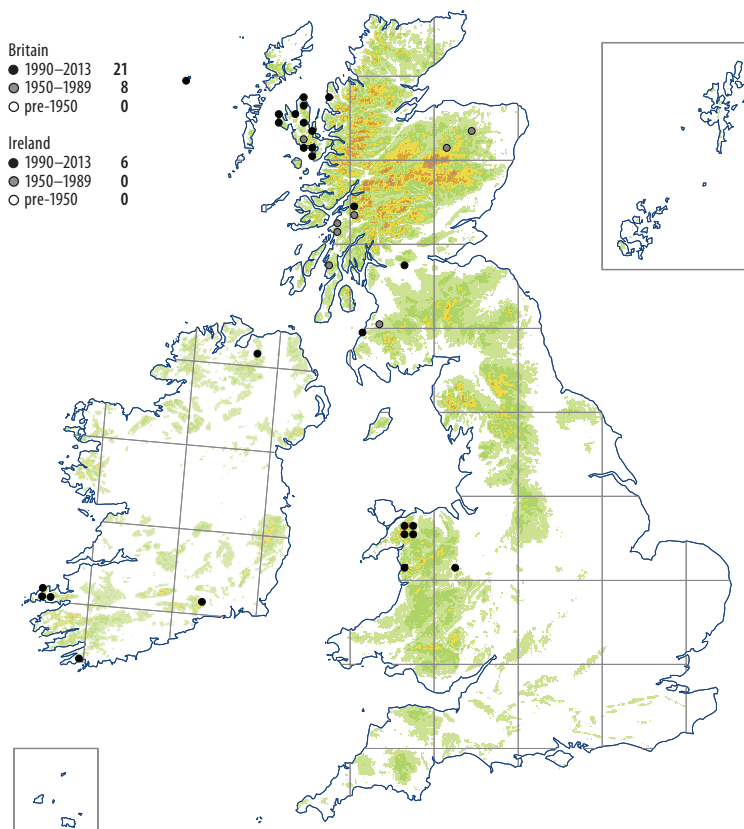


## Grimmia muehlenbeckii



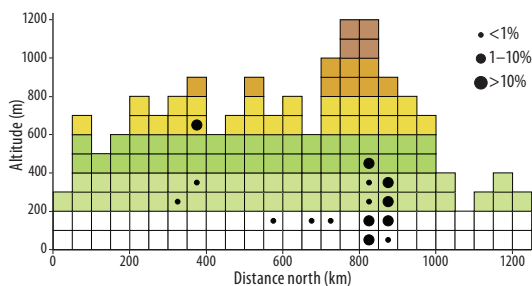
This species forms dense blackish cushions on dry basic igneous and ultra-basic rocks, including basalt and peridotite. It typically occupies sunny positions on exposed rock surfaces or in crevices, with a predominantly south-facing aspect, although it occasionally grows in more sheltered niches facing north. It occurs on cliffs, slabs on rocky hillsides, on the top of boulders in scree, on rocks by rivers, and particularly in Ireland and Wales, on boulders by lakes. It is often accompanied by other *Grimmia* species; these include *G. decipiens*, *G. longirostris*, *G. ramondii* and *G. trichophylla* in exposed situations such as on boulder tops and cliffs, *G. funalis* and more rarely *G. torquata* in more sheltered places, and *G. lisae* and more rarely *G. anomala* around lakes. Other associates are *Frullania tamarisci*, *Pterogonium gracile*, *Racomitrium ellipticum*,

*R. macounii*, *Schistidium agassizii*, *S. strictum* and *Ulota hutchinsiae*. Altitudinal range: 50–640 m.

Dioicous; capsules are unknown in Britain and Ireland. Propagules in the form of gemmae clusters on uniseriate branched filaments on the ventral and dorsal leaf base (Porley & Pressel, 2012) are present in material from Europe and elsewhere but have not been seen in Britain or Ireland.

A study of herbarium material has only recently confirmed *G. muehlenbeckii* as a British and Irish species (Porley & Maier, 2007) and it is therefore likely to be under-recorded. Although *G. muehlenbeckii* was mentioned as a British plant in Braithwaite (1888–1895), it was misunderstood and became mired in confusion. Later bryologists relegated it to *G. trichophylla* var. *tenuis*, and it has been rather neglected by British and Irish bryologists since. Many of the confirmed herbarium specimens were found under the name *G. decipiens* var. *robusta* and *G. britannica*.

Circumpolar Boreo-temperate. The precise distribution of *G. muehlenbeckii* is uncertain from confusion with other species. However, it occurs throughout most of N and C Europe, frequent in Fennoscandia, but rare in southern countries around the Mediterranean Sea. It is one of the few *Grimmia* species present in lowland European Russia. N Africa (Morocco). Turkey, Caucasus and Georgia to Kyrgyzstan, Siberia and Russian Far East, Japan. N America.



R.D. Porley