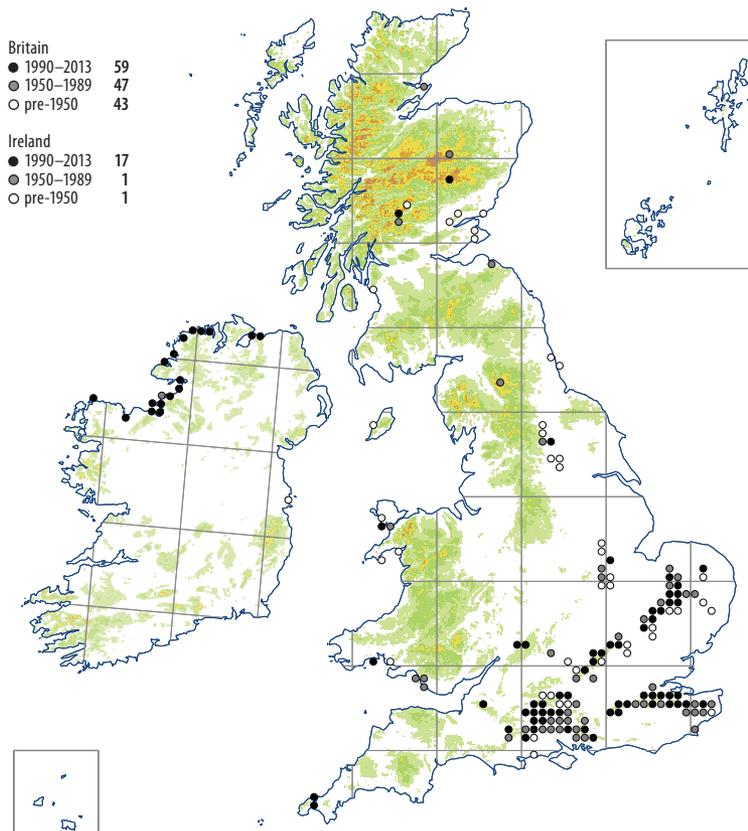


Abietinella abietina



In SE England this is a moss of skeletal soils, growing in open, unimproved short-grazed chalk grassland and on chalky spoil in old quarries and earthworks, mostly on chalk downlands and on the calcareous sandy soils of the East Anglian Breckland. It has also been recorded on Magnesian Limestone in northern England and Oolitic Limestone in the East Midlands and Cotswolds, often from old quarries, but has almost disappeared there. It is widespread but rare in upland areas of N England and Scotland, growing on montane rock ledges, in *Dryas* heath and on basic (often limestone) scree slopes. In E Scotland, Cornwall, Wales and Ireland, it grows in undisturbed calcareous grassland in coastal dune systems, mostly in relatively dry turf but sometimes on low mounds in slacks. Typical associates include *Leiocolea turbinata*, *Campyliadelphus chrysophyllus*, *Ditrichum gracile*, *Entodon concinnus*, *Fissidens dubius*,

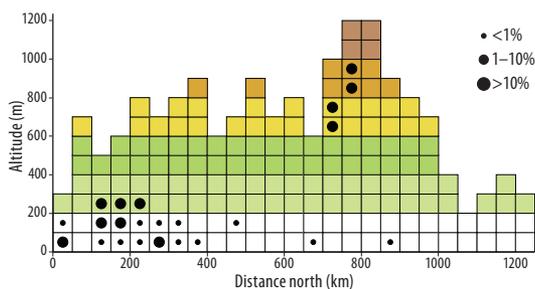
Homalothecium lutescens, *Trichostomum crispulum* and at a few sites *Rhytidium rugosum*. Additional associates on sand dunes include *Rhynchostegium megapolitanum* and *Tortella inclinata*. Altitudinal range: 0–880 m.

It has apparently declined greatly on sand dunes, probably from a general reduction in grazing leading to scrub encroachment. Many of its lowland sites inland have been lost to cessation of traditional grazing and vegetational succession in old quarries and pits.

Dioicous; capsules are very rare.

Two varieties are recognised in Britain and Ireland, but they have not always been treated consistently, both having been recorded on different occasions at the same sites. Most Irish plants except those from Co. Dublin and Magilligan in Co. Londonderry are var. *hystricosa*, as are most of those from the English chalk north to Bedfordshire. Elsewhere most plants are var. *abietina*, but in Anglesey, Angus, Suffolk and Gloucestershire there are records of intermediate plants.

Circumpolar Boreo-arctic montane. In Europe widespread from the Arctic south to N Spain, Sicily, N Greece and the Caucasus. Turkey, Iran. Widespread in Arctic, northern and montane regions of the Northern Hemisphere, and in the Drakensberg Mountains of South Africa and Lesotho in the Southern Hemisphere.



M.J. Wigginton, rev. N.G. Hodgetts