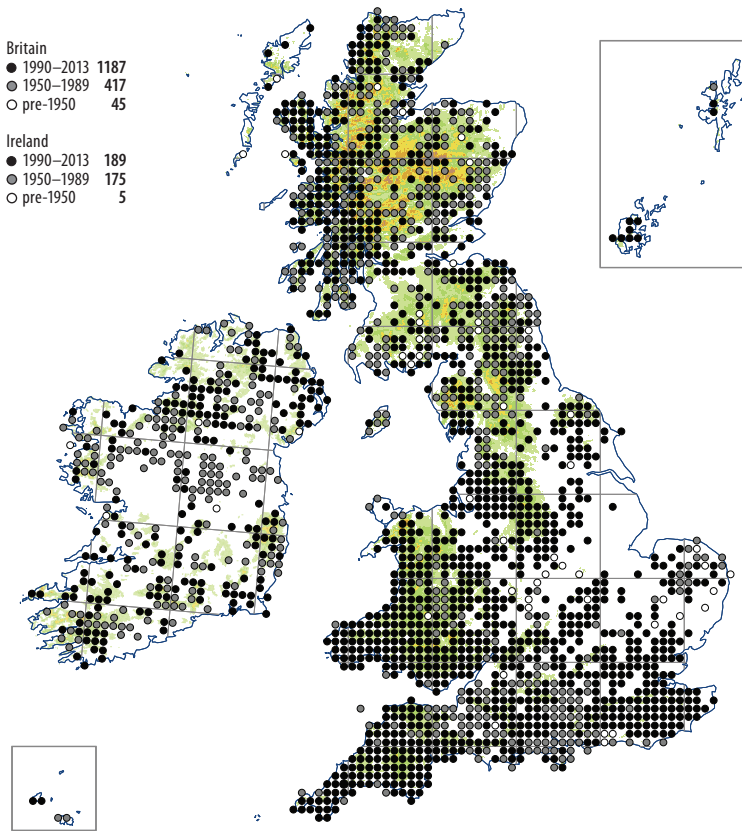


Uloa crispa



Almost always epiphytic, forming tufts on twigs and branches like *U. bruchii*, and often accompanied by it and in similar places. Wet woodland with sallows is a characteristic habitat, and indeed sallow is probably the commonest host tree, but it occurs on a wide range of other species, including ash, hazel, oak and sycamore. Common associates are *Frullania dilatata*, *Metzgeria furcata*, *M. violacea*, *Hypnum cupressiforme*, and in southern and eastern areas *Orthotrichum* spp. and *Rhynchostegium confertum*. It is generally less abundant than *Uloa bruchii*, especially in exposed coastal areas; in much of S Wales it is concentrated in upland areas (e.g. Bosanquet *et al.*, 2005; Bosanquet, 2010). Its relative frequency elsewhere is obscured by recording of *U. crispa* as an aggregate species. Altitudinal range: 0–600 m.

Interpretation of historical records is complicated by confusion with *U. bruchii*, with which it has sometimes been lumped, but during recent decades it has recolonised much of the Midlands and the industrial north where it had almost been eliminated by atmospheric pollution. Its relative scarcity in E England, compared with *U. bruchii*, is genuine.

Autoicous; capsules are abundant, mature mainly in summer and autumn.

For many years *U. crispa* and *U. bruchii* were treated as varieties of a single species, *U. crispa* var. *crispa* and var. *norvegica* respectively, but Garilleti *et al.* (2001) showed that there are distinct morphological differences in the peristome. Even in the narrower sense, *U. crispa* consists of more than one species, of which *U. crispula* Bruch is probably widespread here, as it is in the Iberian Peninsula (Caparrós *et al.*, 2014). Only records of *U. crispa* s.s. are mapped, but these could include a few records of the species in a broad sense.

European Temperate. Europe north to C Scandinavia and NW Russia, south to Portugal and the Balkan mountains, with a few localities in the mountains of the W Mediterranean. Macaronesia. Turkey, Caucasus and across C Asia to China and Japan. Eastern N America.

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