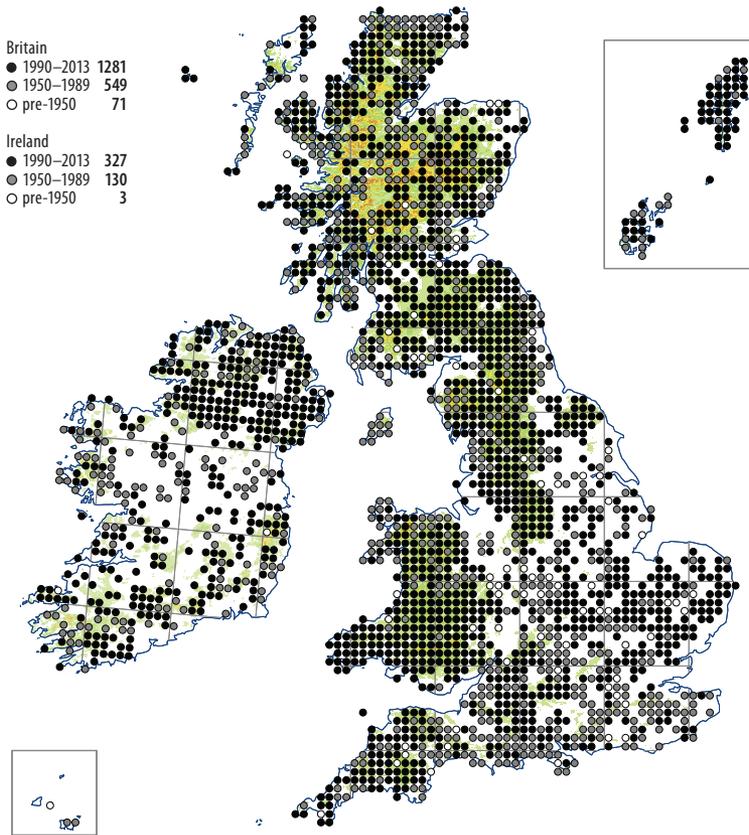


Fontinalis antipyretica



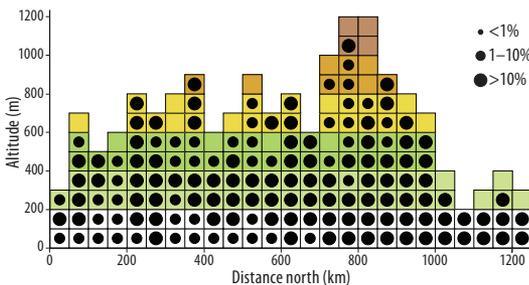
An aquatic with a wide habitat range, found in ponds, ditches, swamps, canals, streams, rivers and even, occasionally, water troughs. Although it often grows in oligotrophic water it is most frequent in neutral or basic, mesotrophic or eutrophic water and it can be particularly abundant in hitherto mesotrophic water which has recently received increased nutrient input. It tolerates periods of desiccation and insolation, and is frequent in the Irish turloughs where it forms a zone below that of *Cinclidotus fontinaloides* (Praeger, 1932). Plants in shallow water are usually attached to sparsely vegetated firm substrates such as stones, rocks or the bark of trees and shrubs; their local distribution around the margins of a lake is often governed by the availability of sites for attachment. *Fontinalis antipyretica* descends to the lower limit of macrophyte growth, growing on mud at a depth of 12 m in the clear,

calcareous water of Loch Baile a'Ghobhainn, Lismore, Argyll (Spence, 1967). It is moderately tolerant of pollution and is sometimes found in squalid streams, but is less persistent in such places than *Platyhypnidium riparioides*, with which it often occurs. Altitudinal range: 0–880 m.

Dioicous; capsules are occasional, mature in summer, developing on plants exposed by receding water levels, usually by ponds. Gemmae are produced from detached leaf and stem fragments and on the protonema in culture (Ares *et al.*, 2014).

A very variable species. The varieties distinguished in Britain and Ireland have not been recorded consistently and are mapped together here. *Var. gracilis* is a narrow-leaved form characteristic of swift-flowing upland streams; *vars. gigantea* and *cymbifolia* are large forms from still water. It is uncertain whether they have a genetic basis, but some distinctive populations of *var. cymbifolia* have been found recently in Ireland (Lockhart *et al.*, 2012).

Circumpolar Boreo-temperate. Throughout Europe from Iceland, N Scandinavia and Arctic Russia south to the Mediterranean islands. Macaronesia, N Africa. Turkey, Caucasus, Iran. Widespread in the Northern Hemisphere, extending south to N China and Japan, and in N America to New Mexico. Ethiopia, Eritrea, C Africa (reported from Uganda). South Africa (*var. gracilis* only), probably introduced.



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