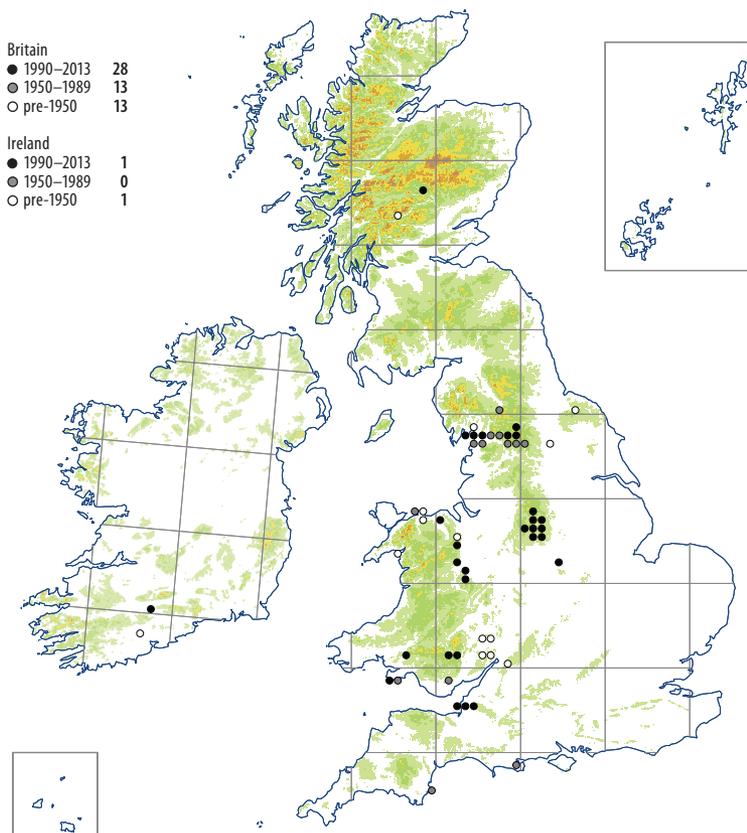


Entosthodon muhlenbergii



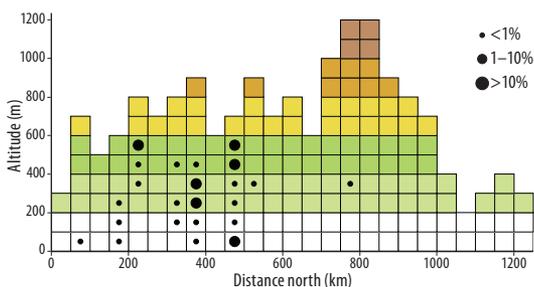
A calcicole, this species occurs on thin, well-drained soil on calcareous substrates. It is especially characteristic of outcrops of Carboniferous Limestone on open banks and hillsides, growing on bare soil in rock crevices, on ledges and boulders, in thin turf and rarely on ant-hills. It has also been recorded from chalk. Frequent associates include *Reboulia hemisphaerica*, *Riccia sorocarpa*, *Encalypta vulgaris*, *Entosthodon fascicularis*, *Tortula* spp., *Weissia* spp., and in the Peak District *Targionia hypophylla*. It ascends to moderate altitudes in the uplands of Wales and the Pennines, but rather surprisingly in Ireland it is known only from southern lowland sites and is apparently absent from the extensive limestone outcrops of the Burren and elsewhere; it was recently rediscovered in Co. Cork, where its habitat is unusual in being on an old limestone wall. Altitudinal range: 30–450 m.

In spite of its restricted distribution and habitat, there is little evidence of decline. However the spread of coarse vegetation and scrub in limestone grassland is a real threat.

Autoicous; capsules are common, mature in late spring and early summer.

In the past this species has been confused with other *Entosthodon* species, especially *E. pulchellus*. Records made since the revision of Crundwell & Nyholm (1974) are generally reliable and the distribution shown in the map is likely to be substantially correct.

Submediterranean-Subatlantic. S, W and C Europe, north to southern Scandinavia, Poland and Ukraine. Macaronesia (Madeira), N Africa. Caucasus, SW Asia (including Arabia), east to Tajikistan and Kazakhstan; records from further east in Asia require confirmation. N and C America. Some older records from the Mediterranean region and elsewhere probably belong to related species.



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