

# Flora Protection Order - bryophytes

## *Hypnum uncinulatum*

**Status:** Near Threatened; listed on the Flora Protection Order

**Location:** Lough Caragh, Co. Kerry

### Species Records

Taxon	Vice County number	Taxon Site	Locality / habitat	Grid Reference	Date	Recorder	Protected site
<i>Hypnum uncinulatum</i>	01	09	Caragh Lake; Cosha North, by lakeshore	V7082689591	2014.11.12	Rory Hodd	SAC000365
<i>Hypnum uncinulatum</i>	01	09	Caragh Lake; Cosha North, by lakeshore	V7094689784	2014.11.12	Rory Hodd	SAC000365
<i>Hypnum uncinulatum</i>	01	09	Caragh Lake; Cosha North, by lakeshore	V7094789774	2014.11.12	Rory Hodd	SAC000365
<i>Hypnum uncinulatum</i>	01	09	Caragh Lake; Cosha North, by lakeshore	V7095089782	2014.11.12	Rory Hodd	SAC000365

### Location (1:50,000 Discovery map)



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## Field Data Sheet – Survey of FPO Bryophytes in Cork & Kerry 2014

<b>Species</b> <i>Hypnum uncinulatum</i>	<b>County</b> Kerry	<b>6" Map</b> Kerry Sheet 64	<b>Discovery Map</b> 78
<b>Locality/ Site name</b> Cosha North, by Caragh Lake	<b>Vice-county (No.)</b> South Kerry (H1)	<b>SAC/NHA</b> 000365 Killarney National Park, Macgillicuddy's Reeks and Caragh River Catchment	
<b>Grid ref (GPS, National Grid)</b> (i) V7094789774(±8)	<b>2005 Aerial Photo</b> O6077-B	<b>Recorder(s)</b> R.L. Hodd	
<b>Elevation (m)</b> 20	<b>Solid geology</b> Sandstone	<b>Survey date</b> 12/11/2014	
<b>Site description</b>	<i>H. uncinulatum</i> occurs in young, rocky <i>Betula pubescens</i> woodland scattered along the shore of Caragh Lake, below a minor road that runs parallel to the shore.		
<b>Population description</b>	At (i) and (iv), <i>H. uncinulatum</i> forms medium-sized patches on <i>Betula</i> trunks and branches, up to 1m above the ground. At (ii) and (iii), large patches grow on the tops and sloping faces of boulders.		
<b>Associated species</b>	<i>H. uncinulatum</i> is associated with <i>Frullania dilatata</i> , <i>Hypnum resupinatum</i> , <i>Isothecium myosuroides</i> var. <i>myosuroides</i> and <i>Cladonia</i> sp.		
<b>Vegetation</b> (Fossitt, 2000)	WN1 Oak-birch-holly woodland/ER3 Siliceous loose rock		
<b>Current management</b>	There are few signs of management of this woodland, with a small amount of timber extraction evident.		
<b>Threats</b>	Felling of the woodland would result in the loss of these populations.		
<b>Conservation measures</b>	Ensure that the woodland cover is not removed.		
<b>Ownership</b>	Ownership is unknown, likely private ownership.		
<b>Access</b>	This population is easily accessed from the adjacent minor road.		
<b>Other remarks</b>			

*Additional GPS readings for the species*

National Grid Letter	Easting	Northing	Comments
V	70950	89782	(±8) (ii)
V	70946	89784	(±8) (iii)
V	70826	89591	(±8) (iv)

**Synonymous habitat/vegetation types :**

**First record and other comments:**

*H. uncinulatum* has not previously been recorded from this area.

**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: Trunk of *Betula pubescens* in young woodland, on which population (i) of *Hypnum uncinulatum* grows.



Photograph 2: Location of population (ii) of *H. uncinulatum* on a sloping rock surface in open *Betula pubescens* woodland.

Maps and Aerial Photographs:



Figure 1: OSI Discovery Series map showing the locations of *Hypnum uncinulatum* (marked by red dots) at Caragh Lake (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).

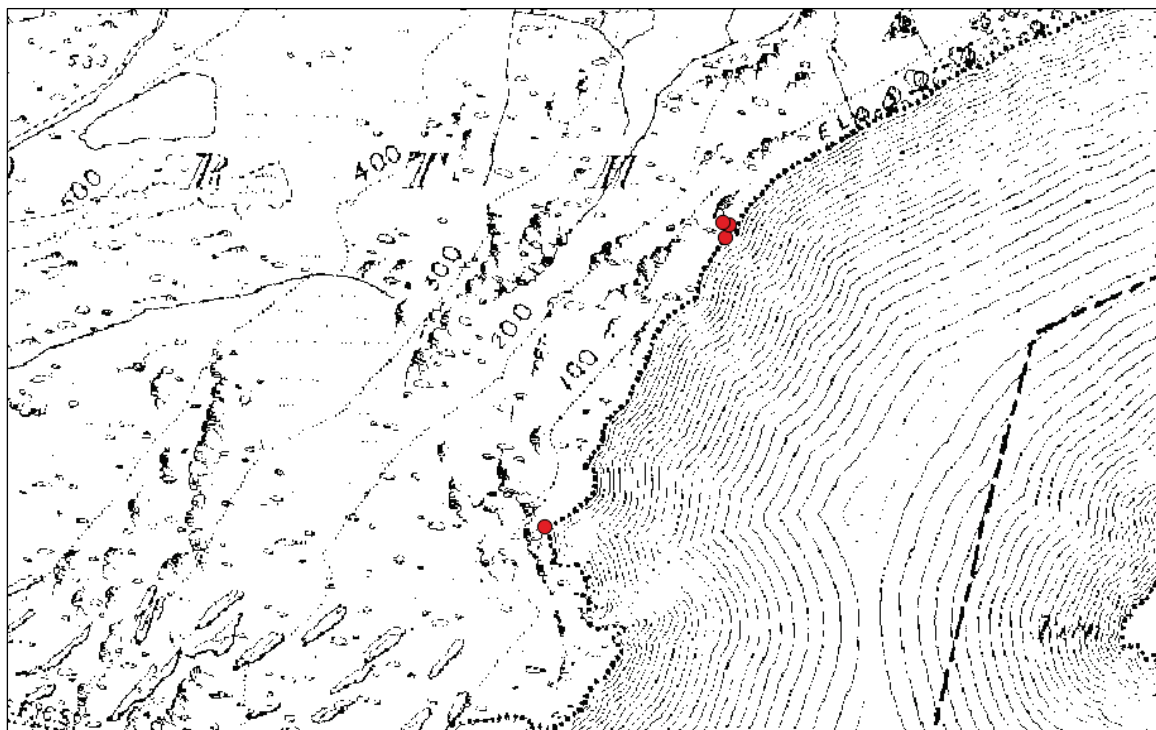


Figure 2: 6-inch map showing the locations of *Hypnum uncinulatum* (marked by red dots) at Caragh Lake (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).

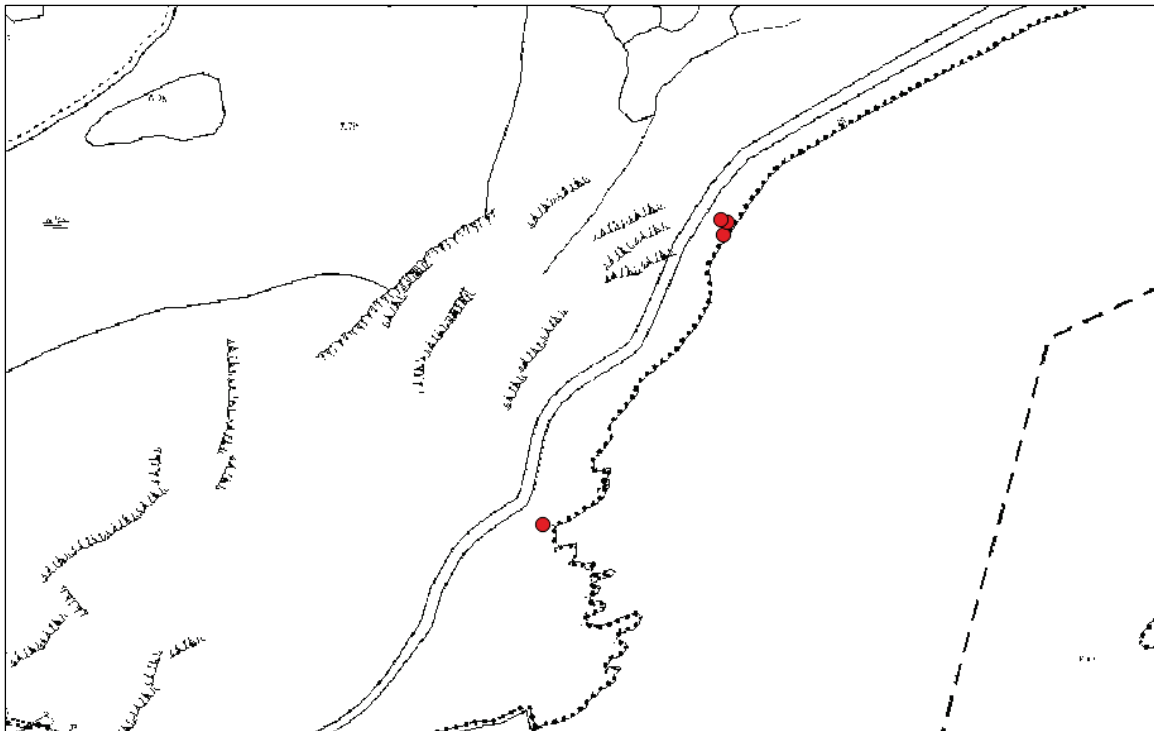


Figure 3: 1:5,000 map showing the locations of *Hypnum uncinulatum* (marked by red dots) at Caragh Lake (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).

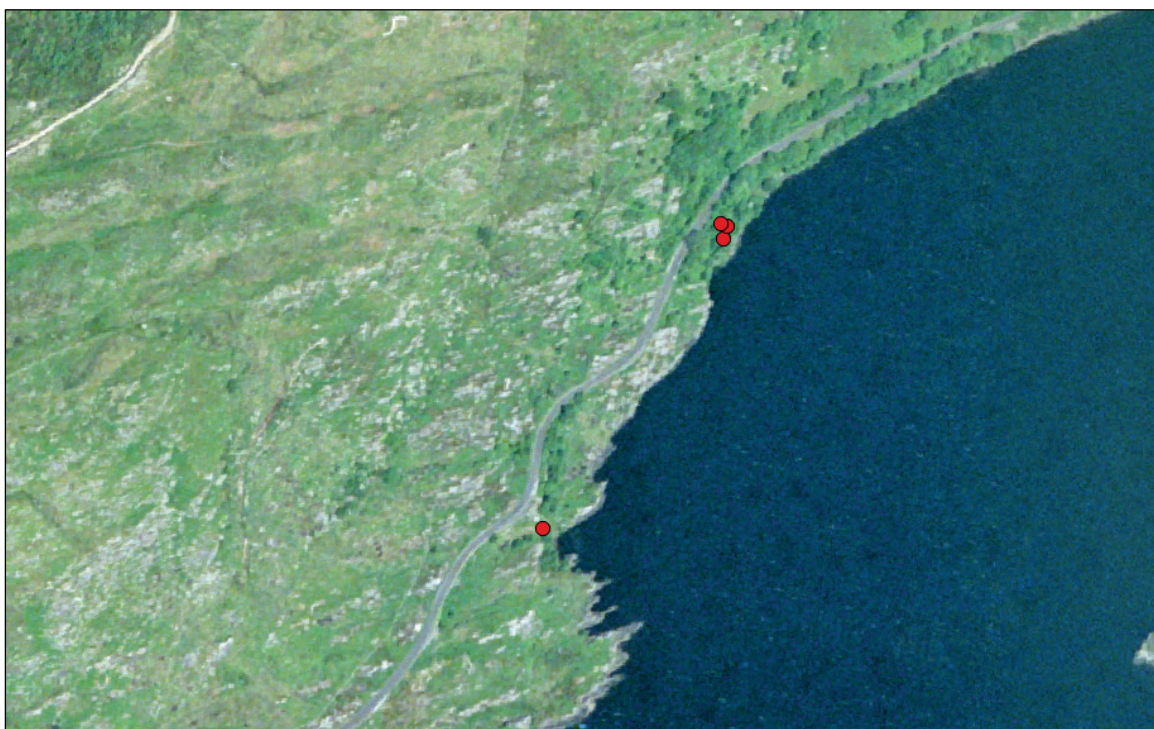


Figure 4: 2005 aerial photo showing the locations of *Hypnum uncinulatum* (marked by red dots) at Caragh Lake (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).



Figure 5: Bing aerial photo showing the locations of *Hypnum uncinulatum* (marked by red dots) at Caragh Lake.

## Management & Conservation

### General

- Not immediately threatened at any of its sites
- Rhododendron infestation causing excessive shading is probably the greatest risk, but this is now being reduced within the Killarney National Park
- *H. uncinulatum* needs shady, humid conditions, so clear-felling where it occurs should be avoided

### Potential site-specific threats/issues

- Felling of the woodland would result in the loss of these populations.

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

## *Hypnum uncinulatum* Jur.

Hooked Plait-moss

syn. *Stereodon canariensis* Mitt., *S. circinalis* sensu Lett (1915)

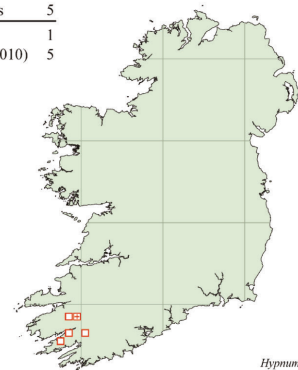
**Status in Ireland:** Near Threatened; **Status in Europe:** Regionally Threatened



### Identification

A small to medium-sized pleurocarpous moss that forms slightly glossy, green, pale green to brownish-green patches (rough mats), with irregularly or more or less regularly pinnately branched stems up to at least 40 mm long. Stem leaves are erecto-patent to patent, more or less falcate, narrowly triangular to ovate triangular and gradually narrowed to an acuminate apex. The leaf

Number of Hectads	5
+ Old (pre-1970)	1
□ Recent (1970–2010)	5



*Hypnum uncinulatum*

margin is plane or slightly reflexed near the base, denticulate throughout or only in upper half; the costa is short and double or indistinct. Mid-leaf cells are mainly 48–117  $\mu\text{m}$  long and 4.5–7  $\mu\text{m}$  wide, straight or slightly flexuose. Alar cells form conspicuously excavated (pouch-like) groups of irregularly subquadrate thick-walled cells that are often brownish. The base of each leaf margin has 5–8 rectangular cells. Capsules are ovoid to obloid, often

somewhat swollen, with a shortly rostrate operculum, exerted on a long seta. *H. uncinulatum* is easily overlooked among the more common *H. andoi* in Ireland, although the capsule of the former may be shorter and more swollen (but not always: Ando 1986) and the operculum is shortly rostrate rather than mamillate. Non-fertile plants are best separated by the deeply excavate alar cells of *H. uncinulatum* and its fewer rectangular cells on the leaf margin (5–8, cf. 7–15 in *H. andoi*). Contrary to the account by Smith (1997), alar cells in *H. andoi* are often brownish.

#### Distribution in Ireland

Confirmed recent records are from 11 localities in three vice-counties: S. Kerry (S. of Lough Beg, 2006; near Galway's Bridge, 2005; NW of Upper Lake, 2006; below O'Sullivan's Cascade, 2006; NW edge of Uragh Wood, 2006; below Lauragh Bridge, 2006; NW part of Derreen Garden, 2006); N. Kerry (Muckcross, Killarney, 1973; E. of Galway's Bridge, 2005; E. of Brickeen, 2005) and W. Cork (E. of Coomroe, 2006). There is one older confirmed record from N. Kerry ('Turk Mt., Killarney' [= Torc], 1829). There are also unconfirmed old records for other sites in N. Kerry (Cromaglan, 1900–1906; under Torc near Muckcross, 1896; Muckcross, 1896–1900). Specimens collected from 'Turk Mt., Killarney' by W. Wilson in 1829 were included among the type material of *Stereodon canariensis* Mitten and the species was treated in the *Flora* by Dixon (1924). However, *H. uncinulatum* was erroneously omitted from the standard moss *Flora* by Smith (1978), as pointed out by Ando & Townsend (1980), and the species was subsequently assumed to be extinct or at least lost in Ireland. Intensive searching during 2005 and 2006 has revealed that it is in fact very locally frequent in SW Ireland.

#### Ecology and biology

*H. uncinulatum* grows in humid, lowland, woodlands; mainly in native *Quercus-Ilex* woodland, but also a coniferous plantation (Sitka Spruce and Lodgepole Pine) and a woodland garden with many large trees, in shade or partial shade. It occurs over a similar range of acidic substrata to the more common *H. andoi*, but it perhaps does not extend so far up trees (no gathering was from more than about one metre above ground level). The most common substrata were low sandstone rocks, but it was also found on bases of tree trunks (oak, Alder and Holly) and tree stumps (deciduous and conifer), with single collections from exposed roots of a dead tree and

decorticated wood lying on the ground. In Macaronesia, it occurs up to 1600 m elevation; it also grows as an epiphyte and has occasionally been collected from soil (Ando 1986, Hedenäs 1992); on Madeira and in the Azores it is even known as an epiphyll, growing on living leaves of shrubs and trees and fronds of ferns (Sjögren 1975, 1978).

The plants are perennial. It is a dioicous species in which capsules are frequent, maturing in late autumn or winter. Gemmae, bulbils and tubers are absent, but vegetative propagation probably occurs from dispersed fragments of leafy stems.

#### World distribution

Restricted to SW Ireland, C. Portugal (Mata do Bussaco), S. Spain (hills near Algeciras in Prov. Cádiz), Azores, Madeira and the Canary Islands (Ando 1986, Hedenäs 1992, Ruiz *et al.* 2006, Casas *et al.* 2006). It is listed as *Endangered* in Spain and Portugal. It is assigned to a Hyperoceanic Southern-temperate floristic element in Europe. Reports of the species from N. America, Turkey and Iran are almost certainly erroneous (cf. Ando 1986, Frey & Kürschner 1991).

#### Threats

*H. uncinulatum* is not immediately threatened at any of its sites in SW Ireland. The greatest risk to it is probably from excessive shading if Rhododendron colonises larger areas of native woodland understorey, but infestations of that species are now being reduced within the Killarney National Park. *H. uncinulatum* apparently needs shady, humid conditions so clear-felling should be avoided where it occurs.

#### Conservation

Most Irish populations are on protected land.

**Protected sites with recent records:** Cloonee and Inchiquin Loughs, Uragh Wood SAC; Derrycunihy Wood Nature Reserve; Killarney National Park; Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC; Uragh Wood Nature Reserve; **Unprotected sites with recent records:** E. of Coomroe; NW part of Derreen Garden.