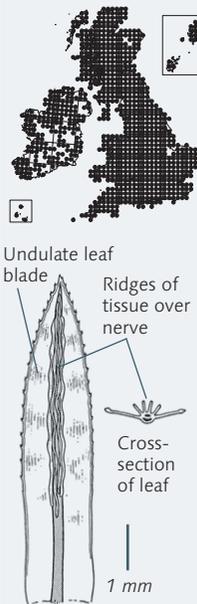


Atrichum undulatum

Common Smoothcap/Catherine's Moss

Key 92, 158



Identification

This is one of our most robust and distinctive acrocarpous mosses and soon becomes familiar to beginners. It is a loosely tufted, moderately robust species that can form extensive patches. These tend to be dark green, but are yellower when well-lit. Individual stems are erect, unbranched, and grow to 7 cm, with long, narrow, pointed leaves up to 1 cm long. Each leaf is distinctly transversely undulate when moist, and strongly crisped when dry. The leaf margins have paired teeth from near the base, and the back is rough, with numerous small teeth. The nerve ends in the leaf tip. Capsules are frequent in the common var. *undulatum*. The inclined, cylindrical capsule is 3–4 mm long with a lid and beak of similar length to the capsule. It is borne on a 2–4 cm long reddish seta. There are 32 peristome teeth and the mouth of the capsule is closed by a delicate drumskin-like membrane (as in other *Atrichum* and *Polytrichum* species, and other relatives). The very rare var. *gracilisetum* has male organs just below the female, whereas in the common var. *undulatum* male and female organs are borne on different branches. Var. *gracilisetum* also differs from var. *undulatum* in having yellow setae and a straighter capsule. It usually produces several capsules per shoot, and these remain *in situ*, so old fruits appear lateral on growing stems.

Similar species

The commonly associated *Mnium hornum* (p. 612) forms tighter tufts, and its shorter leaves are egg-shaped and lack undulations. Although the leaves of *Plagiommium undulatum* (p. 618) are undulate, they are much blunter at the tip; *P. undulatum* often has branched shoots. The ridges of tissue on the leaves of *A. undulatum*, whilst not always obvious unless carefully examined, are very distinctive. Young or stunted plants of *A. undulatum* are most likely to be mistaken for rarer members of the same



genus and microscopical study of the number and height of the ridges of tissue may be necessary. *A. angustatum* (p. 332) has narrower, less crisped leaves and much smaller leaf cells. *A. tenellum* (p. 329) has leaves narrowing to the base; fewer, taller ridges of tissue, marginal teeth only down to about mid-leaf and rhizoidal gemmae. *A. crispum* (p. 328) has broader leaves that are distinctly narrowed to the base, and less well-developed ridges of tissue. The extremely rare *Timmia megapolitana* (Smith, p. 496) is superficially similar, but differs in its leaves with single marginal teeth and no ridges of tissue over the nerve. It is only known in Britain from one area of tidal wet woodland in the Norfolk Broads.

Habitat Very common in lowland woodlands, only avoiding the most acidic and highly calcareous soils. *A. undulatum* is usually found in shaded, well-drained places, but it also occurs on heaths and in unimproved and semi-improved grasslands, where it favours banks and anthills. It also occurs on rocky ledges.