LEMBOPHYLLACEAE

Niels Klazenga[1] *& Josephine Milne*[2]

Lembophyllaceae Broth., *in* H.G.A.Engler & K.A.E.Prantl, *Nat. Pflanzenfam.* I, 3: 863 (1907).

Type: *Lembophyllum* Lindb.

Dioicous pleurocarpous mosses forming rough mats, wefts or pendents, when weft-forming often stipitate-frondose. Pseudoparaphyllia foliose. Leaves often concave; costa single, double or absent; alar patches differentiated.

Perichaetia and perigonia in leaf axils along stems and first order branches. Calyptra cucullate, mainly smooth. Capsules mostly long-exserted and horizontal; stomata at the base of the capsule, slightly bulging, phaneropore. Peristome diplolepideous, hypnobryaceous. Exostome teeth narrowly triangular, shouldered, bordered; outer face horizontally striate with scattered papillae on the striae in the proximal 60–67%, papillose above, with coarse conical papillae on trabeculae, margins and the commissural line; inner face smooth below, papillose above, especially on trabeculae. Endostome slightly shorter to slightly longer than the exostome, with a basal membrane to 33–50% of the endostome length (except in *Weymouthia mollis*); outer surface papillose; inner surface smooth; processes keeled, fenestrate, papillose; cilia 2 or 3 between every 2 processes (except in *W. mollis*), nodulose, papillose. Spores globose, finely papillose.

A family of five genera and 17 species, four genera and ten species are known from Australia (Tangney, 1997); three other non-Australian genera are of uncertain position (Tangney, 1997). The family has a mainly Gondwanan distribution, with representatives in southern South America, New Zealand, eastern Australia, Subantarctic islands and the Hawaiian Islands. Only some members of *Camptochaete* sect. *Thamniella* occur further north, in Malesia and New Caledonia.

The Lembophyllaceae are characterised by (i) a pleurocarpous, weft-forming or pendent growth form; (ii) mostly long-exserted, horizontal capsules; (iii) a hypnobryaceous peristome; (iv) often concave leaves; (v) mostly linear, often slightly vermicular mid-laminal cells; and (vi) rhombic upper laminal cells. A stipitate-frondose growth form occurs in *Camptochaete* and often, to a lesser extent, in *Lembophyllum* and *Fallaciella*.

References

Crum, H.A. (1991), A partial clarification of the Lembophyllaceae, *J. Hattori Bot. Lab.* 69: 313–322.

Tangney, R.S. (1997), A generic revision of the Lembophyllaceae, *J. Hattori Bot. Lab.* 81: 123–153.

KEY TO GENERA

1 Plants stipitate-frondose, with a distinct stipe and frond; stipe, frond axis and branch leaves differing in size and/or shape; leaf apices mostly acuminate or ending in a sharp point ..... **CAMPTOCHAETE**

1: Plants not frondose or the leaves uniform; leaf apices rounded to broadly acute 2

[1] Royal Botanic Gardens Melbourne, Birdwood Avenue, South Yarra, Vic. 3141.

[2] Royal Botanic Gardens Melbourne, Birdwood Avenue, South Yarra, Vic. 3141.

Cite as: N.Klazenga & J.Milne, *Australian Mosses Online. 30. Lembophyllaceae*.
http://www.anbg.gov.au/abrs/Mosses_Online/Lembophyllaceae.pdf (2012)

2 Lamina with isodiametric to oblong ±rhombic cells, at least in the upper half and further down in a broad marginal band; leaves uniform ..... **LEMBOPHYLLUM**

2: Mid-laminal cells elongate to linear; only apical cells considerably shorter; stem or frond axis leaves often slightly larger than branch leaves 3

3 Plants small, growing in rough mats or wefts; laminal cells prorulate..... **FALLACIELLA**

3: Plants large, growing in wefts or pendents; laminal cells not markedly prorulate..... **WEYMOUTHIA**