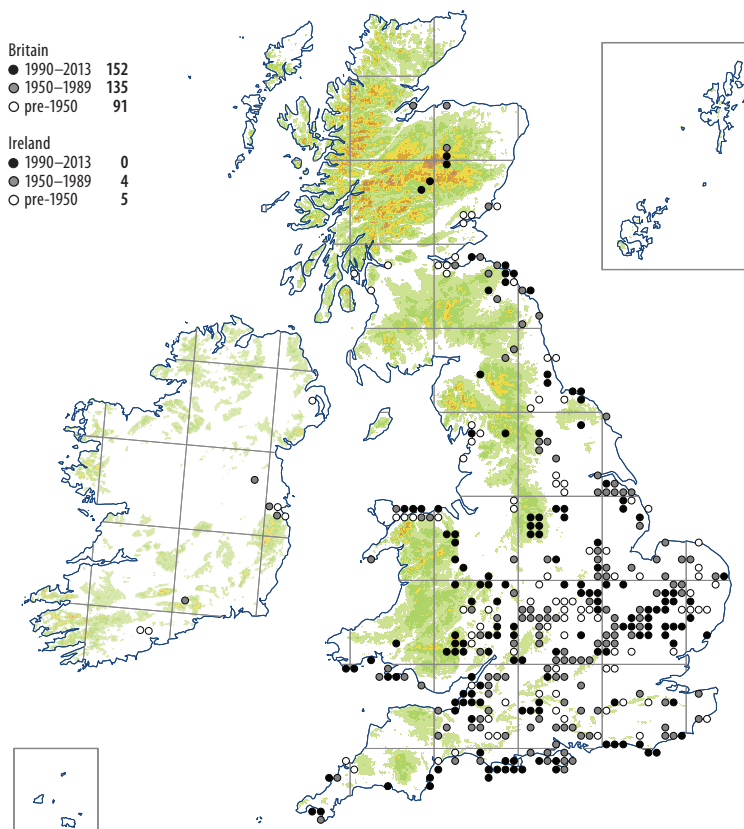


Tortula lanceola



A colonist of open or disturbed, usually calcareous soil, most frequently found over chalk and limestone, but also recorded from calcareous clay and sand, dolerite, sandstone and serpentine. Typical habitats include thin rocky turf over limestone, earthy rock ledges, open chalk downland (where it sometimes grows on ant-hills and mole-hills), quarries, soil on sea cliffs and banks by the sea. Associates on limestone rock ledges include *Reboulia hemisphaerica*, *Riccia sorocarpa*, *Encalypta vulgaris*, *Tortula modica* and *T. protobryoides*, while in southern regions and on chalk *Microbryum* spp. may be present. It was formerly a component of the rich bryophyte communities that occurred on mud-capped walls, with associates such as *Aloina* spp., *Barbula* spp., *Microbryum curvicolle* and *Pterygoneurum ovatum*. It only rarely occurs in more artificial habitats, such as stubble fields and paths. Altitudinal range: 0–660 m.

It has declined in southern and eastern England from the loss of grazed chalk and limestone grassland, and the encroachment of scrub and coarse vegetation. However much of this decline is of long-standing, as is the disappearance of mud-capped walls.

Autoicous; capsules are abundant, mature in the early months of the year, rarely at other seasons. Rhizoidal tubers are frequent in nearby parts of Europe and presumably in Britain and Ireland, and can remain viable even after five years' dry storage (Arts, 1987b). During & ter Horst (1983) demonstrated the presence of a bank of viable propagules in the soil of a Dutch chalk grassland.

Circumpolar Southern-temperate. Europe from the Mediterranean north to S Scandinavia and the Baltic States. Macaronesia, N Africa. SW and C Asia, China, Japan. N America (Idaho to Texas and South Carolina).

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