Hooker, *Icon. Pl.* 1: 17, fig. 4 (1836); *Pottia vernicosa* (Harv.) Hampe, in C.Müller, *Syn. Musc. Frond.* 1: 557 (1849); *Hymenostylium vernicosum* (Harv.) Mitt., *Musc. Ind. Orient.* 33 (1859). T: Prome, Burma, 1826, *N.Wallich s.n.*; iso: E n.v.

Illustrations: P.L.Redfearn Jnr, *Bryologist* 94: 393, figs 1–27; 394, figs 28–31 (1991); R.H.Zander, *Bull. Buffalo Soc. Nat. Sci.* 32: 155, figs 1–4 (1993); T.Arts, *J. Bryol.* 20: 420, fig. 5; 422, fig. 6 (1998).

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Plants to 2 mm tall, forming green tufts. Stems with a central strand and orange somewhat incrassate parenchymatous cells. Leaves lingulate, with the apex much broader than the base, to 0.5 mm long and 0.25 mm wide; margin entire below, crenulate-papillose in the upper half; costa ending in the middle or upper part of the leaf; basal laminal cells, short- to long-rectangular,  $27\text{--}60 \times 12\text{--}15 \mu\text{m}$ ; upper cells irregular in shape, 1–2 times longer than wide,  $18\text{--}27 \times 9\text{--}15 \mu\text{m}$ , mostly with (1–) 2 (–4) conical papillae. Gemmae green, multicellular, with transverse and longitudinal walls, axillary, to  $100 \mu\text{m}$  long and  $60 \mu\text{m}$  wide. Gametangia not seen.

Known from two localities in northern N.T. and eastern Qld; on calcareous sandstone. Also in the Neotropics, from Florida south to Brazil, and in SE Asia.

N.T.: Cave Beach, Cape Arnhem, S of Gove, *J. & J.Eurell 78/38, 78/39* (CANB). Qld: Walkunder Tower, Chillagoe Natl Park, *I.G.Stone 21740* (MEL).

Only the type variety occurs in Australia; var. *tenerum* (Müll.Hal ex Dus.) Arts is broadly sympatric with var. *vernica* in the Americas and Asia, but unlike the latter it also occurs in Africa. It differs from the type variety in its unipapillose laminal cells.

The species has also been recorded from Western Australia (Stoneburner *et al.*, 1993), but the report could not be verified as no specimens were found in Australian herbaria, including the personal herbarium of the late Ilma Stone (N.Klazenga, pers. comm.).