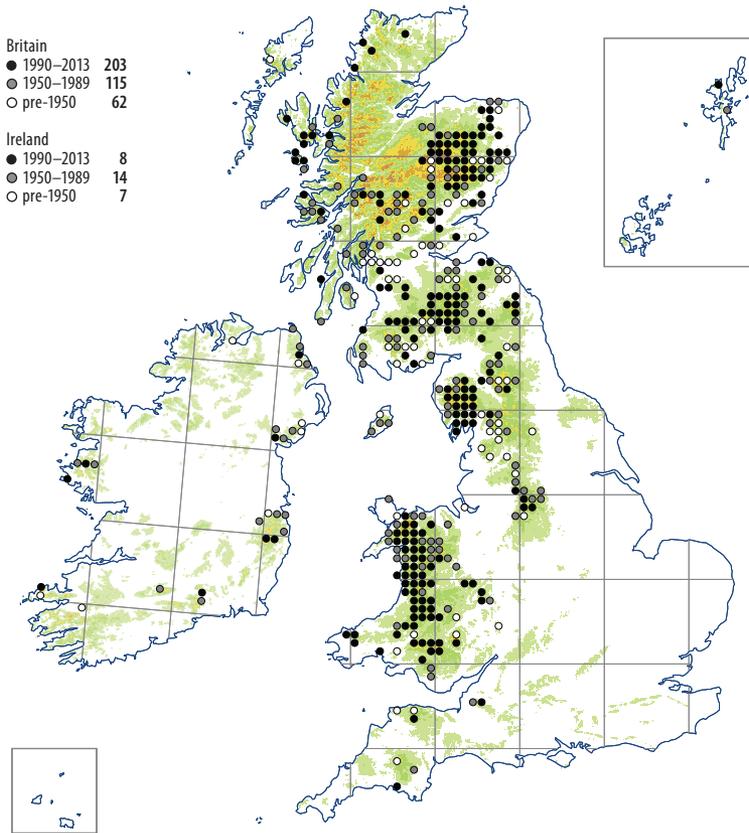


Grimmia donniana



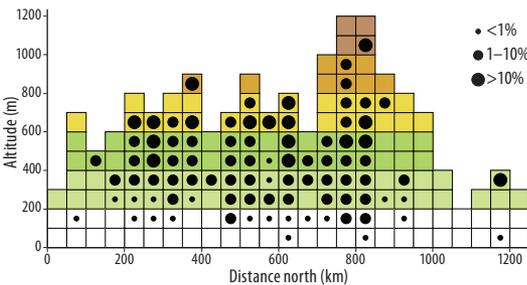
This upland species forms dark green to black cushions or sprawling tufts on exposed rather dry acid rock outcrops. It is particularly characteristic of hard rocks such as slates, and granites, shales, gritstones and sandstones. Only very rarely does it occur on base-rich rocks, for example on the island of Rum (where it is associated with *Glyphomitrium daviesii*). It occurs in a range of habitats, including on the surface and in cracks of sloping slabs on cliffs and crags, in screes and quarries, on rocky outcrops in open woodland, moorland and upland heath, on hill tops and on boulders surrounding lakes. At lower elevations it occasionally grows on stony mine waste and dry-stone walls; some populations in the South Pennines are on mortared gritstone walls, where the mortar may have acted as a buffer against SO₂ pollution. It is frequently found on rocks rich in heavy metals, such as vitrified lead slag. This is considered to

represent tolerance of, rather than any specific adaptation to, high concentrations of heavy metals (Brown & Bates, 1972) and it is thus not necessarily an indicator of these metals. Associates include other saxicolous mosses, such as *Andreaea* spp., *Grimmia* spp. and *Racomitrium* spp. Altitudinal range: 10–1020 m.

There is no clear evidence of a decline in this species, and whilst populations may comprise just a few small individual tufts, some sites support hundreds or even thousands of cushions.

Autoicous; capsules are common, mature from spring to autumn.

European Boreo-arctic montane. In Europe it occurs in Scandinavia (where it grows also on softer rocks), in the Alps and other high mountains of C Europe and extends east to the Balkans and European Russia. It is rare or absent from much of southern Europe but is reported from Spain, Sicily and Sardinia. Macaronesia. Turkey. Elsewhere it is known from the Caucasus, Siberia, the Himalaya (Nepal, Sikkim), China and Japan. N America (higher latitudes). S America (Bolivia, Ecuador). E Africa (Tanzania) and southern Africa (Lesotho and the Cape).



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