

# NECKERACEAE

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**Neckeraceae** Schimp., *Coroll. Bryol. Eur.* 99 (1856).

Type: *Neckera* Hedw.

Dioicous or monoicous. Plants frondose, dendroid or fan-shaped. Primary stem creeping, monopodially branched. Secondary stems ascending, horizontal or pendulous, simple to irregularly branched, complanate-foliate; flagelliform branches often present. Leaves ovate, ovate-lanceolate, elliptical, lingulate or spatulate, often plicate or undulate; costa single, strong or weak, ending below the apex. Laminal cells narrowly rectangular throughout, or upper laminal cells isodiametric to oblong, oval or rhomboidal; intramarginal limbidium occasionally present, consisting of longer cells; alar cells not differentiated; paraphyllia present or absent.

Perichaetia and perigonia lateral. Calyptra cucullate, smooth. Capsules immersed to exserted, oblong-ovoid to cylindrical, smooth. Peristome diplolepidous; endostome processes entire, fenestrate or gaping at the base; cilia present or absent.

This large, cosmopolitan family is most diverse in temperate to tropical regions of the world. Enroth (1994) provisionally listed 23 genera in the family; Buck & Goffinet (2000) accepted 28 genera. The family is represented in Australia by eight genera and 13 species.

## References

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

Enroth, J. (1989), Bryophyte flora of the Huon Peninsula, Papua New Guinea. XXVII. Neckeraceae (Musci), *Acta Bot. Fenn.* 137: 41–80.

Enroth, J. (1994), On the evolution and circumscription of the Neckeraceae (Musci), *J. Hattori Bot. Lab.* 76: 13–20.

## Key to Genera

- 1 Plants stipitate-frondose .....2
- 1: Plants not stipitate-frondose .....8
  - 2 Leaf margin coarsely dentate with multicellular teeth at the apex ..... **HOMALIODENDRON**
  - 2: Leaf margin entire to serrulate at the apex .....3
- 3 Leaf apex rounded .....4
- 3: Leaf apex obtuse to acuminate .....5
  - 4 Distal stem and branch leaves caducous ..... **CADUCIELLA**
  - 4: Leaves not caducous ..... **HOMALIODENDRON**
- 5 Leaves lingulate with ±parallel sides, undulate or rugose; leaf apex very broadly obtuse to acute .....  
..... **HIMANTOCLADIUM**
- 5: Leaves ovate to ovate-lingulate, smooth or plicate; sides not parallel; apex obtuse to acuminate .....6

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[Leptodontaceae, treated as a distinct family in *Australian Mosses Online* (No. 60), has recently been confirmed as a synonym of Neckeraceae – Ed.]

- 6 Leaves subdistichous, flat, smooth; costa not keeled ..... **THAMNOBRYUM**
- 6 Leaves spirally arranged, canaliculate, plicate; costa strongly keeled ..... 7
- 7 Intramarginal limbidium differentiated; 2–4 rows of cells at the basal leaf margin quadrate, conspicuously shorter than basal median cells ..... **PINNATELLA**
- 7: Intramarginal limbidium not differentiated; cells at basal leaf margin long-rectangular to linear, similar to basal median cells ..... **THAMNOBRYUM**
- 8 Costa very strong, occupying c. one-third of the leaf width, subpercurrent; growing on partly submerged rocks ..... **TOUWIA**
- 8: Costa absent or short and faint; usually epiphytic ..... 9
- 9 Leaves ovate to ovate-lanceolate; leaf apex acuminate, serrate; undulate when dry ..... **NECKERA**
- 9: Leaves lingulate; leaf apex broadly rounded to truncate, entire; conspicuously undulate when dry ..... **NECKEROPSIS**