BARTRAMIACEAE

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Bartramiaceae Schwägr., *in* C.L. von Willdenow, *Sp. Pl.* 5(2): 90 (1830).

Type: *Bartramia* Hedw.

Monoicous or dioicous. Plants variable in size, slender to robust, short to tall, ±densely tufted. Stems usually erect and simple, or with subfloral innovations, sometimes sparingly or fastigately branched, ±tomentose below (occasionally densely so). Rhizoids usually ±papillose (smooth in *Conostomum*). Leaves ovate-lanceolate to linear-lanceolate, acute to acuminate; margin entire to serrate; costa failing below apex to long-excurrent; laminal cells linear to rectangular or isodiametric, ±papillose from projecting cell ends, rarely with a central papilla; alar cells present or absent.

Calyptra cucullate. Setae well developed, elongate, rarely short and arcuate. Capsules erect to pendulous, globose to short-cylindrical, often furrowed longitudinally when dry; operculum convex to rostrate, with or without an umbo. Peristome single, double or absent. Spores often coarsely papillose or verrucose.

This is a large, cosmopolitan family of 11 genera. Four genera and 24 species are known from Australia. Griffin & Buck (1989) recognised three subfamilies based on axillary hair morphology. Conostomideae is represented in Australia by *Conostomum*, Breutelioideae by *Breutelia* and *Philonotis*, and Bartramioideae by *Bartramia*.

The Bartramiaceae have the common name of Apple Moss due to the shape of the globose, immature capsules. Many species are highly variable, and Sainsbury (*Bull. Roy. Soc. New Zealand* 5: 1–490, 1955) noted that habitat-induced variability could be seen in moist habitats, causing difficulties in the delimitation of species.

References

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Key to Genera

1 Leaves in ranks of 5 (this sometimes obscured when dry); operculum rostrate with a long thin bent apex; peristome teeth absent or smooth and joined at the apex ..... **CONOSTOMUM**

1: Leaves not ranked; operculum convex to umbonate; peristome teeth absent or papillose and not joined at the apex 2

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2 Plants without subfloral innovations; leaves long and narrow (often abruptly narrowed from a sheathing base); apex setaceous *(1:)*.....**BARTRAMIA**

2: Plants with subfloral innovations; leaves shorter and more lanceolate (sheathing base not present); apex entire to denticulate, occasionally setaceous 3

3 Leaves usually plicate at least at the base; more than 20 cells between margin and costa at leaf base *(2:)* ..... **BREUTELIA**

3: Leaves not plicate; fewer than 20 cells between margin and costa at leaf base ..... **PHILONOTIS**