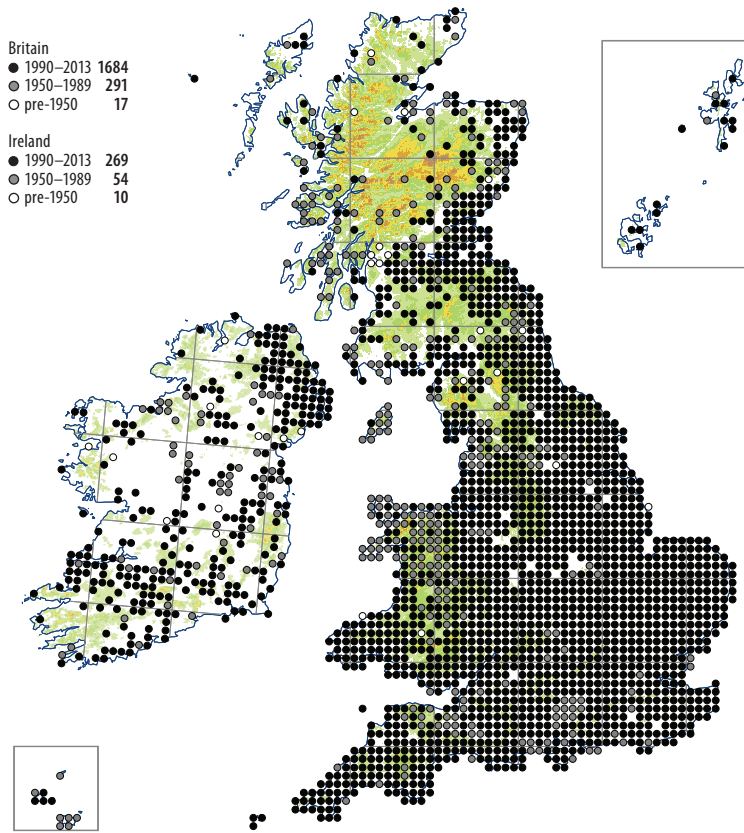


Orthotrichum diaphanum



Exceptional amongst our *Orthotrichum* species in the range of its substrates, being frequent both on inorganic substrates and as an epiphyte. On stonework, brickwork and concrete of walls, buildings, bridges and river embankments it grows with *Bryum argenteum*, *B. capillare*, *Grimmia pulvinata*, *Schistidium crassipilum* and *Tortula muralis*. It also occurs on rocks of natural outcrops and in quarries, and on artificial substrates such as asbestos and old tarmac, even exceptionally on metal gratings and the rubberised window edges of old cars. As an epiphyte it is often abundant on nutrient-enriched bark, e.g. of roadside trees in areas of intensive agriculture, but occurs also in less polluted sites and on silty bark in the flood zone of streams and rivers. It is most frequent on elder; other hosts include alder, ash, elm, hazel, oak, sycamore, tamarisk and willow. It colonises fence-posts and wooden gates. Among its many epiphytic

associates are *Frullania dilatata*, *Amblystegium serpens*, *Brachythecium rutabulum*, *Cryphaea heteromalla*, other *Orthotrichum* spp., *Rhynchostegium confertum*, *Syntrichia papillosa*, *Ulota phyllantha* and the lichens *Phaeophyscia orbicularis*, *Physcia tenella* and *Xanthoria parietina*. On silty riverside trees it is sometimes found with *O. sprucei* and *Syntrichia latifolia*. Altitudinal range: 0–525 m.

Even during the industrial era, *O. diaphanum* was tolerant of atmospheric pollution and at one time it was the only member of the genus found in many urban areas (Gilbert, 1968). It now extends into the heart of our city centres.

Autoicous; capsules are abundant, usually mature in winter and spring but recorded throughout the year. Gemmae are frequent on the leaves, and are abundant on the persistent protonema in nature and also in culture (Pressel & Duckett, unpublished).

European Southern-temperate. Europe except the north, reaching the Faeroes and S Scandinavia, NW Russia, Belarus and Ukraine; a common epiphyte in S Europe and often on street trees. Macaronesia, N Africa, SW Asia, to Caucasus and Kyrgyzstan. N America and northern S America, Hawaii. C and S Africa.

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