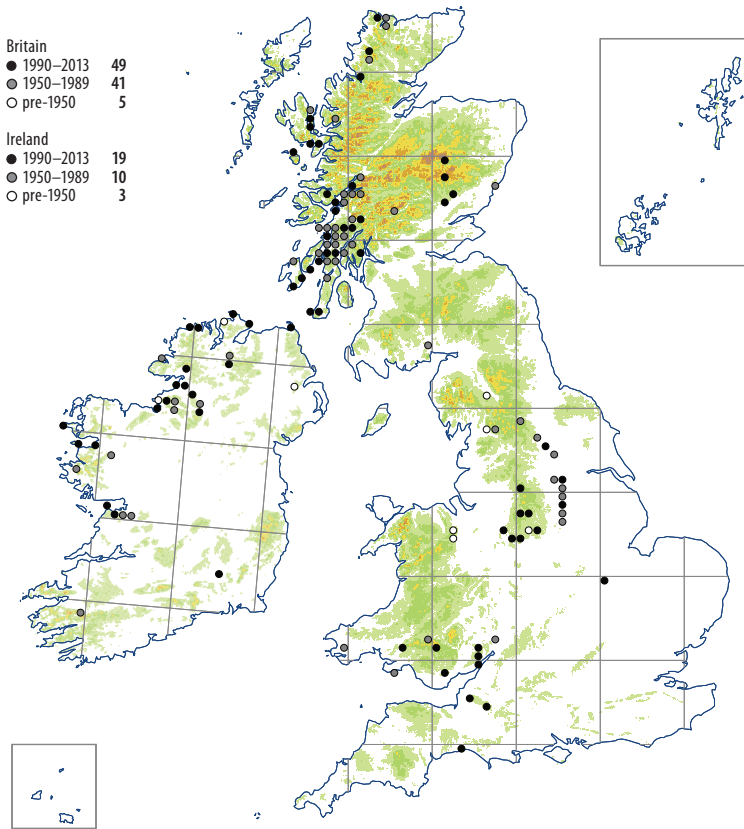


Gymnostomum calcareum

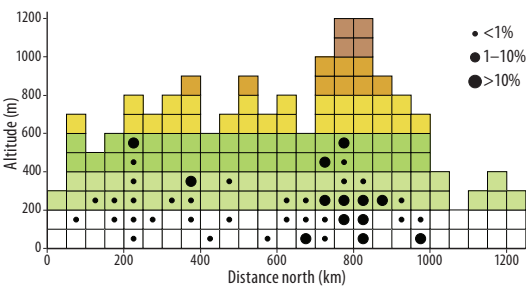


Growing in dense low patches on the soft faces of calcareous rocks or on thin soil in crevices and pockets among them, typically in sheltered well-drained sites that are seasonally moist. The most common rock types are Carboniferous and Magnesian Limestone and base-rich sandstone. Some populations are on banks (or detached blocks) of tufa, but it also occurs on boulders and crags in woodland and by springs and streams, less often in old quarries, and rarely in rock gardens, where it is possibly introduced with the substrate. There are a few records from the mortar of walls, but it is much rarer in this habitat than *Gymnostomum viridulum*. Some of its sites, especially in Scotland and Ireland, are on calcareous schist and base-rich igneous rocks, and its habitats there include coastal gullies, bouldery slopes and ravines at low altitudes. Its associates include *Leiocolea* spp. and *Eucladium verticillatum*. Altitudinal range: 15–560 m.

Dioicous; most plants are female. Male plants are rare in Britain and unknown from Ireland and consequently capsules are very rare, mature in late spring to summer. Gemmae are produced on the protonema in culture (Whitehouse & Crundwell, 1991).

This species was much confused in the past with other small Pottiaceae that have strap-shaped leaves, including *G. viridulum*. Older records are mapped only if herbarium specimens were confirmed by Whitehouse & Crundwell (1992). There have been relatively few additions since then, and it is likely that the map accurately reflects its very localised distribution.

Euro Siberian Southern-temperate. W, C and S Europe, common in the Mediterranean region, rare northwards to southern Sweden, Finland and NW Russia. Macaronesia, N Africa. SW Asia. Widely distributed elsewhere in both hemispheres, but its detailed distribution is obscured by taxonomic difficulties. Whitehouse & Crundwell (1991) confirmed records from Ethiopia, South Africa, China, USA, Chile, Australia and New Zealand.



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