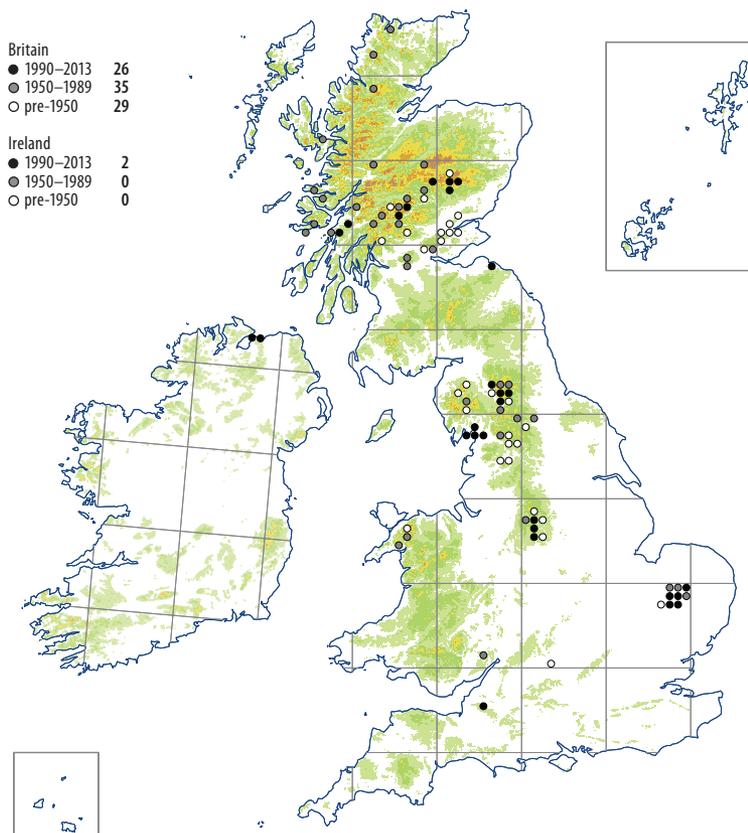


Rhytidium rugosum



A calcicolous species of dry, short and often rather open grassland and turf on well-drained shallow rendzina soils developed over a range of substrates including calcareous sands (especially in the East Anglian Breckland), limestone, basic andesites and other volcanic rocks, and mica-schists. It also occurs on dry south- to south-west-facing ledges of inland cliffs, in stable scree, in old limestone quarries, and more rarely in dune grasslands in Ireland and Scotland. It sometimes occurs in extensive, almost pure patches; common associates include *Scapania aspera*, *Ditrichum gracile*, *Entodon concinnus*, *Fissidens dubius*, *Homalothecium lutescens*, *Hylocomium splendens* and *Hypnum cupressiforme* var. *lacunosum*. On basic volcanic rocks it can occur with *Antitrichia curtispindula* and *Leucodon sciuroides*. Altitudinal range: 0–1000 m.

Although the map shows a number of apparent losses, the species may still be present at many of its old sites in the north of England and Scotland. It is curiously patchy in its distribution and absent from many seemingly suitable localities in Scotland, and surprisingly absent from the Carboniferous Limestone regions of Ireland (e.g. the Burren). In western N America it can occur in spruce (*Picea glauca*) forest, where it is fertile.

Dioicous; capsules are unknown in Britain and Ireland and very rare in Europe.

Circumpolar Boreo-arctic montane. In N Europe to Iceland, N Fennoscandia and Arctic Russia, southwards in the mountains to Spain, S Italy and N Greece. N Africa (Morocco). Turkey, Iran. Widespread in cool regions of the Northern Hemisphere, especially in continental interiors, the boreal zone and low Arctic, becoming rarer northwards to 78°N in Greenland. It extends southwards to the Himalaya, southern China, Mexico, Guatemala and Bolivia. Also in the mountains of tropical Africa (Kenya, Uganda).

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