

CRYPHAEACEAE

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Cryphaeaceae Schimp., *Coroll. Bryol. Eur.* 97 (1856).

Type: *Cryphaea* D.Mohr

Autoicous, nearly always with sporophytes. Plants gregarious, epiphytic or epilithic, mostly dull, various shades of green, yellowish or brownish, occasionally blackish; stolons creeping; stems erect to pendent, ±distinctly stipitate, irregularly to pinnately branched. Leaves imbricate when dry, spreading when wet, distinctly decurrent, ovate, ovate-lanceolate, ovate-acuminate or almost elliptic; apex acute to acuminate, occasionally obtuse; costa single, strong, usually reaching near the leaf apex or percurrent, occasionally vanishing clearly below the leaf apex; margins recurved at least below, crenulate to serrulate above, entire below, or entire throughout. Laminal cells moderately thick-walled, smooth or with elevated corners, mostly oval to rhomboid; marginal cells shorter; supra-alar cells often transverse; alar cells indistinct or somewhat inflated and hyaline to brownish.

Perigonia small, bud-shaped, pseudolateral on stems and branches. Perichaetia terminal on branches or pseudolateral (terminal on very short branches). Perichaetial leaves gradually demarcated from the subjacent branch leaves; innermost leaves longest and most well-differentiated, aristate by a long-excurrent costa. Seta short. Capsules immersed, erect, symmetrical, ovoid to obloid, smooth. Annulus well-differentiated and deciduous, or absent. Operculum conical-rostrate, conical, or flat and short-rostrate. Calyptra mitrate, scabrous by projecting cells. Peristome inserted below the rim, diplolepideous, single or double, with 16 lanceolate exostome teeth and (in double peristomes) subulate endostome segments; basal membrane low; cilia absent. Spores globose, isomorphic.

The family includes 11 genera and approximately 100 species, mainly in tropical and subtropical regions, with the centre of diversity being the Neotropics. It is represented in Australia by four genera and six species, with one species endemic. These mosses are predominantly epiphytic or, especially when associated with aquatic habitats, epilithic.

The Cryphaeaceae are closely related to the Leucodontaceae. The generic taxonomy is not yet well understood, the heterogeneous *Cryphaea* posing the greatest problems. The genera are characterised by combinations of features rather than any unique characters.

References

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Key to Genera

- 1 Perichaetia pseudolateral (terminal on short branches).....2
- 1: Perichaetia terminal on elongate branches3
 - 2 Associated with aquatic habitats; corners of leaf cells elevated; alar cells somewhat enlarged, hyaline or slightly pigmented **DENDROCRYPHAEA**
 - 2: Usually not associated with aquatic habitats; corners of leaf cells not elevated; alar cells indistinct
..... **CRYPHAEA**
- 3 Associated with aquatic habitats, epiphytic or epilithic; stems (sub)pinnately branched; branches mostly patent; costa ceasing near the leaf apex; peristome double; operculum flat-rostrate **CYPTODON**
- 3: Not associated with aquatic habitats, epiphytic; stems irregularly branched; branches mostly erect or erect-patent; costa ceasing at c. two-thirds of the leaf length; peristome single (endostome absent); operculum conical **SCHOENOBRYUM**