MEESIACEAE

Graham H. Bell[1] *& David G. Catcheside*†

Meesiaceae Schimp., *Coroll. Bryol. Eur.* 82 (1856).

Type: *Meesia* Hedw., *nom. cons.*

Monoicous or dioicous. Plants slender to robust. Stems unbranched, or branching near base, with a central strand. Rhizoids basal or cauline, coloured and ornamented. Leaves ovate-lanceolate to narrowly lanceolate; costa single, strong, ending near apex or slightly excurrent; laminal cells smooth, almost quadrate to elongate-rectangular.

Perichaetial leaves undifferentiated. Calyptra small, cucullate. Sporophytes terminal. Setae usually long, slender and flexuose. Capsules clavate to elongate-pyriform, slightly to strongly curved and asymmetrical, with a long apophysis; annulus present; operculum small, convex or short-conical, often apiculate. Peristome diplolepidous; exostome teeth 16; endostome of 16 segments from a basal membrane. Spores small to large.

A small family of five genera; three (*Amblyodon* P.Beauv., *Neomeesia* Deguchi and *Paludella* Brid.) are monotypic, *Meesia* comprises c. 10 species and *Leptobryum* five. The latter two genera occur in Australia. The distribution is predominantly cool- to cold-temperate in both hemispheres, and colonies occur as dense tufts in wet habitats. *Leptobryum* was transferred (Buck & Goffinet, 2000) from its traditional position in Bryaceae on the basis of nuclear and chloroplast DNA evidence (Cox & Hedderson, 1998). This placement has been maintained in the most recent classification of mosses (Goffinet *et al.*, 2012).

References

Brotherus, V.F. (1924), Meeseaceae (sic), *Nat. Pflanzenfam.*, 2nd edn, 10: 443–445.

Buck, W.R. & Goffinet, B. (2000), Morphology and classification of mosses, *in* A.J.Shaw & B.Goffinet (eds), *Bryophyte Biology* 71–123.

Cox, C.J. & Hedderson, T.A.J. (1998), Phylogenetic relationships among the ciliate arthrodontous mosses: evidence from chloroplast and nuclear DNA sequences, *Pl. Syst. Evol.* 215: 119–139.

Goffinet, B., Shaw, A.J. & Buck, W.R. (2012), *Classification of the Bryophyta*. [http://www.eeb.uconn.edu/people/goffinet/Classificationmosses.html]

Norris, D.H., Koponen, T. & Piippo, S. (1999), Bryophyte flora of the Huon Peninsula, Papua New Guinea. LXVI. Meesiaceae (Musci), with lists of boreal to temperate disjunct, bipolar, and widely spread species in New Guinea, *Ann. Bot. Fennici* 36: 257–263.

Smith, A.J.E. (1978), Meesiaceae, *Moss Flora of Britain and Ireland* 451–453.

Key to Genera

Short slender annual plants with long flexuose leaves; growing on the ground in moist habitats, often weedy .... **LEPTOBRYUM**

Taller robust perennial plants with shorter erect or squarrose leaves; growing partly buried in subalpine boggy habitats ..... **MEESIA**

[1] State Herbarium of South Australia, Plant Biodiversity Centre, Hackney Road, Hackney, South Australia 5069.

Cite as: G.H.Bell & D.G.Catcheside, *Australian Mosses Online. 43. Meesiaceae.* http://www.anbg.gov.au/abrs/Mosses_online/Meesiaceae.pdf (2012)