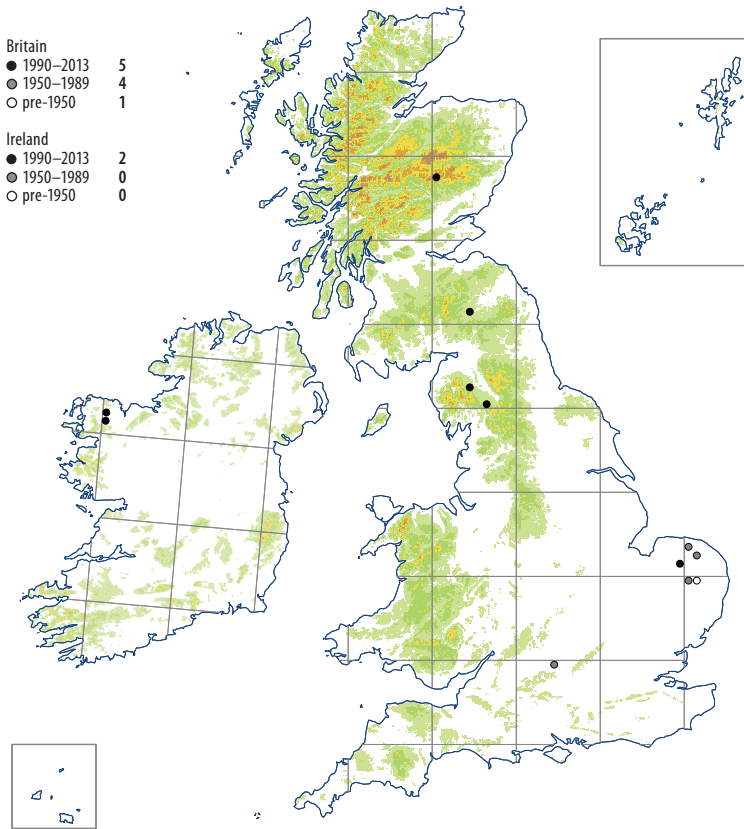


Leiocola rutheana



Two varieties of *Leicoles rutheana* grow in Britain, one of which is also present in Ireland. Both are found primarily in very wet, calcareous lowland fens, with *Carex dioica*, *Schoenus nigricans*, *Aneura pinguis*, *Bryum pseudotriquetrum*, *Calliergonella cuspidata*, *Campylium stellatum*, *Ctenidium molluscum*, *Scorpidium revolvens*, *S. scorpioides* and *Tomentypnum nitens*. In Co. Mayo, associated vegetation includes a heathy element with *Myrica gale*, *Vaccinium oxycoccus* and sphagna. One of the Westmorland sites is a tufa-rich flush, with admixed *Leicoles bantriensis* and associated *Parnassia palustris*, *Primula farinosa* and *Philonotis calcarea*. Altitudinal range: 25–520 m.

Leicoles rutheana appears to be following the ecologically similar *Helodium blandowii*, *Meesia triquetra* and *Paludella squarrosa* towards extinction or near extinction. Var.

rutheana has gone from its two Norfolk sites but is still present at two localities in Westmorland, one each in Selkirkshire and Roxburghshire (about 4 km apart in NT41), one in Perthshire, and three sites close to each other in West Mayo; var. *laxa* has been lost from its Berkshire site since 1983 and from three of its four Norfolk sites. Losses in southern England result from a lowered regional water table, fertiliser inputs and lack of grazing which have encouraged rank growth of tall herbs. The northern English and Scottish sites have all been found since the 1991–1994 Atlas, as have two of the three Irish localities. These new finds provide hope that further sites await discovery.

Paroicous; fertile plants are frequent, sporophytes are occasional in April; gemmae are absent.

DNA Barcoding suggests that var. *laxa* is more closely related to *L. gillmanii* and should be treated as a var. of that species (Bell *et al.*, 2013).

Circumpolar Boreo-arctic montane. Var. *rutheana* is generally rare throughout its range, but is recorded from 15 European countries (Porley, 2013), Siberia and the Russian Far East, Alaska, Canada and northern USA, Greenland; var. *laxa* has been recorded from England and one locality in Sweden.

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