Flora Protection Order - bryophytes

Radula holtii

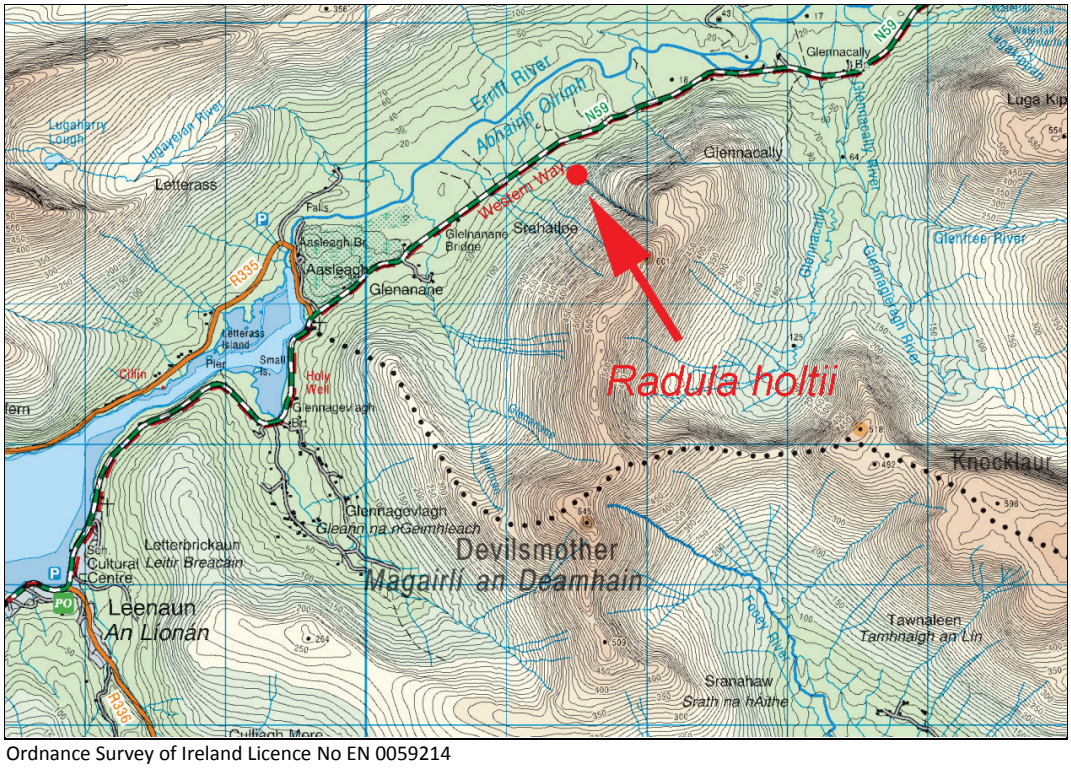
Status: Near Threatened; listed on the Flora Protection Order
Location: Devilsmother, Co. Mayo

Species Records

Taxon	Vice County number	Taxon Site	Locality / habitat	Grid Reference	Date	Recorder	Protected site
Radula holtii	27	15	Devils Mother	L96	1901.	Lett, H.W.	pNHA000735
Radula holtii	27	15	Devilsmother, ravine on NW slope	L96	1970.	Paton, J.A.	pNHA000735
Radula holtii	27	15	Devilsmother, ravine	L9164	1987.	British Bryological Society meeting	pNHA000735
Radula holtii	27	15	: ravine on slope of N ridge of Devil's Mother	L91546491	2002.08.16	Long, D.G.	pNHA000735
Radula holtii	27	15	Devilsmother; Ravine above Erriff Valley	L9156864883	2015.09.10	Rory Hodd	pNHA000735
Radula holtii	27	15	Devilsmother; Ravine above Erriff Valley	L9158264862	2015.09.10	Rory Hodd	pNHA000735
Radula holtii	27	15	Devilsmother; Ravine above Erriff Valley	L9160364854	2015.09.10	Rory Hodd	pNHA000735

R. holtii may also occur in other ravines on this hill, as well as the one where it was found in 2002.

Location (1:50,000 Discovery map)



Ordnance Survey of Ireland Licence No EN 0059214
© Ordnance Survey of Ireland Government of Ireland

Field Data Sheet – Survey of FPO Bryophytes 2015

Species *Radula holtii*	**County** Mayo	**6" Map** Ma116	**Discovery Map** 37
Locality/ Site name Devilsmother ravine, Erriff Valley	**Vice-county (No.)** H27	**SAC/NHA** 000735 Maumtrasna Mountain Complex	
Grid ref (GPS, National Grid) (i) L9156864883(±7)	**2005 Aerial Photo** 2526-B	**Recorder(s)** R.L. Hodd	
Elevation (m) 120	**Solid geology** Sandstone	**Survey date** 10/09/2015	
Site description	Site consists of a narrow rocky ravine with steep rocky sides and a small stream running through a boulder filled base.		
Population description	Growing as numerous small patches of ca. 2x2cm on the shaded undersides of boulders just above the flow of the stream.		
Associated species	Associated with *Jubula hutchinsiae, Fissidens bryoides* var. *caespitans, Oxystegius tenuirostris* and *Sciuro-Hypnum plumosum*.		
Vegetation (after Fossit, 2000)	ER3 Siliceous loose rock		
Current management	The surrounding slopes are heavily grazed by sheep, but this is not occurring in the ravine.		
Threats	There is evidence that the surrounding levels of grazing are leading to eutrophication of the stream, with much alga present, which may be detrimental to *R. holtii*.		
Conservation measures	A reduction of grazing levels on the surrounding slopes would be beneficial.		
Ownership	Commonage.		
Access	Accessed from the adjacent N59 road west of Glenacally Bridge.		
Other remarks			

GPS readings for the species

National Grid Letter	**Easting**	**Northing**	**Comments**
L	91582	64862	(±10) (ii) 130m alt.
L	91603	64854	(±17) (iii) 145m alt.

Synonymous habitat/vegetation types :

First record and other comments:
R. holtii was first recorded at this site by H.W. Lett in 1901, and subsequently by J.A. Paton in 1970, the BBS in 1987 and D.G. Long in 2002.

References:
Hodd, R.L. 2015. *Survey of Flora Protection Order Bryophytes 2015*. Unpublished report to National Parks and Wildlife Service. Dublin.

Photographs:



Photograph 1: View of deep ravine on Devilsmother from the N59 road, in which a number of populations of *R. holtii* grow.



Photograph 2: Location of population (i) of *R. holtii*, indicated by red arrow, in wet shady recess.



Photograph 3: Strong population of *R. holtii* forming pure mats shaded by boulders above stream.

Maps and Aerial Photographs:

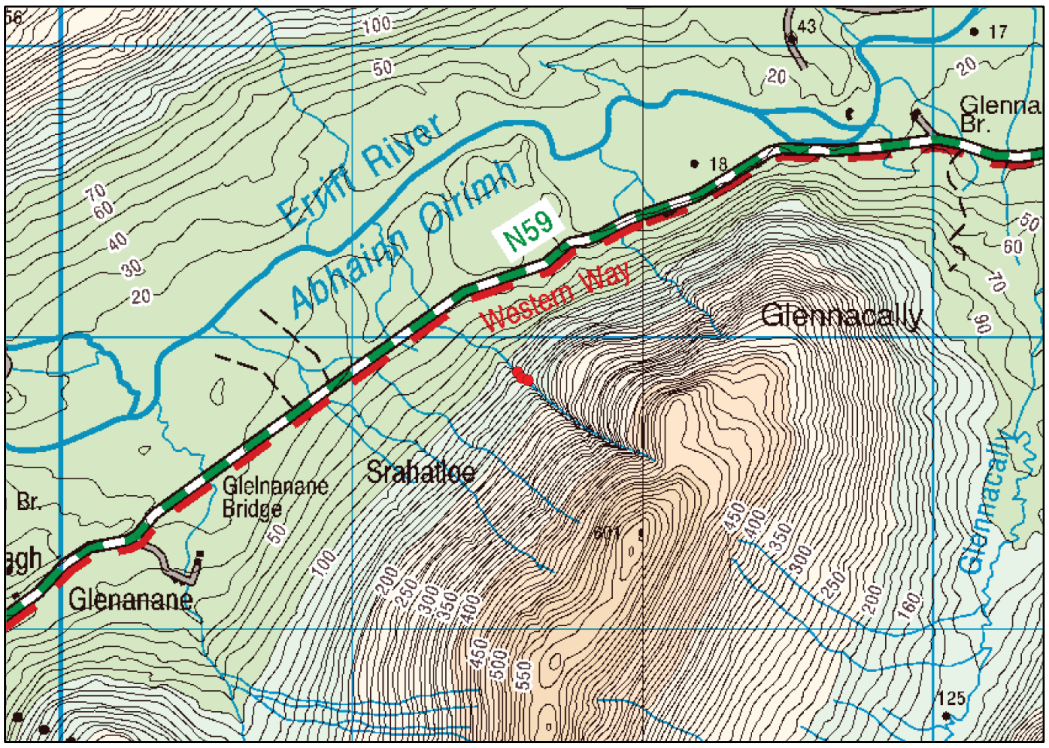


Figure 1: OSI Discovery Series map showing the locations of *R. holtii* (marked by red dots) at Devilsmother ravine, Erriff Valley (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).

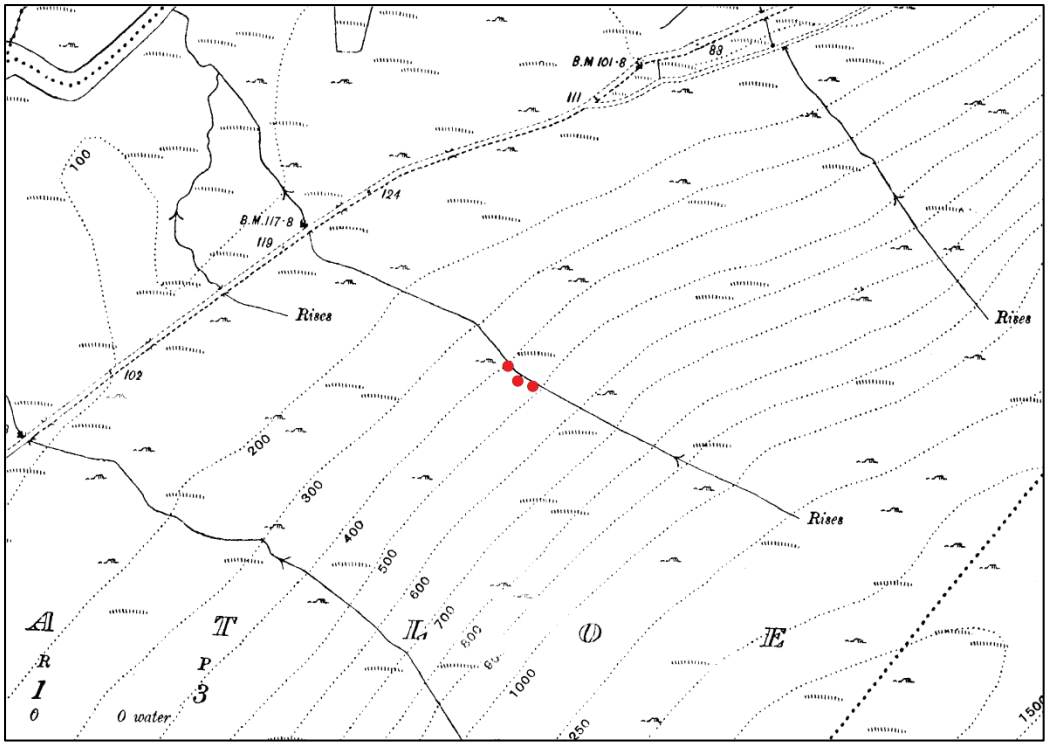


Figure 2: 6-inch map showing the locations of *R. holtii* (marked by red dots) at Devilsmother ravine, Erriff Valley (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).



Figure 3: 1:5,000 map showing the locations of *R. holtii* (marked by red dots) at Devilsmother ravine, Erriff Valley (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).



Figure 4: 2005 aerial photo showing the locations of *R. holtii* (marked by red dots) at Devilsmother ravine, Erriff Valley (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).

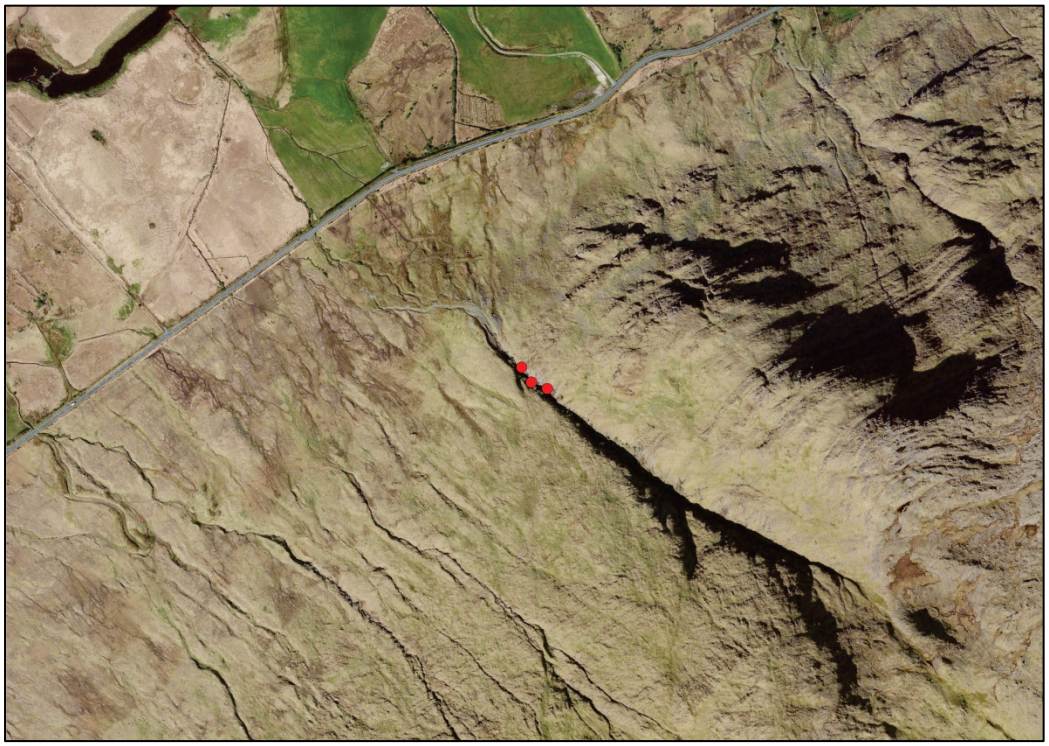


Figure 5: Satellite image showing the locations of *R. holtii* (marked by red dots) at Devilsmother ravine, Erriff Valley (Basemap source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community).
one available.

Management & Conservation

General

- Water abstraction for hydroelectric schemes could endanger this species at some sites
- New survey needed at many older sites, as this species was not targeted specifically during recent fieldwork

Potential site-specific threats/issues

- No specific threats identified at this site

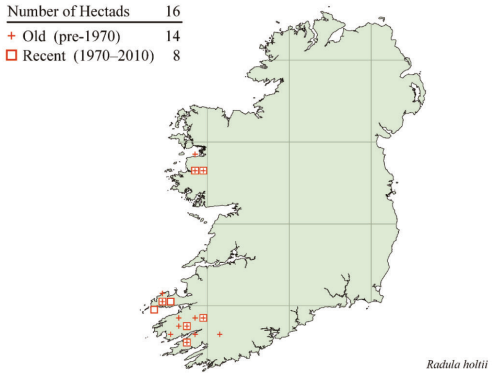
Excerpt from:
Lockhart, N., Hodgetts, N. & Holyoak, D. (2012). *Rare and Threatened Bryophytes of Ireland.* Belfast: National Museums Northern Ireland Publication No. 028.

Radula holtii Spruce

Holt's Scalewort

Status in Ireland: Near Threatened; **Status in Europe:** Rare





Identification

Like all species of *Radula*, *R. holtii* is a rather fleshy leafy liverwort with a rounded leaf lobe much larger than the almost square lobule beneath, and no underleaves. It is yellowish-green in colour and the shoots grow up to c. 2 cm long and 1.8 mm wide. Although superficially similar to the much more common *R. complanata* and *R. lindenbergiana*, the antical leaf margin of *R. holtii* does not cross the stem, and gemmae are very rare, whereas they are very common in the other two species. Furthermore, the perianths are characteristically trumpet-shaped, with a narrow base and a wide mouth; the other two species have oblong perianths. Finally, the cell walls of the stem medulla are thin-walled rather than collenchymatous.

Distribution in Ireland

R. holtii is confined to the extreme west and south-west, with recent records from 11 localities in four vice-counties: S. Kerry (Brandon Mountain, 1961–2008; Lough Anscaul, 2006; Loch an Duin, 2006; An Loch Dubh, Ballysitteragh, 2006; Mount Eagle, 2006; Ballaghbeama Gap, 1967–1983); N. Kerry (Muckross-Ross Island, 1905–1983; Torc Cascade, 1885–2005); W. Cork (Glenbeg Lough and Lackawee, 1955–1979) and W. Mayo (Ben Gorm, 1901–1987; Devil's Mother, 1901–1987). There are older records from a further 11 localities in: S. Kerry (Lough Currane, 1967; Lough Coomeathcun, 1951; Coomasaharn, 1961; Inchiquin Lough, 1967; Uragh Wood, 1967; Cummeenduff Glen, 1967; O'Sullivan's Cascade, 1912–1935); N. Kerry (Eagle's Nest, 1911–1925; Derrycunihy Wood, 1967); W. Cork (Pass of Keimaneigh, 1967) and W. Mayo (Old Head Wood, 1901–1909). It is not clear whether there has actually been a decline in the species, since *R. holtii* was not on the original list of target species for recent fieldwork and little effort has therefore been made to refind it at old localities. This plant is described as Southern Atlantic by Ratcliffe (1968).

Ecology and biology

R. holtii is a hyperoceanic species that grows in shade, usually deep shade, on wet rocks in ravines, woodland, by lakes, in small caves or under overhangs, usually by streams and waterfalls, especially where permanently wet from spray. It is a lowland plant, recorded in Ireland from near sea level to c. 330 m. Associates include *Jubula hutchinsiae*, *Lejeunea* spp., *Plagiochila exigua*, *Porella pinnata*, other *Radula* spp., *Trichostomum hibernicum* and *Trichomanes speciosum*.

Paroicous and often fertile, sporophytes are frequent in this species. Gemmae are very rare.

World distribution

This plant is recorded from the Azores, Madeira and the Canary Islands, where it is not on any list of rare or threatened species, and also from Spain and Portugal, in

both of which it is listed as *Vulnerable*. It is absent from Britain. It is classified as a Hyperoceanic Southern-temperate floristic element and is apparently endemic to Europe and Macaronesia.

Threats

There are probably few real threats to *R. holtii*, but water abstraction for hydroelectric schemes could endanger this species at some sites.

Conservation

This species has a very restricted distribution and the Irish populations are of global importance for conservation. Efforts should be made to target this species for resurvey, in particular the many localities described from the 1960s. Populations at the more important sites should be monitored.

Protected sites with recent records: Glanmore Bog SAC; Killarney National Park; Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC; Maumtrasna Mountain Complex pNHA; Mount Brandon SAC; Mweelrea/Sheeffry/Erriff Complex SAC; **Unprotected sites with recent records:** Mount Eagle.