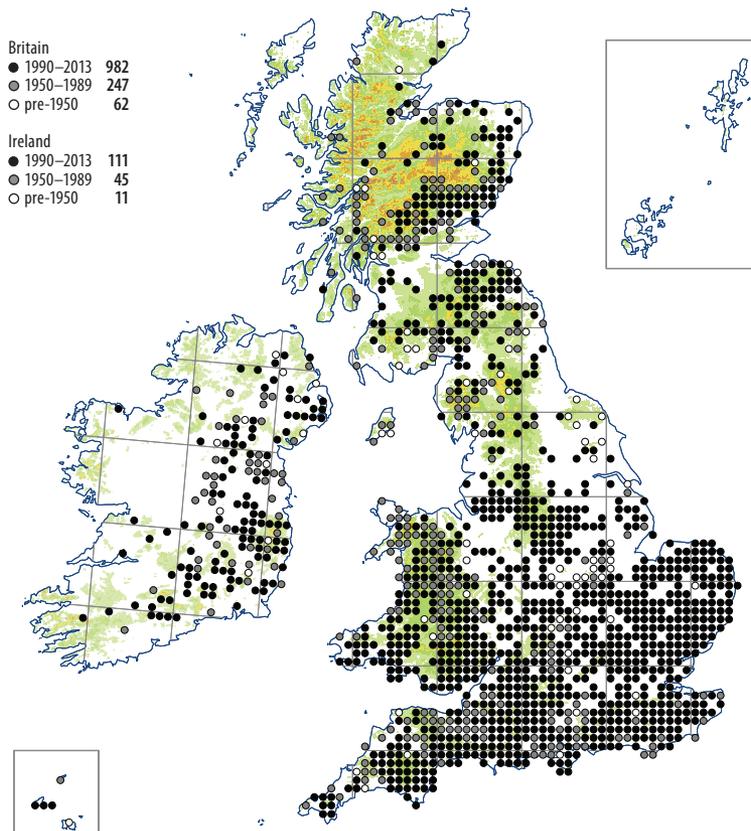


Orthotrichum lyellii

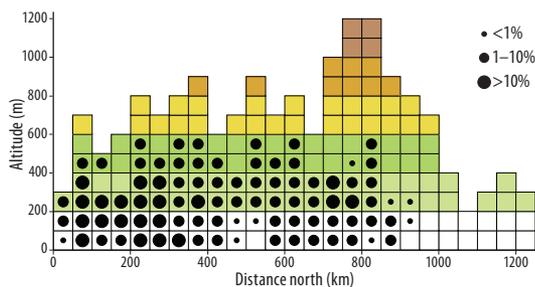


A member of the rather open bryophyte community found on the trunks of trees in woods or in open sites such as riversides and roadsides, often growing as solitary tufts amongst associates such as *Frullania dilatata*, *Metzgeria furcata*, *M. violacea*, *Cryphaea heteromalla*, *Neckera pumila*, *Orthotrichum striatum*, *Ulotia bruchii*, *U. crispa*, *U. phyllantha*, and (in drier places) *Leucodon sciuroides* and *Syntrichia laevipila*. It also grows on branches and twigs of elders and sallows in sheltered, humid thickets, and on the branches of coppiced hazels. It is occasionally recorded on walls and stonework. Like many *Orthotrichum* species, it is generally rare or absent in areas of highest rainfall where the tree trunks are smothered in a carpet of *Hypnum andoi* (Proctor, 1962). It is found on a wide range of host trees, most frequently on ash, oak, sycamore and willows, but also on many other species, even on

relatively short-lived shrubs such as roses. Altitudinal range: 0–450 m.

The western tendency formerly shown by the distribution of this species was a result of its susceptibility to atmospheric pollution. Following reductions in SO₂ levels, it is now present throughout England and Wales, though less common northwards in Scotland. Individual tufts are often vigorous, even close to areas once dominated by heavy industry.

Dioicous; capsules are scarce, maturing from spring to summer. Gemmae are always present on the leaves, sometimes in great abundance. They are also produced on the protonema, which may be persistent, in nature (Pressel & Duckett, unpublished) and in culture (Whitehouse, 1987).



Suboceanic Temperate. Widespread in S, W and C Europe north to southern Scandinavia, the Baltic States and Ukraine. Macaronesia, N Africa. Turkey and Near East to Kazakhstan and Tajikistan. Western N America, Mexico.

C.D. Preston, rev. T.L. Blockeel