

Flora Protection Order - bryophytes

Radula holtii

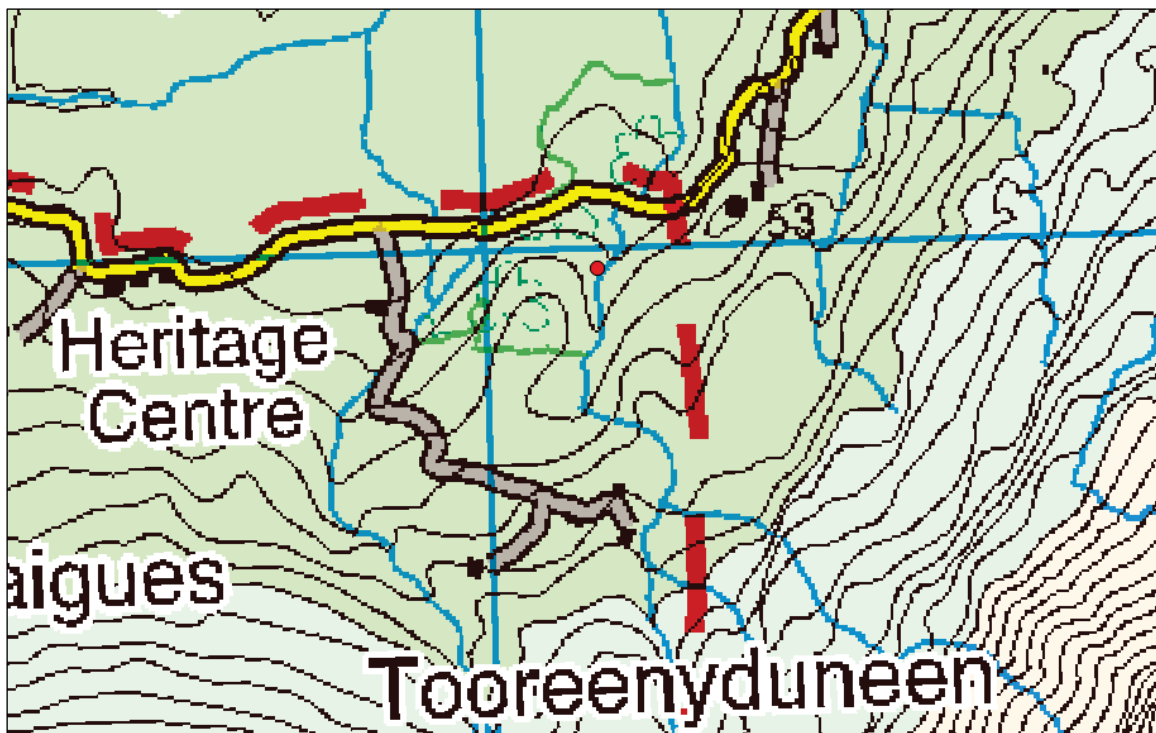
Status: Near Threatened; listed on the Flora Protection Order

Location: Tooreenyduneen, Co. Kerry

Species Records

Taxon	Vice County number	Taxon Site	Locality / habitat	Grid Reference	Date	Recorder	Protected site
<i>Radula holtii</i>	01	22	Valley east of Lough Currane; Tooreenyduneen	V5914064977	2014.11.16	Rory Hodd	SAC000365

Location (1:50,000 Discovery map)



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Field Data Sheet – Survey of FPO Bryophytes 2014

Species <i>Radula holtii</i>	County Kerry	6" Map Kerry Sheet 99	Discovery Map 83
Locality/ Site name Tooreenyduneen, valley above L. Currane	Vice-county (No.) South Kerry (H1)	SAC/NHA 000365 Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment	
Grid ref (GPS, National Grid) V5914064977(±7)	2005 Aerial Photo O6442-D	Recorder(s) R.L. Hodd	
Elevation (m) 45	Solid geology Sandstone	Survey date 16/11/2014	
Site description	<i>R. holtii</i> grows in a cascade of a wide, rocky stream, running through mature <i>Quercus petraea</i> woodland on a relatively flat valley floor.		
Population description	A number of small, scattered patches of <i>R. holtii</i> grow on the shaded face of a boulder in the centre of the river, in the splash zone of a small waterfall.		
Associated species	<i>R. holtii</i> is associated at this location with <i>Thamnobryum alopecurum</i> , <i>Plagiochila porreloides</i> and <i>Lejeunea eckloniana</i> .		
Vegetation (Fossitt, 2000)	ER3 Siliceous loose rock		
Current management	The surrounding woodland is well-grazed, but there is no sign of timber extraction.		
Threats	The main threat to this population would be removal of the woodland cover, resulting in a loss of shade. Eutrophication of the stream is also a possible threat.		
Conservation measures	Ensure that the woodland cover is not removed and that the stream is retained in good condition.		
Ownership	Ownership is unknown, likely private ownership.		
Access	This population is located ca. 100m from the minor road that runs along the valley above Lough Currane, access is by a gate that leads into woodland beside a small bridge.		
Other remarks			

Additional GPS readings for the species

National Grid Letter	Easting	Northing	Comments

Synonymous habitat/vegetation types :

First record and other comments:

R. holtii was previously recorded from the vague localities of 'Lough Currane' and 'near Waterville' by H.J.B Birks, H.H. Birks and D.A. Ratcliffe in 1967, but it is not clear whether these records refer to this locality.

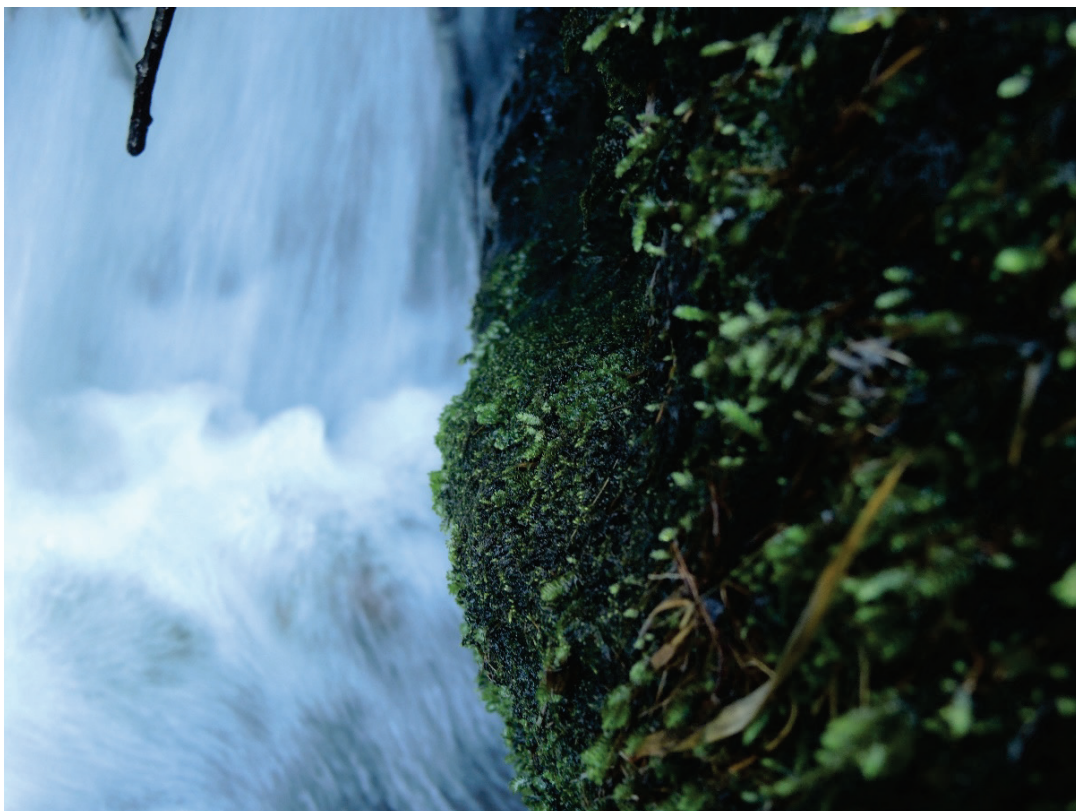
References:

Hodd, R.L. 2014. *Survey of Flora Protection Order bryophytes in Cork and Kerry (H1-H5)*. Unpublished report to National Parks and Wildlife Service. Dublin.

Photographs:



Photograph 1: Location of *Radula holtii* on the shaded side of a boulder in a broad stream in woodland, indicated by red arrow.



Photograph 2: Bryophyte mat, containing *R. holtii*, on the side of a boulder above a small waterfall.

Maps and Aerial Photographs:

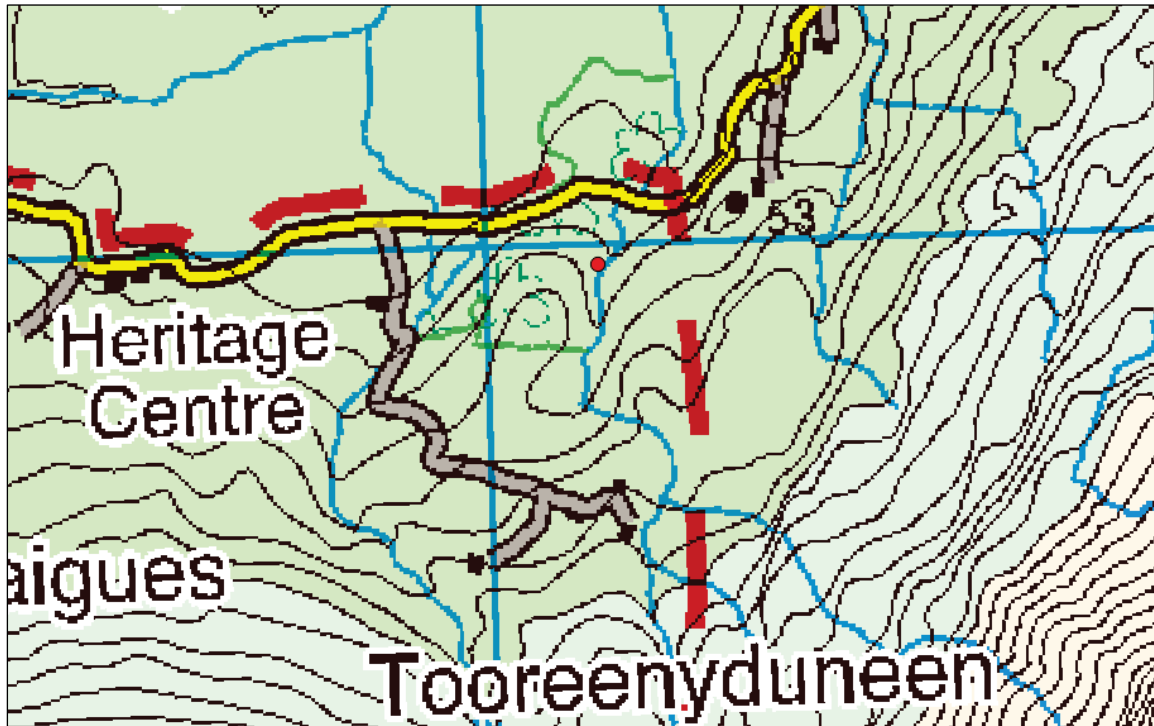


Figure 1: OSI Discovery Series map showing the location of *Lejeunea hibernica* (marked by red dot) at Tooreenyduneen (note that the course of the Kerry Way walking route is marked incorrectly, and actually passes within 10m of the population) (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).

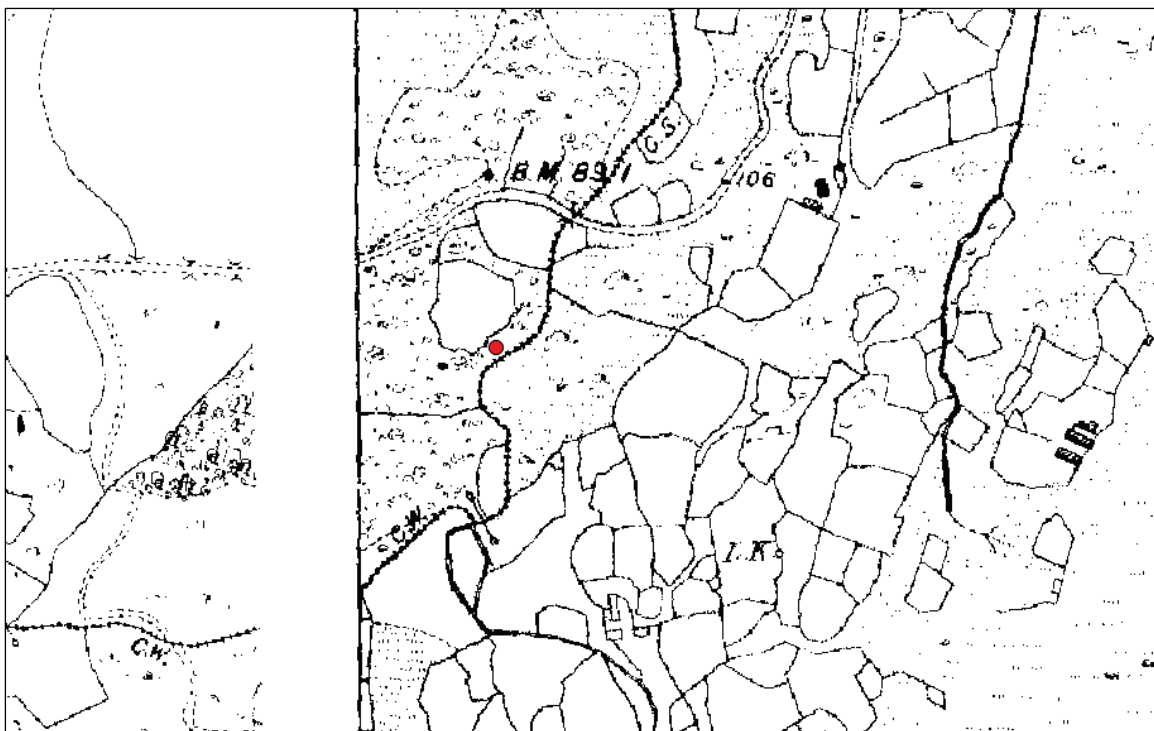


Figure 2: 6-inch map showing the location of *Lejeunea hibernica* (marked by red dot) at Tooreenyduneen (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).



Figure 3: 1:5,000 map showing the location of *Lejeunea hibernica* (marked by red dot) at Tooreenyduneen (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).



Figure 4: 2005 aerial photo showing the location of *Lejeunea hibernica* (marked by red dot) at Tooreenyduneen (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).



Figure 5: Bing aerial photo showing the location of *Lejeunea hibernica* (marked by red dot) at Tooreenyduneen.

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

- The main threat to this population would be removal of the woodland cover, resulting in a loss of shade. Eutrophication of the stream is also a possible threat.

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

RARE AND THREATENED BRYOPHYTES OF IRELAND

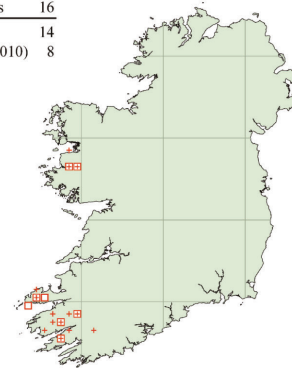
Radula holtii Spruce

Holt's Scalegwort

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



Number of Hectads	16
+ Old (pre-1970)	14
□ Recent (1970–2010)	8



Radula holtii

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. lindenberghiana*, 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 (Muckcross-Ross Island, 1905–1983; Torc Cascade, 1885–2005); W. Kerry (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. Kerry (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 re-find 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

Hornworts and Liverworts

both of which it is listed as *Vulnerable*. It is absent from Britain. It is classified as a Holarctic 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.