

# Flora Protection Order - bryophytes

## *Bazzania pearsonii*

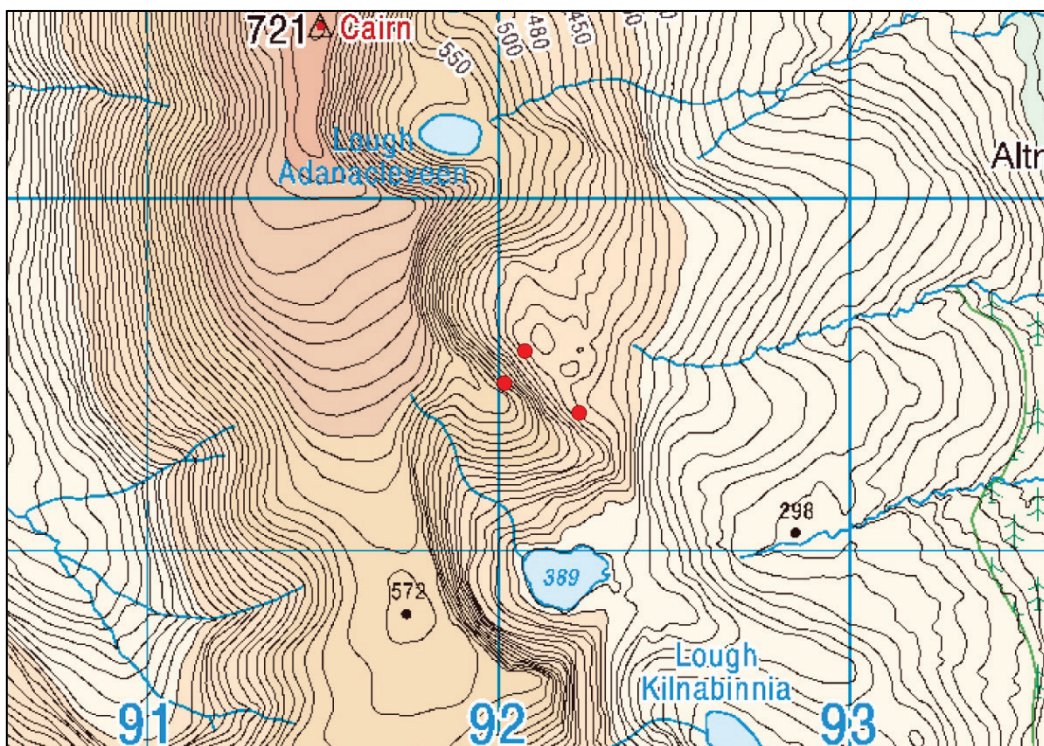
**Status:** Vulnerable; listed on the Flora Protection Order

**Location:** Slieve Carr, Co. Mayo

### Species Records

Taxon	Vice County number	Taxon Site	Locality / habitat	Grid Reference	Date	Recorder	Protected site
<i>Bazzania pearsonii</i>	27	28	Slieve Carr	F9222513394	2016.11.28	Rory Hodd	SAC000534
<i>Bazzania pearsonii</i>	27	28	Slieve Carr	F9207013569	2016.11.28	Rory Hodd	SAC000534
<i>Bazzania pearsonii</i>	27	28	Slieve Carr	F9201213478	2016.11.28	Rory Hodd	SAC000534

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



Ordnance Survey of Ireland Licence No EN 0059214  
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## Field Data Sheet – Survey of FPO Bryophytes 2016

<b>Species</b> <i>Bazzania pearsonii</i>	<b>County</b> Mayo	<b>6" Map</b> ma036c	<b>Discovery Map</b> 23
<b>Locality/ Site name</b> Slieve Carr	<b>Vice-county (No.)</b> H27	<b>SAC/NHA</b> 000534 Owenduff/Nephin Complex SAC	
<b>Grid ref (GPS, National Grid)</b> (i) F9222513394(±4)	<b>2005 Aerial Photo</b> 1444-C	<b>Recorder(s)</b> R.L. Hodd	
<b>Elevation (m)</b> 445	<b>Solid geology</b> Banded, graded and X-bedded quartzites	<b>Survey date</b> 28/11/2016	
<b>Site description</b>	North-facing heathery slope of open corrie alongside of spur on east side of Slieve Carr.		
<b>Population description</b>	Growing as scattered shoots and small patches in three locations, intermixed with other bryophytes and partially shaded by <i>Calluna</i> .		
<b>Associated species</b>	Associated with <i>Pleurozia purpurea</i> , <i>Herbertus hutchinsiae</i> , <i>Racomitrium lanuginosum</i> , <i>Bazzania tricrenata</i> , <i>Mylia taylorii</i> , <i>Odontoschisma sphagni</i> , <i>Calluna vulgaris</i> , <i>Erica cinerea</i> and <i>Carex binervis</i> .		
<b>Vegetation</b>	HH1 Siliceous dry heath		
<b>Current management</b>	Although within Ballycroy National Park, evidence of moderate grazing by sheep present.		
<b>Threats</b>	Overgrazing would be detrimental to these populations.		
<b>Conservation measures</b>	Grazing sheep should be excluded from this area.		
<b>Ownership</b>	Ballycroy National Park		
<b>Access</b>	Forestry tracks can be followed from the nearest road at Muingaghel to reach open country at the top of the forestry east of Lough Kilnabinnia.		
<b>Other remarks</b>			

## GPS readings for the species

National Grid Letter	Easting	Northing	Comments
F	92070	13569	(±4) (ii) 460m alt.
F	92012	13478	(±6) (iii) 535m alt.

## Synonymous habitat/vegetation types :

## First record and other comments:

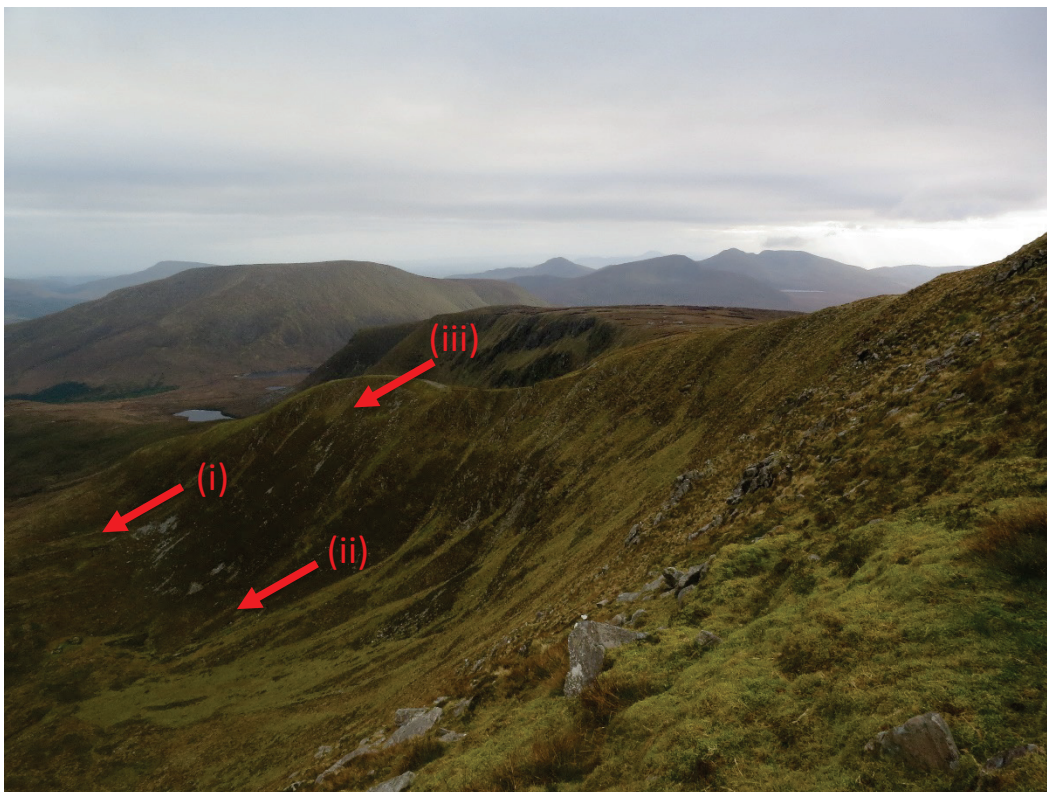
Not previously recorded here.

**References:** Hodd, R.L. 2016. *Survey of Flora Protection Order Bryophytes 2016*. Unpublished report to National Parks and Wildlife Service. Dublin.

**Photographs:**



Photograph 1: Slieve Carr as viewed from the east, with the red arrow marking the general location of the populations of *B. pearsonii*.



Photograph 2: View of the area in which *B. pearsonii* is found from higher up the mountain, red arrows indication general locations of populations.



Photograph 3: Habitat of population (i) of *B. pearsonii* on heathy slopes.



Photograph 4: Population (ii) of *B. pearsonii* amongst boulders on heathery slope.

Maps and Aerial Photographs:

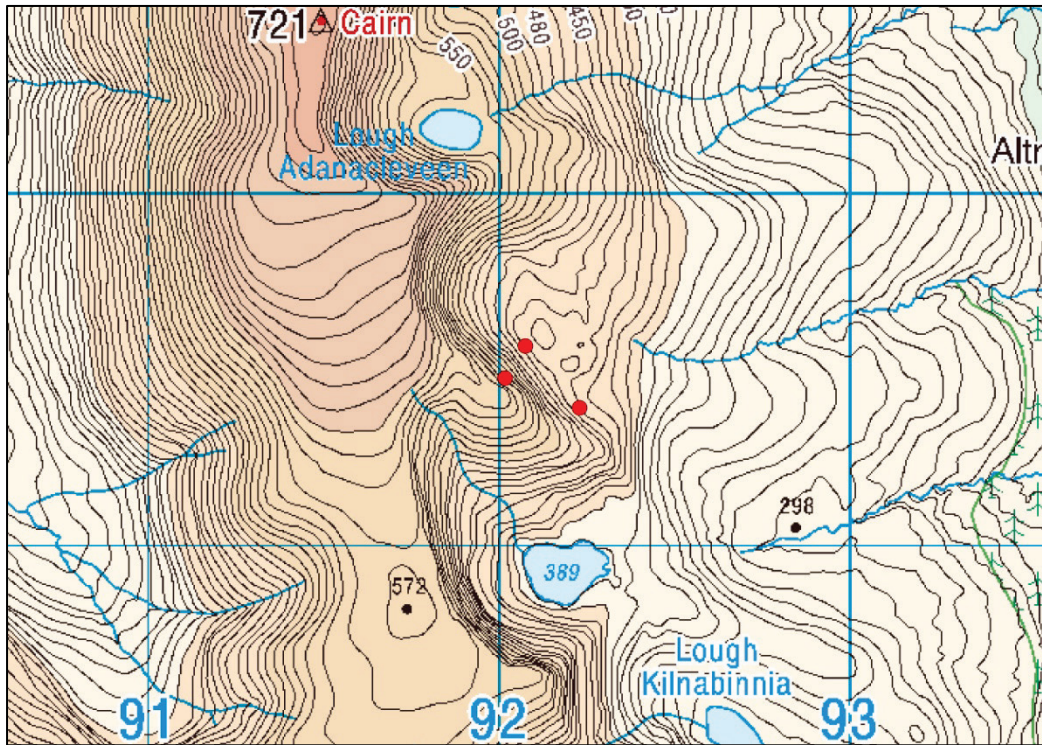


Figure 1: OSI Discovery Series map showing the locations of *B. pearsonii* (marked by red dots) on Slieve Carr (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).

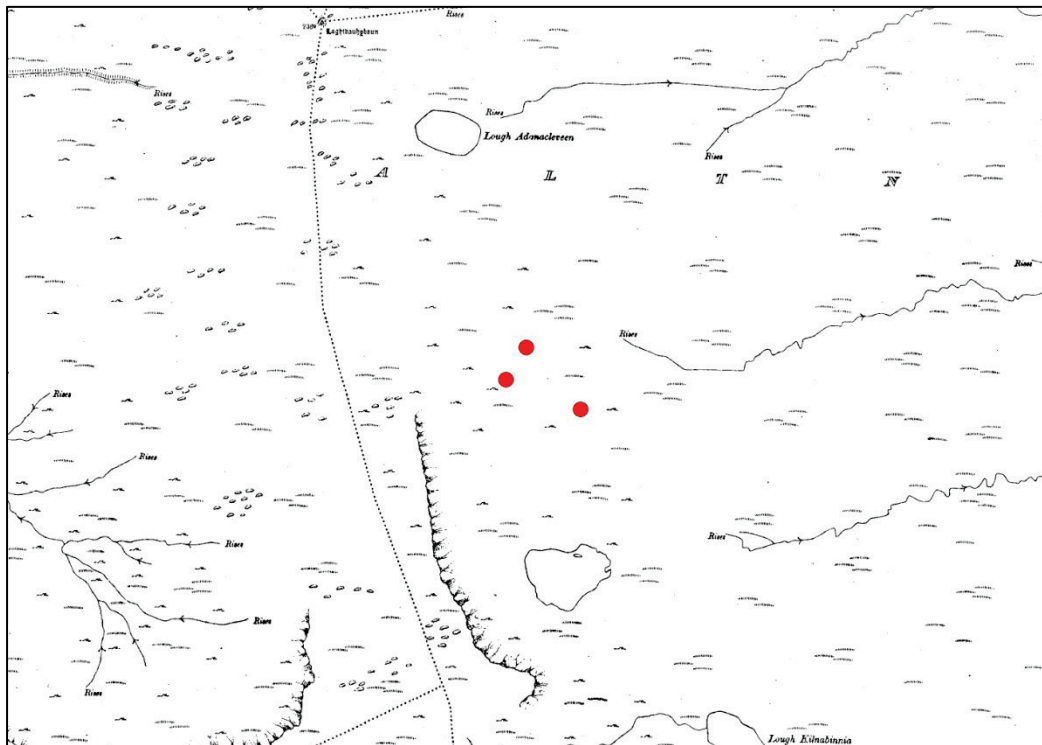


Figure 2: 6-inch map showing the locations of *B. pearsonii* (marked by red dots) on Slieve Carr (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).

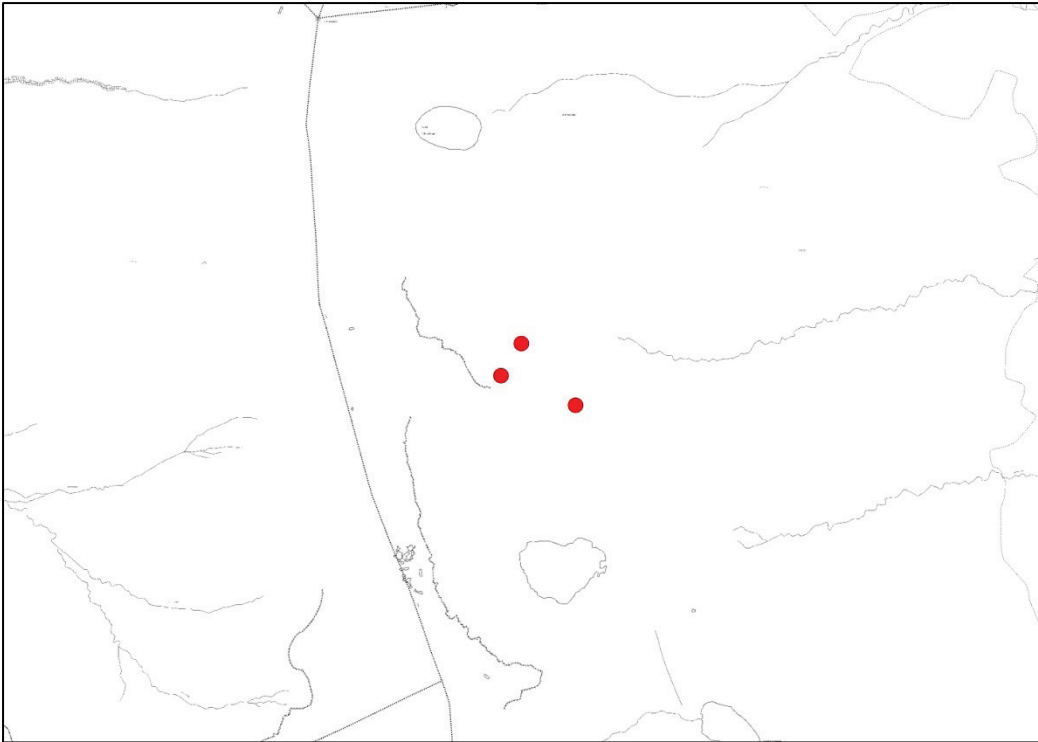


Figure 3: 1:5,000 map showing the locations of *B. pearsonii* (marked by red dots) on Slieve Carr (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).

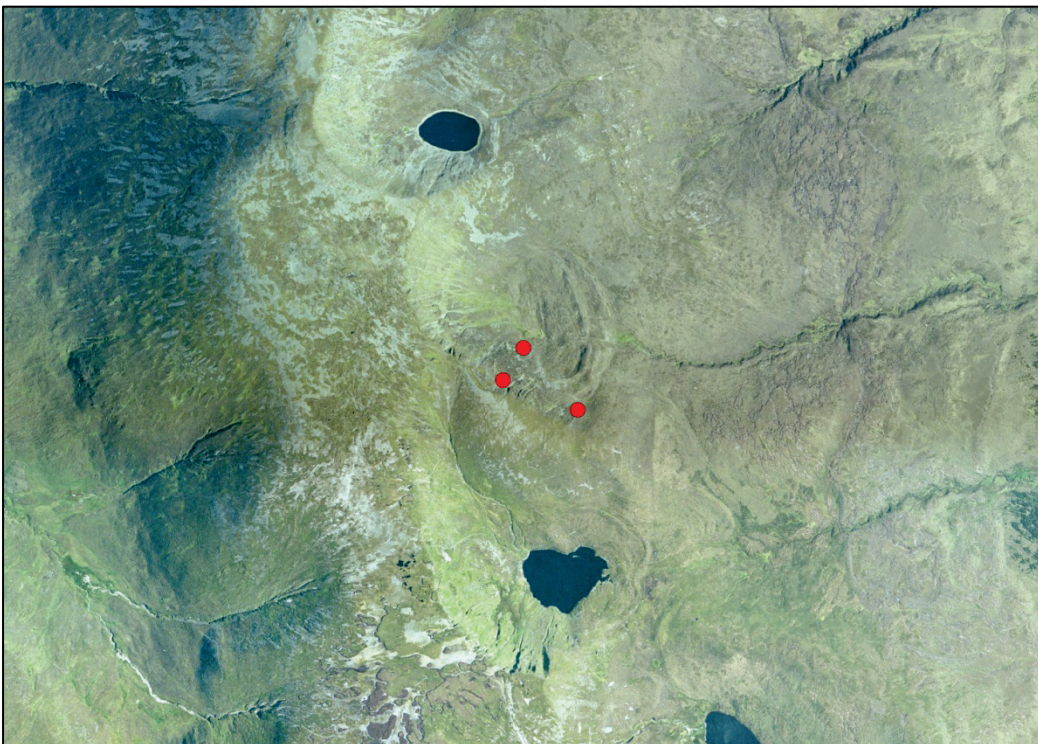


Figure 4: 2005 aerial photo showing the locations of *B. pearsonii* (marked by red dots) on Slieve Carr (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).



Figure 5: Satellite image showing the locations of *B. pearsonii* (marked by red dots) on Slieve Carr (Basemap source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community).

## Management & Conservation

### General

- Burning
- Afforestation
- Overgrazing
- Climate change?

### Potential site-specific threats/issues

- Although within Ballycroy National Park, evidence of moderate grazing by sheep present. Overgrazing would be detrimental to 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

## *Bazzania pearsonii* Steph.

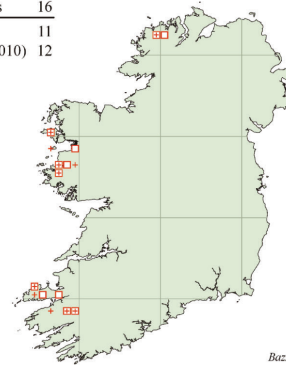
Arch-leaved Whipwort

syn. *Mastigobryum pearsonii* (Steph.) Steph.

**Status in Ireland:** Vulnerable (B2a, bii, iii, iv); **Status in Europe:** Rare



Number of Hectads	16
+ Old (pre-1970)	11
□ Recent (1970–2010)	12



*Bazzania pearsonii*

### Identification

A pale green, more or less erect, turf-forming leafy liverwort with shoots up to c. 9 cm long and 1.5 mm wide. It has incubous leaves tapering from broadly rounded bases, with the antical margin extending well beyond the stem, to narrowly pointed, 2–3-dentate or bidentate apices. The underleaves are large and conspicuous, shortly oblong and not or barely notched at the apex. It differs from the more common *B. tricrenata* in the antical leaf bases widely crossing the stem and the underleaves being longer than wide. Flagella are common.

### Distribution in Ireland

*B. pearsonii* is confined to the extreme west, but is more widespread in Ireland than *Adelanthus lindenbergianus* or *Plagiochila carringtonii*, with recent records from 15 localities in five vice-counties: S. Kerry (Brandon Mountain, 1950–2009; Connor Pass, 2009; Lough Gogh, 2009; Derrymore River, 2006; Stradbally Mountain, 2006; Carrauntoohil, 1961–2009); N. Kerry

(Counbrack Lake, 2009; Lough Erhogh, 2009); W. Galway (Muckanaght, 1957–1994; Benbreen and Bengower, 1994); W. Mayo (Croagh Patrick, 1987; Mweelrea, 1950–2010; Slievemore, 1910–1999) and W. Donegal (Errigal, 1962–2002; Muckish Mountain, 1955–2009). There are older records from S. Kerry (Beenkeragh, 1964 and 1965; Coomasaharn, 1951); N. Kerry (Mangerton Mountain, 1855–1963); W. Galway (Maumtrasna, 1957–1963) and W. Mayo (Skeltia, 1957; Clare Island, 1910). Ratcliffe (1968) places *B. pearsonii* into the Northern Atlantic group.

### Ecology and biology

One of the Northern Atlantic hepatic mat species, confined to N.- and NE-facing slopes in the hills in hyperoceanic areas, *B. pearsonii* often grows under open cover of dwarf shrubs on cliff ledges and in boulder scree, and is usually associated with other large oceanic bryophytes such as *Anastrepta orcadensis*, *Bazzania tricrenata*, *Breutelia chrysocoma*, *Herbertus aduncus* subsp. *butchinsiae*, *Mastigophora woodsii*, *Mylia taylorii*,



*Plagiochila spinulosa* and *Scapania gracilis*, as well as common species such as *Diplophyllum albicans* and *Lophozia ventricosa*. It is primarily an upland species, but has been recorded at altitudes as low as 100 m in Ireland.

This species is dioicous; female inflorescences are frequent, but male inflorescences, perianths and sporophytes are unknown. Gemmae are also unknown, so fragmentation is likely to play a part in its vegetative propagation.

#### World distribution

Apart from Ireland, this species is only known in Europe from Scotland, where it is almost confined to the western highlands (*Nationally Scarce* in Britain). Its distribution pattern in Europe is categorised as Oceanic Boreal-montane. Elsewhere, *B. pearsonii* occurs in disjunct populations in E. and SE Asia and the Pacific coast of north-western N. America.

#### Threats

Overstocking in the uplands, afforestation and burning are the main threats. Sites in W. Galway have been hit

particularly hard by overstocking with sheep, and *B. pearsonii* may have been eliminated completely from sites in Connemara.

#### Conservation

The restricted distribution and global importance of the Irish populations of this species mean that conservation measures to reinstate a less intensive grazing regime at key sites should be a priority. Populations at the more important sites should be monitored.

**Protected sites with recent records:** Cloghernagore Bog and Glenveagh National Park SAC; Croagh Patrick pNHA; Croaghun/Slievemore SAC; Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC; Mount Brandon SAC; Muckish Mountain SAC; Mweelrea/Sheeffry/Erriff Complex SAC; Slieve Mish Mountains SAC; The Twelve Bens/Garraun Complex SAC; **Unprotected sites with recent records:** none.