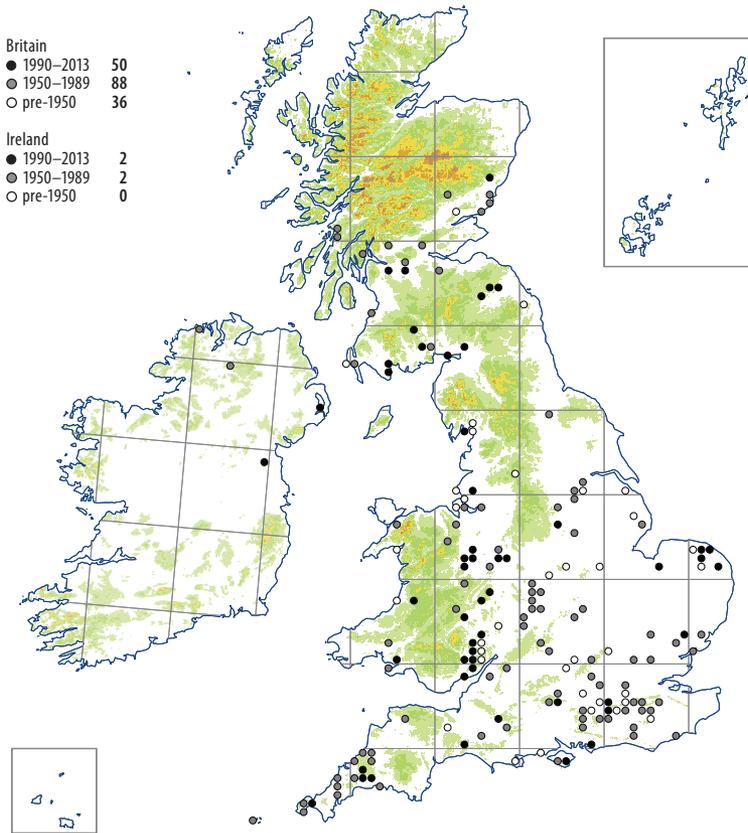


Anthoceros agrestis



A colonist of bare soils that is almost entirely restricted to arable fields, in contrast to *Anthoceros punctatus* which sometimes grows in them but is more often found in other habitats. It is a summer annual that grows on neutral or slightly alkaline, water-retentive clay and loam. It is characteristic of the species-rich *Tortula truncata*–*Anthoceros* assemblage, which is the most north-western and least abundant of the six British arable bryophyte communities (Preston *et al.*, 2010). Other members of this assemblage include *Phaeoceros carolinianus*, *P. laevis*, *Fossombronia pusilla*, *Riccia glauca*, *Bryum rubens*, *Dicranella staphylinia*, *Didymodon insulanus*, *Ephemerum minutissimum*, *Entosthodon fascicularis*, *Pleuridium subulatum*, *T. truncata* and *Trichodon cylindricus*. Altitudinal range: 0–215 m.

There is evidence of a significant decline in England. Although the Survey of the Bryophytes of Arable Land led to a large increase in the number of recording visits to British arable fields between 2002 and 2005, most English records date from before 1990. This species is primarily found in arable fields and there has been widespread arable intensification in Britain, including a large-scale shift from spring cultivation to autumn ploughing which does not allow any *Anthoceros* thalli that germinate sufficient time to produce spores. A similar decline has taken place in C Europe (Bisang *et al.*, 2009).

Monoicous; sporophytes mature from July to December. In a Swiss population studied by Bisang (2003), spores were able to germinate in cereal crops before the harvest and the first sporophytes matured four weeks after germination. Her evidence suggests that the species may reappear in fields after several years of unfavourable management, presumably from a persistent spore bank (Bisang, 1998). It lacks special means of asexual reproduction.

European Temperate. Occurs in N, E and C Europe; Macaronesia; N Africa; Kamchatka, China, Japan, Taiwan, Himalaya; N America.

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