

BRYOBARTRAMIACEAE

Ilma G. Stone†

Bryobartramiaceae Sainsbury, *Bryologist* 51: 9 (1948).

Type: *Bryobartramia* Sainsbury.

Monoicous perennial mosses, minute, green to yellowish brown, scattered or crowded on soil. Stems very short and fleshy, lacking a central strand, often with numerous fertile basal branches; protonemata persistent, inconspicuous, with clusters of short-celled filaments. Rhizoids hyaline, extensive. Leaves crowded, the smallest towards the stem base, short-ligulate to broadly spatulate, obtuse or broadly acute; margin plane, entire to crenulate; costa usually subpercurrent, weak below, well developed above. Upper laminal cells rounded-quadrate, papillose; basal cells longer, smooth.

Perigonia lateral, axillary; perigonial leaves small, broad; antheridia few, with uniseriate paraphyses. Perichaetial leaves linear to lanceolate, subulate or strap-like above, often with a twist; margin entire, toothed above; costa strong, filling the subula; laminal cells mostly smooth, the upper occasionally weakly papillose. Epigonium large, inflated, oval, rostrate, enclosing the entire sporophyte and remaining intact even at maturity. Capsules cleistocarpous, immersed, globose to oval, with a small apiculus; exothecial cells isodiametric, rough when dry, tumid when moist; stomata scattered over the surface. Spores rather large.

A monotypic family, with one species native to Australia and South Africa.

References

- Sainsbury, G.O.K. (1948), Bryobartramiaceae a new moss family, *Bryologist* 51: 9–13.
- Stone, I.G. & Schelpe, E.A.C.L.E. (1973), Two new generic records of mosses for southern Africa, *J. S. African Bot.* 39: 131–132.
- Stone, I.G. (1977), Some morphological and anatomical features of the monotypic genus *Bryobartramia* Sainsbury (Musci), *Austral. J. Bot.* 25: 141–157.
- Magill, R.E. (1981), *Fl. Southern Africa* 1(1): 269–270.

BRYOBARTRAMIA

Bryobartramia Sainsbury, *Bryologist* 51: 9 (1948); from the Greek *bryon* (a moss), and named in honour of the eminent American bryologist Edwin Bunting Bartram (1878–1964).

Type: *B. novae-valesiae* (Broth. ex G.Roth) I.G.Stone & G.A.M.Scott.

Description as for the family.

Bryobartramia novae-valesiae (Broth. ex G.Roth) I.G.Stone & G.A.M.Scott, *J. Bryol.* 7: 604 (1973)

Trachycarpidium novae-valesiae Broth. ex G.Roth, *Hedwigia* 53: 94 (1913). T: Cowra, N.S.W., W.W.Watts 7829; holo: ?S n.v.; iso: NSW.

Cite as: I.G.Stone, *Australian Mosses Online*. 6. *Bryobartramiaceae*.
http://www.anbg.gov.au/abrs/Mosses_Online/Bryobartramiaceae.pdf (2012)

Bryobartramia robbinsii Sainsbury, *Bryologist* 51: 10 (1948). T: near Castlemaine, Vic., *F.Robbins 40a*; holo: Herb. G.O.K.Sainsbury 8092; iso: MEL.

Illustrations: G.A.M.Scott & I.G.Stone, *Mosses of Southern Australia* 199, pl. 34 (lower) (1976); I.G.Stone, *op. cit.* figs 1–6 (1977); D.G.Catcheside, *Mosses of South Australia* 204, fig. 108; 205, fig. 109 (1980); D.Meagher & B.Fuhrer, *A Field Guide to the Mosses and Allied Plants of Southern Australia* 133 (2003).

Plants to 3 mm tall. Leaves 0.3–1.0 mm long, 0.2–0.4 mm wide; costa to 60 μ m wide above, in cross-section with an adaxial surface of large papillose cells over 2 large deuter cells and an abaxial substereid group flanked by large papillose cells. Upper laminal cells 15–18 μ m wide.

Perichaetial leaves c. 5, to 2 mm long at maturity; costa 40–60 μ m wide, \pm filling the subula; laminal cells 10–15 μ m wide, elongate below, shorter above mid-region, but usually longest and thickest near the apex. Epigonium glossy, smooth, except at the rostrum, 1.7–2.2 mm long. Seta 0.2–0.4 mm long. Capsules c. 0.8 mm long. Spores \pm globose, 40–50 μ m diam., golden brown, irregularly tuberculate.

Occurs in southern W.A., S.A., N.S.W., A.C.T. and Vic. and found inland in lightly wooded country, mallee and dry-sclerophyll forest, with a mean annual rainfall of 250–600 mm; grows on clay or sandy loams, skeletal soils and rocky outcrops or on compacted river silts of the Murray River system. Also in Cape Province, South Africa.

W.A.: Boxwood Hills, Pallinup R., *I.G.Stone 6291* (MEL). S.A.: Koongawa, *I.G.Stone 6940* (MEL). N.S.W.: near Young, *W.W.Watts 7136* (NSW). Vic.: Dimboola Flora Reserve, *A.C.Beauglehole 5144* (MEL); Whipstick, Greater Bendigo Natl Park, *I.G.Stone 55* (MEL).

Apparently rare but probably overlooked. Usually easily recognised by the very large, glossy, inflated epigonium that persists until it eventually decays still enclosing the capsule, which then breaks off at the top of the seta.

Macroscopically, this moss can be confused with *Goniomitrium* Hook.f. & Wilson (Funariaceae), but the latter has smooth-celled leaves and a large plicate calyptra without a long rostrum.