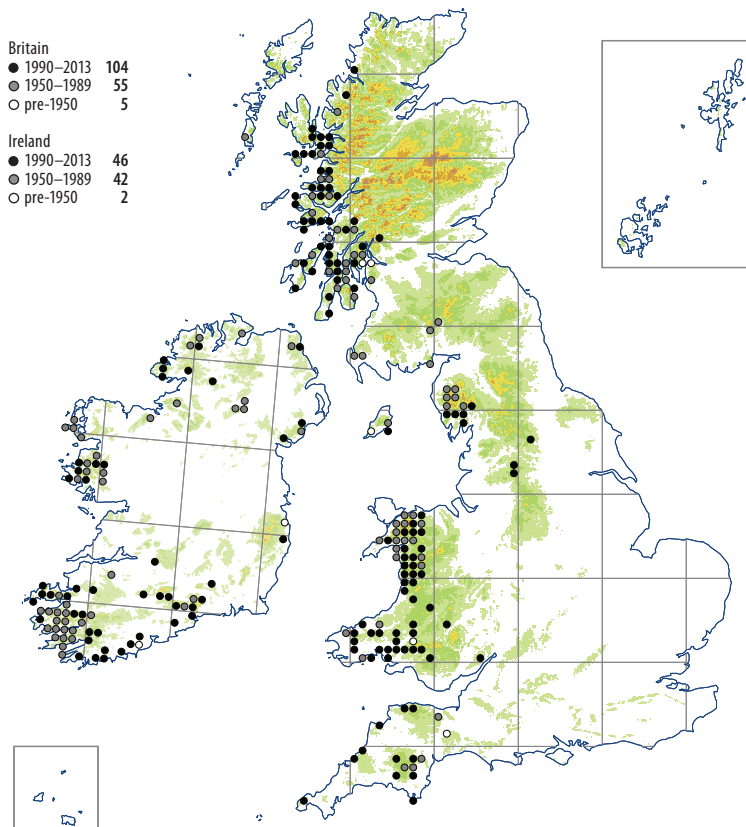


# Jubula hutchinsiae



Most commonly as pure, dark green patches on shaded, wet, often constantly dripping rocks in low-lying wooded ravines, especially around waterfalls and cascades and in deeply shaded humid recesses in caves formed from jammed blocks in the bed of ravines. It also occurs on wet shaded stream banks in wooded glens, and in damp, shaded crevices and caves in raised beach cliffs along the west coast of Scotland from Arran northwards to Rum. More rarely it occurs in treeless streams or in dark, humid crevices between blocks on boulder strewn slopes where water percolates, particularly in SW Ireland. It also occurs epiphytically on the fronds of *Trichomanes speciosum* and on the stems of *Thamnobryum alopecurum* in dripping caves by waterfalls and in wooded ravines. Associates include *Riccardia chamedryfolia*, and, more rarely, *Dumortiera hirsuta*, *Radulaholtii* and *Cyclodictyon laetevirens*. It occurs on a wide range

of rock types including limestone (e.g. in caves in Co. Leitrim) but is very rare on the most acid rocks. Altitudinal range: 5–450 m.

It is known to be much more frequent in S Wales than was previously realised, and therefore perhaps less ecologically demanding than was thought at the time of the 1991–1994 Atlas.

Usually autoicous, rarely dioicous (Paton, 1999); inflorescences and capsules are fairly frequent, May to July.

Hyperoceanic Southern-temperate. This is a very variable and taxonomically complex species; subsp. *hutchinsiae* occurs in Faeroes, Belgium, Luxembourg, Spain, Azores, Madeira, Canary Islands; subsp. *caucasica* in the Caucasus (Kürschner, 2013); subsp. *pennsylvanica* in eastern N America; subsp. *javanica* grows in Asia and Oceania, including Russia, China, Korea, Japan, SE Asia and some Pacific Islands including Fiji (Söderström *et al.*, 2011) and subsp. *australiae* in Queensland, Australia (Pócs & Cairns, 2008).

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