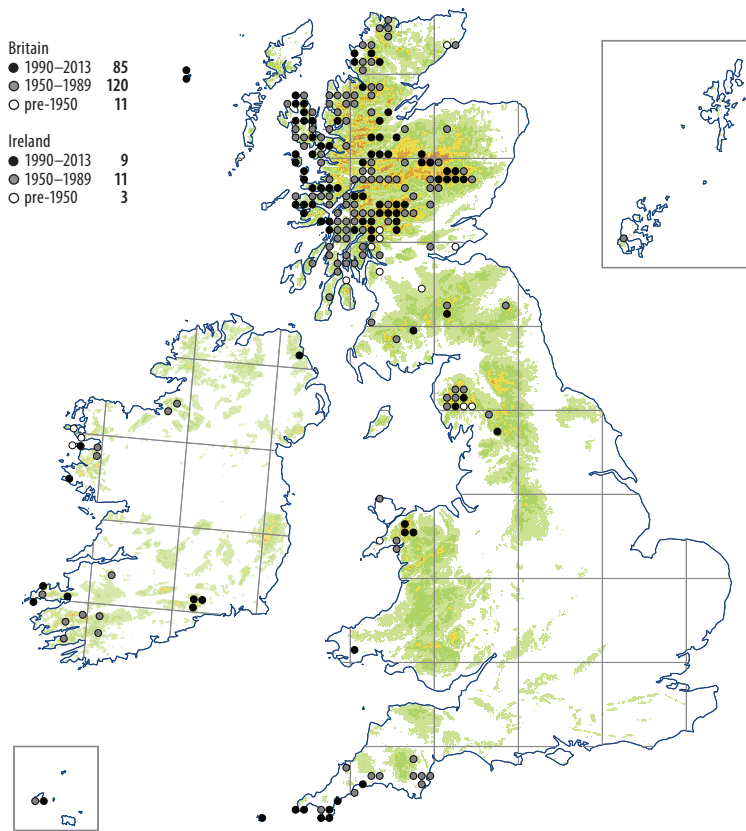


# Radula lindenberghiana



Characteristically found as small, pure but loose patches, on damp shaded mildly basic rocks, in both woodland and treeless ravines with *Lejeunea* spp., *Heterocladium heteropterum* and *Hyocomium armoricum*, and as pure, more compact patches on damp shaded basic montane cliffs with *Anoetangium aestivum*, *Distichium capillaceum*, *Fissidens dubius* and *Pohlia cruda*. It also occurs, more rarely, on basic boulders in stable block screens, on sheltered coastal rocks, on rocks in 'hedges' in Cornwall, and on damp rocks in woodlands. Altitudinal range: 15–1100 m.

The records appear to indicate a decline since the 1980s, but this is likely to result from the paucity of recording in some of its key areas. At the same time, the inconspicuous nature of fertile plants has led to *Radula lindenberghiana* being under-

recorded in some well-worked districts, such as Cornwall (Holyoak, 2012).

Dioicous; female plants are more common than males, sporophytes are occasional, February to August. Nearly always with gemmae.

Possibly under-recorded because it cannot be distinguished from *R. complanata* unless gametangia are present, and female shoots are easily overlooked. Studies of chloroplast DNA have shown that genetic variation is greatest in Macaronesia and falls off rapidly along a W-E gradient in Eurasia. Many western European populations may be derived from plants which have spread from Macaronesian refugia (Laenen *et al.*, 2011).

European Boreal-montane. Widespread but local in Europe, mainly in mountainous areas. Macaronesia; N, S and tropical Africa; Caucasus, Turkey, Iran, Arabia; N America, Greenland.

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