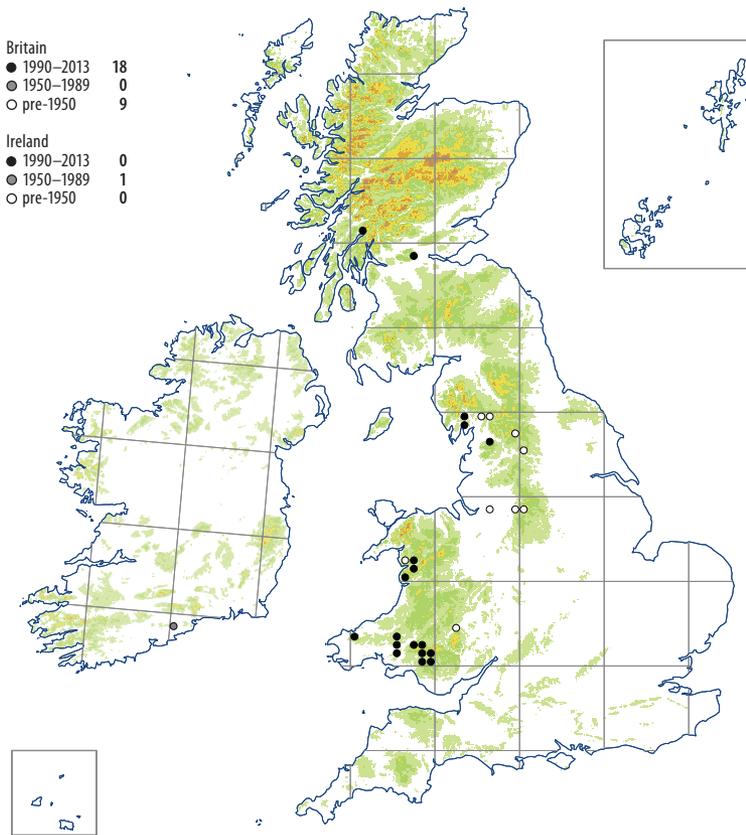


Rhytidiadelphus subpinnatus



Essentially a forest species of damp, lightly shaded, grassy stream-sides and banks in open woodland. At recently discovered sites in Wales it is characteristic of steep-sided wooded river valleys, growing on banks or over rocks and old tree stumps, associated with other robust bryophytes including *Plagiochila asplenioides*, *Cirriphyllum piliferum*, *Eurhynchium striatum*, *Rhytidiadelphus loreus*, *R. triquetrus* and *Thuidium tamariscinum* (Bosanquet & Motley, 2009). Some of these sites are on river banks subject to occasional flooding. In Stirlingshire its habitat is in open woodland in a ravine, and in Argyll in bouldery turf with *Loeskeobryum brevirostre* at the side of a burn. Altitudinal range: 50–270 m.

Rhytidiadelphus subpinnatus has a more boreal distribution than *R. squarrosus* (Koponen, 1971), being montane in C Europe and rare in the lowlands south of Finland. Its

occurrence in lowland Britain is therefore surprising. Its decline in areas formerly subject to severe air pollution is likely to be real, but the number of new records from Wales and Scotland suggest that it is widely overlooked. Bosanquet & Motley (2009) indicate livestock grazing and forestry operations as potential threats at the Welsh sites.

Dioicous; dehisced capsules were found in Carmarthenshire in April 2005, at a colony with both sexes of *R. subpinnatus* present. Holyoak (2001a) found a single capsule at Torrent Walk, Dolgellau, in 1998 that was probably a hybrid with male *R. loreus*, as only female plants of *R. subpinnatus* appear to be present nearby.

This misunderstood species can be confused with shade forms of *R. squarrosus*; however molecular analysis indicates that it is genetically distinct (Vanderpoorten *et al.*, 2003; Bell *et al.*, 2013). It can also be overlooked in the field as *Loeskeobryum brevirostre*. Older records are shown on the map only if confirmed by M.O. Hill from herbarium material.

Circumpolar Boreal-montane. N and C Europe, especially in the boreal forest zone, not in Iceland and Svalbard, south to the Alps and Bosnia-Herzegovina. Macaronesia (Azores). Turkey. Widespread in N and C Asia and in N America, where it is commoner than *R. squarrosus*, south to Tennessee and North Carolina.

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