

Flora Protection Order - bryophytes

Hypnum uncinulatum

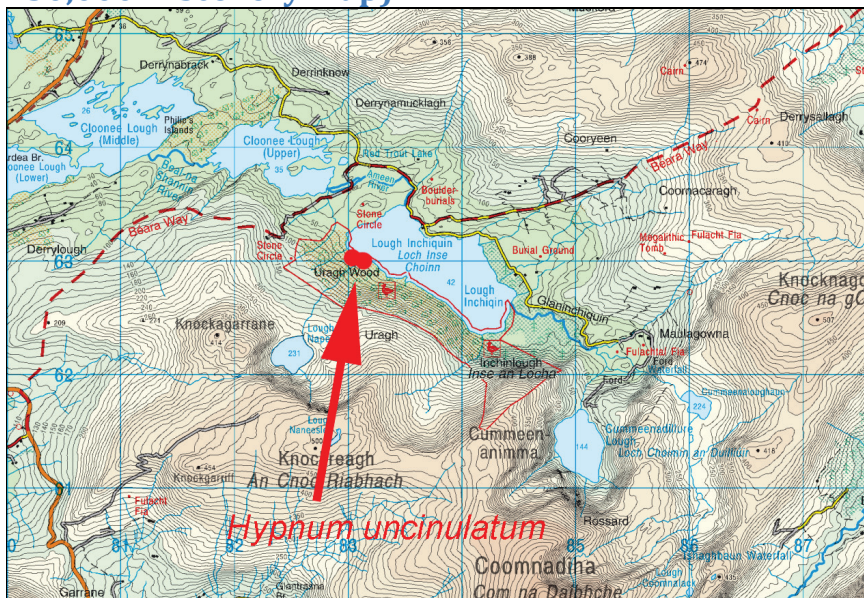
Status: Near Threatened; listed on the Flora Protection Order

Location: Uragh Wood, Co. Kerry

Species Records

Taxon	Vice County number	Taxon Site	Locality / habitat	Grid Reference	Date	Recorder	Protected site
<i>Hypnum uncinulatum</i>	01	02	NW. edge of Uragh Wood: steep face of sandstone block on lough shore	V831630	2006.05.30	Holyoak, D.T.	SAC001342
<i>Hypnum uncinulatum</i>	01	02	Just NW. of Uragh Wood	V830630	2006.05.30	Holyoak, D.T.	SAC001342
<i>Hypnum uncinulatum</i>	01	02	Uragh Wood; Near shore of Lough Inchiquin	V8297463167	2014.11.14	Rory Hodd	SAC001342
<i>Hypnum uncinulatum</i>	01	02	Uragh Wood; Near shore of Lough Inchiquin	V8297963181	2014.11.14	Rory Hodd	SAC001342
<i>Hypnum uncinulatum</i>	01	02	Uragh Wood; Near shore of Lough Inchiquin	V8307463031	2014.11.14	Rory Hodd	SAC001342
<i>Hypnum uncinulatum</i>	01	02	Uragh Wood; Near shore of Lough Inchiquin	V8313963021	2014.11.14	Rory Hodd	SAC001342
<i>Hypnum uncinulatum</i>	01	02	Uragh Wood; Near shore of Lough Inchiquin	V8321562971	2014.11.14	Rory Hodd	SAC001342
<i>Hypnum uncinulatum</i>	01	02	Uragh Wood; Near shore of Lough Inchiquin	V8326462920	2014.11.14	Rory Hodd	SAC001342
<i>Hypnum uncinulatum</i>	01	02	Uragh Wood; Near shore of Lough Inchiquin	V8328162908	2014.11.14	Rory Hodd	SAC001342
<i>Hypnum uncinulatum</i>	01	02	Uragh Wood; Near shore of Lough Inchiquin	V8333462873	2014.11.14	Rory Hodd	SAC001342

Location (1:50,000 Discovery map)



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First recorded here by David Holyoak in 2006. Refound at several locations by Rory Hodd and Clare Heardman in 2014.

Field Data Sheet - Rare and Threatened Bryophyte Survey 2006

2006-040

Species <u>Hypnum uncinulatum</u>		Vice-county number H 01	Vice-county S. Kerry
Locality NW. edge of Uragh Wood		Land Owner/Occupier	cSAC/pNHA? no. pNHA
Grid Ref. V830630 (i) V831630 (ii)	GPS? X	alt. (m) ca 45	Date d/m/y 30/5/2006
Sketch Map of Site showing Location of Species: indicate North (arrow) and scale		Recorder D.T. Holyoak	
Describe substrate(s), e.g. rock/ soil/ tree type; wet/moist/dry, sunny/shaded habitat features e.g. aspect, slope, vegetation cover/height (i) sloping top of sandstone block lightly shaded in <u>Quercus petraea</u> / <u>Ilex</u> woodland; (ii) steep face of sandstone block on long slope ca 1.5 m above water, slightly shaded by edge of <u>Betula pubescens</u> / <u>Quercus petraea</u> woodland		Size of Population	
Locality Map (1:50 000 if possible)		Sporophytes present (stage) (i) with old capsules, (ii) non-fertile	
[or copy of part of 1:50 000 sheet no. 84 attached to this page]		Associated Species	
Photographs		Threats and proposed Conservation Measures Site immediately threatened: yes / no	
New record at this site / <u>older record refound</u>			
Voucher specimen no. DT Holyoak 06-85, 06-86			

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

Species <i>Hypnum uncinulatum</i>	County Kerry	6" Map Kerry Sheet 101	Discovery Map 84
Locality/ Site name Uragh Wood, Glaninchiquin	Vice-county (No.) South Kerry (H1)	SAC/NHA 001342 Cloonee and Inchiquin Loughs, Uragh Wood SAC	
Grid ref (GPS, National Grid) (i) V8333462873(±7)	2005 Aerial Photo O6487-B	Recorder(s) R.L. Hodd and C. Heardman	
Elevation (m) 45	Solid geology Sandstone	Survey date 14/11/2014	
Site description	<i>H. uncinulatum</i> occurs in open woodland at the edge of an extensive mature <i>Quercus petraea</i> forest, on the shores of Lough Inchiquin.		
Population description	<i>H. uncinulatum</i> grows on the trunks, from the base up to 2m above ground, of <i>Betula pubescens</i> , <i>Ilex aquifolium</i> and <i>Quercus petraea</i> , as well as on a dead <i>Quercus</i> branch (at (ii)) and on a rockface close to the lakeshore (at (vii)). There are occasional capsules on population (i).		
Associated species	Associates of <i>H. uncinulatum</i> at this site are <i>Thuidium tamariscinum</i> , <i>Frullania tamarisci</i> , <i>Isothecium myosuroides</i> var. <i>myosuroides</i> and <i>Hypnum cupressiforme</i> .		
Vegetation (after Fossitt, 2000)	WN1 Oak-birch-holly woodland		
Current management	This site is managed as a nature reserve.		
Threats	Few threats to these populations exist, as this site is located in a nature reserve.		
Conservation measures	Monitor these populations regularly.		
Ownership	This site is a nature reserve, under the ownership of National Parks and Wildlife Service.		
Access	Access to this site is gained from a rough road leading between Cloonee Lough and Inchiquin Lough, across open bogland, entering the woodland by the lakeshore through a swing gate in the deer fence.		
Other remarks			

Additional GPS readings for the species

National Grid Letter	Easting	Northing	Comments
V	83281	62908	(±8) (ii)
V	83264	62920	(±6) (iii)
V	83215	62971	(±7) (iv)
V	83139	63021	(±8) (v)
V	83074	63031	(±10) (vi)
V	82974	63167	(±4) (vii)
V	82979	63181	(±7) (viii)

Synonymous habitat/vegetation types :

First record and other comments:

H. uncinulatum was previously recorded at this site by D.T. Holyoak in 2006.

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.

Holyoak, D.T. 2006. *Survey of Rare and Threatened Bryophytes in West Cork and South Kerry*. Unpublished report to National Parks and Wildlife Service, Dublin.

Photographs:



Photograph 1: View of Uragh Wood, a number of populations of *Hypnum uncinulatum* are scattered on trees close to the lakeshore at this location.



Photograph 2: Population (i) of *H. uncinulatum*, close to the base of a trunk of *Betula pubescens*.



Photograph 3: Population (i) of *H. uncinulatum*, on *Betula pubescens* trunk near the shore of Inchiquin Lough.



Photograph 4: Population (vii) of *H. uncinulatum*, on a vertical rockface in partial shade above the shore of Inchiquin Lough.

Maps and Aerial Photographs:

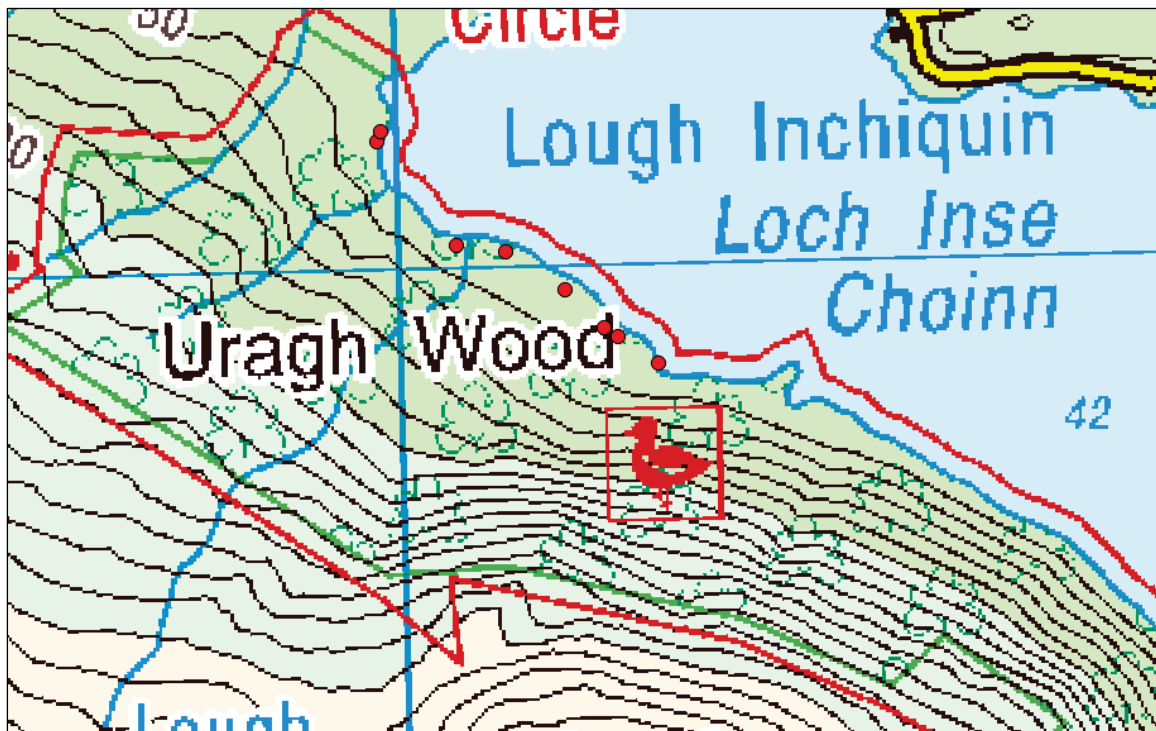


Figure 1: OSI Discovery Series map showing the locations of *Hypnum uncinulatum* (marked by red dots) in Uragh Wood (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).

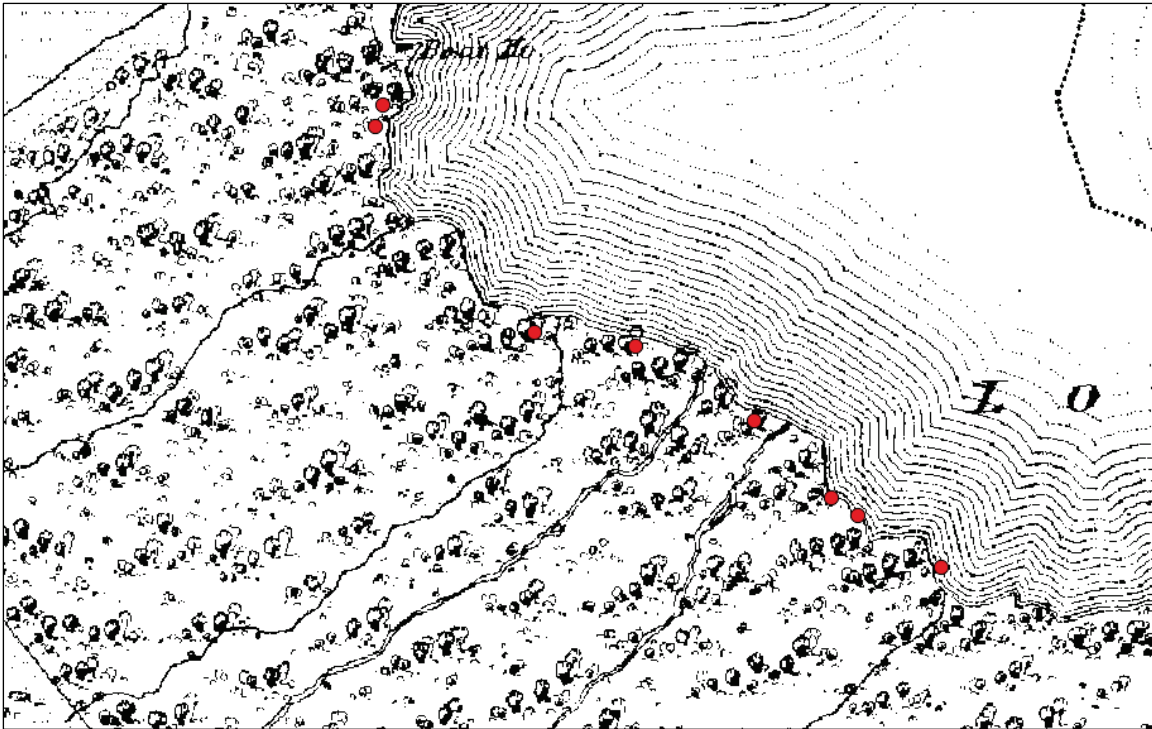


Figure 2: 6-inch map showing the locations of *Hypnum uncinulatum* (marked by red dots) in Uragh Wood (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).

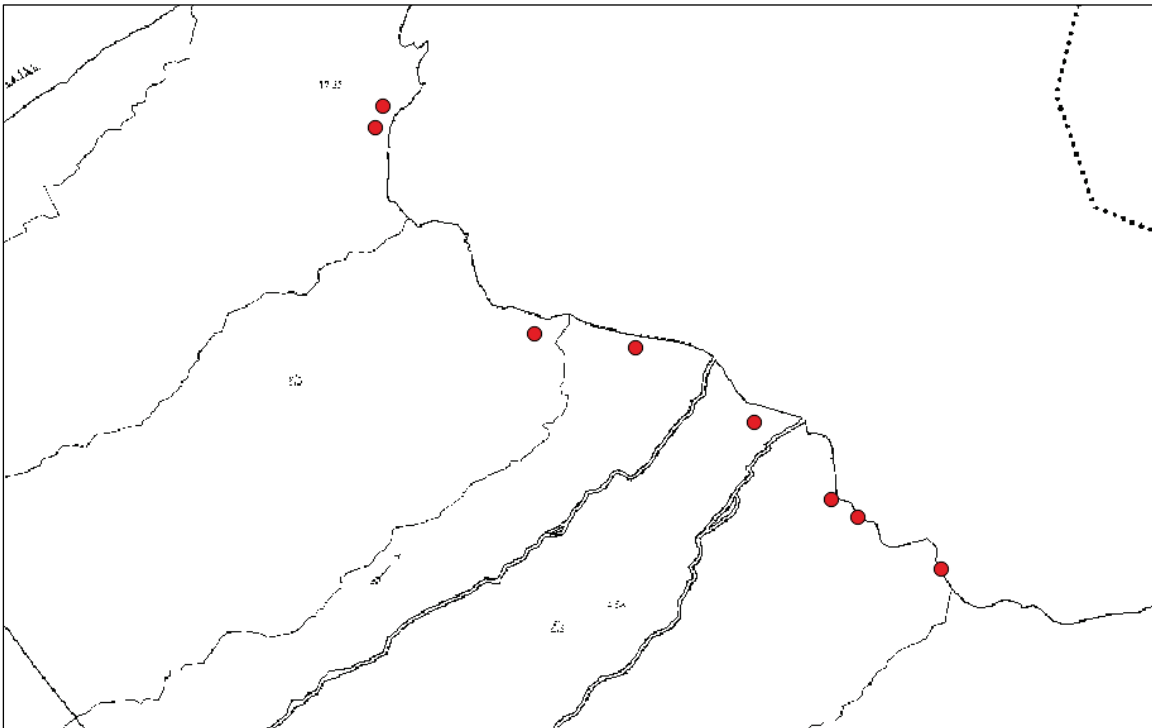


Figure 3: 1:5,000 map showing the locations of *Hypnum uncinulatum* (marked by red dots) in Uragh Wood (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).



Figure 4: 2005 aerial photo showing the locations of *Hypnum uncinulatum* (marked by red dots) in Uragh Wood (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) in Uragh Wood.

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

- Few threats to these populations exist, as this site is located in a nature reserve.

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)

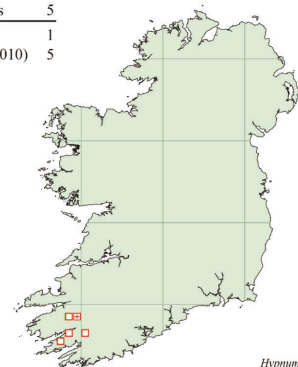
Status in Ireland: Near Threatened; **Status in Europe:** Regionally Threatened



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 μm long and 4.5–7 μm 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.