

# Flora Protection Order - bryophytes

## *Scapania nimbosa*

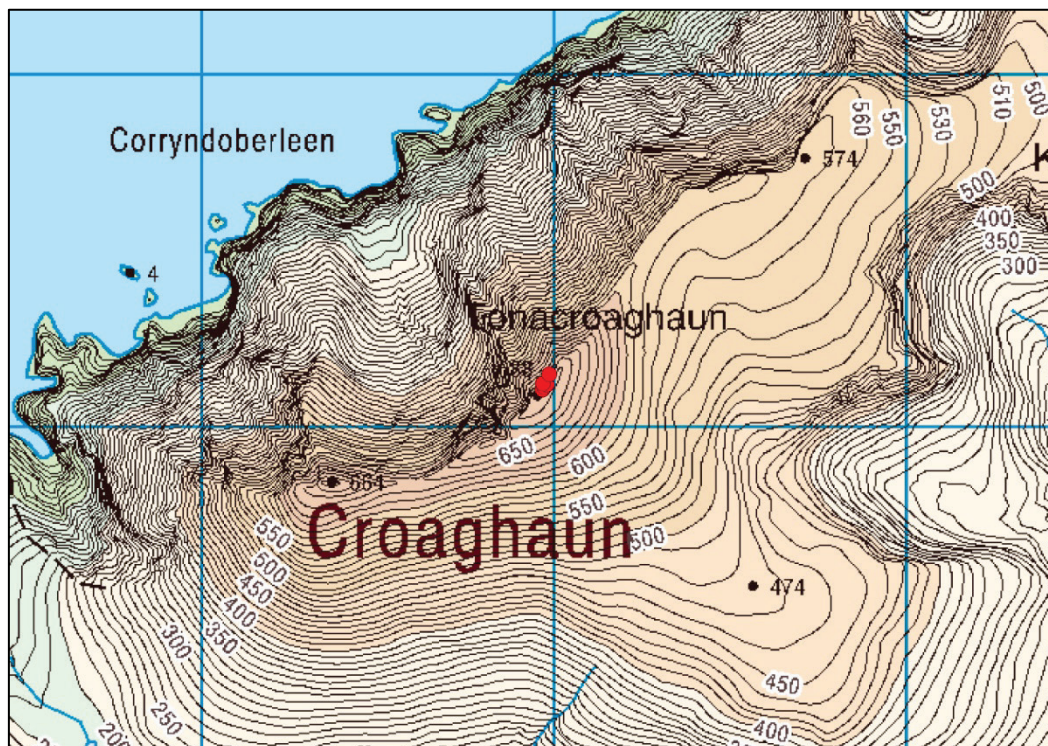
**Status:** Endangered; listed on the Flora Protection Order

**Location:** Croaghaun, Co. Mayo

### Species Records

| Taxon                   | Vice County number | Taxon Site | Locality / habitat                   | Grid Reference | Date       | Recorder  | Protected site |
|-------------------------|--------------------|------------|--------------------------------------|----------------|------------|-----------|----------------|
| <i>Scapania nimbosa</i> | 27                 | 06         | Croaghaun, north slopes below summit | F5596406107    | 2016.11.02 | Rory Hodd | SAC001955      |
| <i>Scapania nimbosa</i> | 27                 | 06         | Croaghaun, north slopes below summit | F5596906114    | 2016.11.02 | Rory Hodd | SAC001955      |
| <i>Scapania nimbosa</i> | 27                 | 06         | Croaghaun, north slopes below summit | F5597706121    | 2016.11.02 | Rory Hodd | SAC001955      |
| <i>Scapania nimbosa</i> | 27                 | 06         | Croaghaun, north slopes below summit | F5596506124    | 2016.11.02 | Rory Hodd | SAC001955      |
| <i>Scapania nimbosa</i> | 27                 | 06         | Croaghaun, north slopes below summit | F5598406150    | 2016.11.02 | Rory Hodd | SAC001955      |

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



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### Location (6" map)

No map available.

## Field Data Sheet – Survey of FPO Bryophytes 2016

|  |  |   |                                |
|--|--|---|--------------------------------|
| <b>Species</b><br><i>Scapania nimbosa</i>                          | <b>County</b><br>Mayo  | <b>6" Map</b><br>ma041d                           | <b>Discovery Map</b><br>22, 30 |
| <b>Locality/ Site name</b><br>Croaghaun, north slopes below summit | <b>Vice-county (No.)</b><br>H27  | <b>SAC/NHA</b><br>001955 Croaghaun/Slievemore SAC |                                |
| <b>Grid ref (GPS, National Grid)</b><br>(i) F5596406107(±6)        | <b>2005 Aerial Photo</b><br>1639-B   | <b>Recorder(s)</b><br>R.L. Hodd                   |                                |
| <b>Elevation (m)</b><br>680  | <b>Solid geology</b><br>X-bedded psammities and schists  | <b>Survey date</b><br>02/11/2016                  |                                |
| <b>Site description</b>  | Very steep north-facing rocky slope high above the sea, just below summit ridge of Croaghaun.  |   |                                |
| <b>Population description</b>                                      | Sparsely scattered through mixed hepatic mat, only 10-20 shoots at each location, in several places on heathy, rocky slopes, often partially shaded by rocks.  |   |                                |
| <b>Associated species</b>  | Associates include <i>Mastigophora woodsii</i> , <i>Herbertus hutchinsiae</i> , <i>Bazzania tricrenata</i> , <i>Pleurozia purpurea</i> , <i>Scapania gracilis</i> , <i>Sphagnum capillifolium</i> subsp. <i>rubellum</i> , <i>Calluna vulgaris</i> , <i>Hymenophyllum wilsonii</i> , <i>Vaccinium myrtillus</i> , <i>Galium saxatile</i> , and <i>Deschampsia flexuosa</i> . |   |                                |
| <b>Vegetation</b>  | HH4 montane heath, grading into HH1 Siliceous dry heath  |   |                                |
| <b>Current management</b>  | Sheep grazing occurs on these slopes.  |   |                                |
| <b>Threats</b>   | Overgrazing and associated erosion, although due to the inaccessibility of these slopes, there is unlikely to be a significant impact.   |   |                                |
| <b>Conservation measures</b>                                       | Ensure that stocking levels do not become too high.  |   |                                |
| <b>Ownership</b>   | Commonage  |   |                                |
| <b>Access</b>  | The summit of Croaghaun can be reached by ascending over open country from Lough Acorrymore or Keem Strand, from where it is possible to carefully descend onto the north-facing slopes.   |   |                                |
| <b>Other remarks</b>   | It is likely that other populations of this species occur on the extensive north-facing slopes of Croaghaun, but it was only possible to access the upper parts of the slope due to the precipitous nature of the slope.   |   |                                |

## GPS readings for the species

| National Grid Letter | Easting | Northing | Comments             |
|----------------------|---------|----------|----------------------|
| F                    | 55969   | 06114    | (±5) (ii) 680m alt.  |
| F                    | 55977   | 06121    | (±6) (iii) 675m alt. |
| F                    | 55965   | 06124    | (±3) (iv) 670m alt.  |
| F                    | 55984   | 06150    | (±6) (v) 660m alt.   |

**Synonymous habitat/vegetation types :**

**First record and other comments:**

First record for this site.

**References:**

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

**Photographs:**



Photograph 1: View of the northern slopes of Croaghaun, with the general location of *S. nimbosa* populations marked by the red arrow.



Photograph 2: Habitat of population (i) of *S. nimbosa* on ledge below the summit of Croaghau.



Photograph 3: Hepatic mat vegetation in which *S. nimbosa*, indicated by red arrow, grows.



Photograph 4: Close-up of *S. nimbosa* in a rich liverwort mat.

**Maps and Aerial Photographs:**

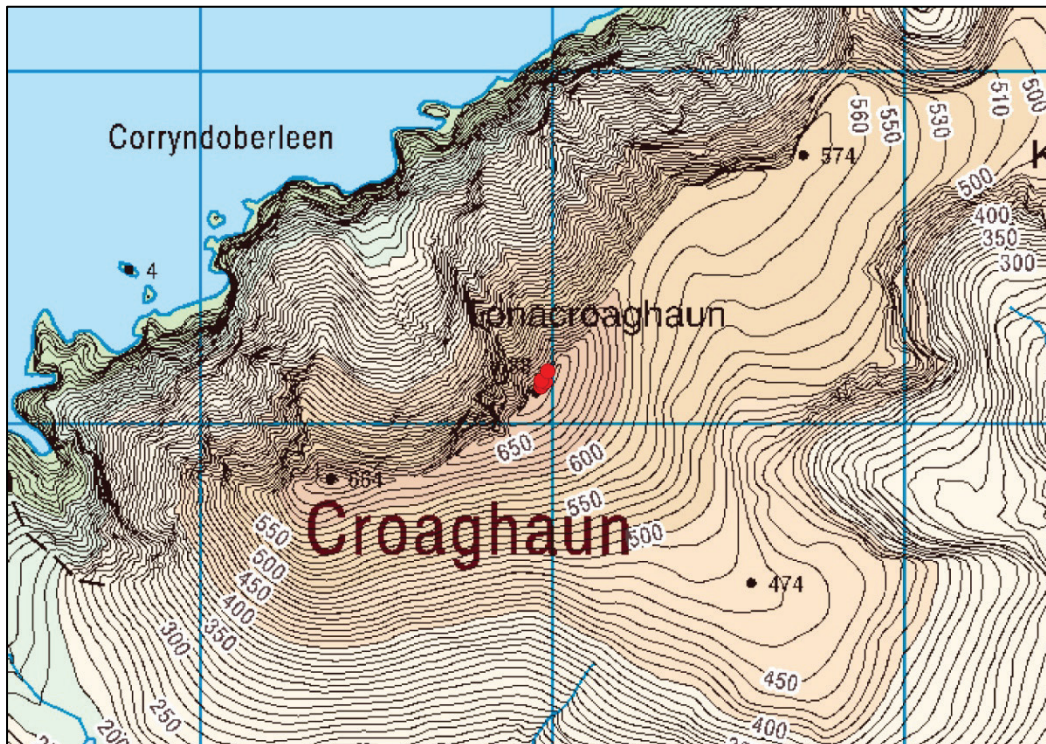


Figure 1: OSI Discovery Series map showing the locations of *S. nimbosa* (marked by red dots) on Croaghaun Mountain (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).

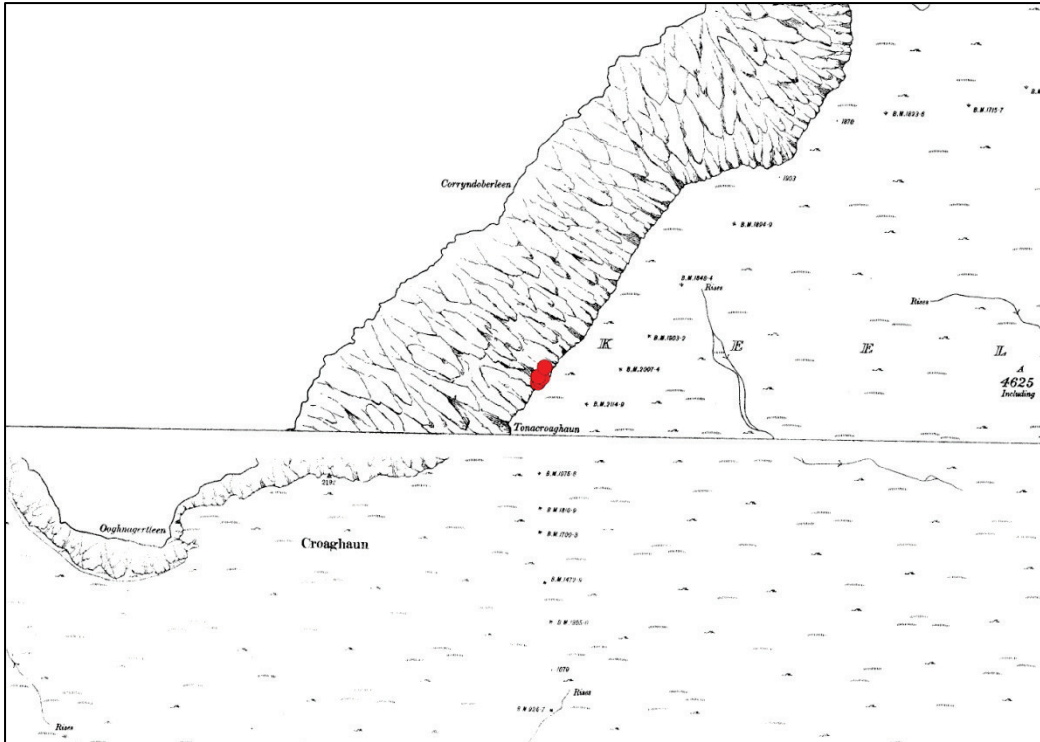


Figure 2: 6-inch map showing the locations of *S. nimbosa* (marked by red dots) on Croaghau Mountain (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).

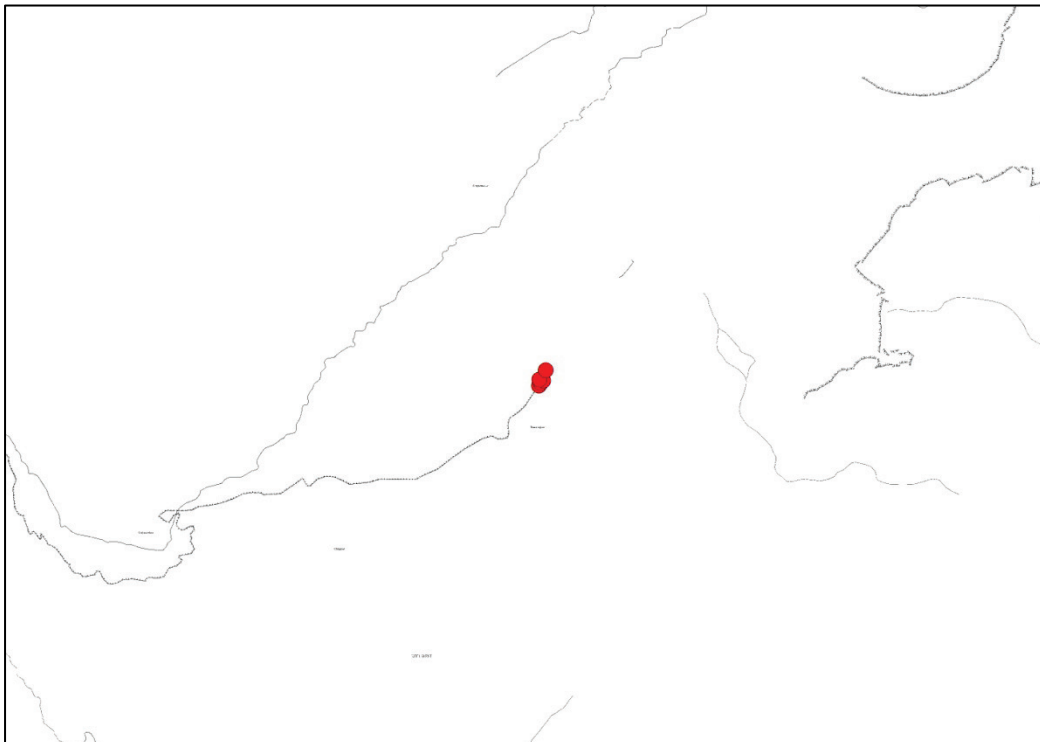


Figure 3: 1:5,000 map showing the locations of *S. nimbosa* (marked by red dots) on Croaghau Mountain (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).



Figure 4: 2005 aerial photo showing the locations of *S. nimbosa* (marked by red dots) on Croaghau Mountain (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).



Figure 5: Satellite image showing the locations of *S. nimbosa* (marked by red dots) on Croaghau Mountain (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

- Overstocking with sheep, damaging the habitat, has badly affected some sites
- Other potential threats include burning and afforestation
- Botanical collecting a possible threat in some localities
- Climate change?

### Potential site-specific threats/issues

- Overgrazing and associated erosion, although due to the inaccessibility of these slopes, there is unlikely to be a significant impact.



Excerpt from:

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

*Hornworts and Liverworts*

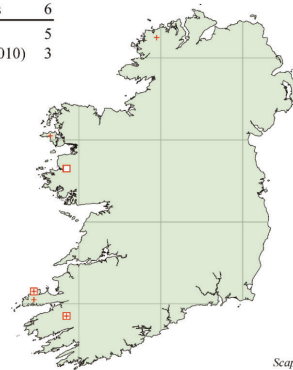
## *Scapania nimbosa* Taylor ex Lehm.

Cloud Earwort

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



| Number of Hectads    | 6 |
|----------------------|---|
| + Old (pre-1970)     | 5 |
| □ Recent (1970–2010) | 3 |



*Scapania nimbosa*

### Identification

This is a large and very distinctive leafy liverwort, usually dark reddish-brown or purple in colour, with shoots up to c. 7 cm long and c. 4 mm wide. As in other species of *Scapania*, the leaves are bilobed and divided into two unequal lobes attached by a keel, the slightly smaller antical lobe overlying the postical lobe, and there are no underleaves. The keel is very short in *S. nimbosa*, and the leaves have long ciliate teeth on the margins: these teeth are longer, more widely spaced and fewer in number than in *S. ornithopodioides*.

### Distribution in Ireland

*S. nimbosa* is known from a few sites in the extreme west: the most recent records are from S. Kerry (Brother O'Shea's Gully, Lough Cummeenoughter, 2009; near the summit of Carrauntoohil, 1983; Brandon Mountain, 1813–2009) and W. Mayo (NE corrie of Mweelrea, 1987). There are older records from S. Kerry (Beenkeragh, 1964, 1965); W. Mayo (Slievemore, 1911) and W. Donegal (Errigal, 1962), but searching has failed to re-find it in these places. Ratcliffe (1968) places it into the Northern Atlantic species group.

### Ecology and biology

One of the rarest of the Northern Atlantic hepatic mat species in Ireland, *S. nimbosa* is confined to N.- and NE-facing rocky slopes, often in block scree or in heather, at relatively high altitudes. Its habitat is similar to that of *S. ornithopodioides*, although it tends to occur at even higher altitudes and usually in smaller quantities than that species. It is normally associated with other Atlantic liverworts such as *Anastrepta orcadensis*, *Bazzania tricrenata*, *B. pearsonii*, *Herbertus aduncus*, *Mylia taylorii* and *Scapania ornithopodioides*. On Brandon Mountain it was found recently in two patches, one 5 × 3 cm, in association with other hepatics, including *Scapania ornithopodioides*, *S. gracilis* and *Anastrepta orcadensis*, as well as *Poa pratensis*, the second patch 15 m to west, 7 × 15 cm, with numerous stems, both patches on the near-vertical edge of small rocks; at Brother O'Shea's Gully it occurs in at least three patches, c. 10 × 10 cm, on a steep, grassy, hepatic-rich slope, beside an increasingly eroded path, in association with *Festuca vivipara*, *Agrostis capillaris*, *Saxifraga spathularis*, *Scapania ornithopodioides* and *Scapania gracilis* (R.L. Hodd, pers. comm.). The

occurrences are subalpine and alpine, at altitudes of 700–1010 m in Ireland.

Fertile plants and sporophytes are unknown anywhere. Gemmae are produced on the leaf margins but are very rare. Vegetative reproduction by fragmentation probably takes place to some extent.

#### World distribution

This plant is only recorded elsewhere in Europe from Scotland (*Nationally Scarce* in Britain) and Norway (where it is considered *Critically Endangered*). In Europe, it is categorised as an Oceanic Boreal-montane floristic element. Elsewhere, there are disjunct populations in the Himalaya and China.

#### Threats

Climate change may be the most serious threat to this species, as it is one of the most northern of the Northern Atlantic hepatic mat plants. Overstocking with sheep has damaged the habitat in most areas, and botanical collecting may have contributed to the disappearance of

some populations. It seems likely that more material has been removed from some localities than can easily be replenished, in a plant that is apparently so reproductively inefficient.

#### Conservation

It is difficult to recommend any conservation measures to counter climate change, but the very special places where this plant has been recorded should at least be protected from the impacts of overstocking. It may still occur at some of its older sites, perhaps in places inaccessible to botanists and sheep. Hopefully, the system of EU subsidies that has encouraged destructively high stocking levels in the uplands is now changing, and sheep numbers should decline as a consequence.

**Protected sites with recent records:** Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment SAC; Mount Brandon SAC; Mweelrea/Sheeffry/Erriff Complex SAC; **Unprotected sites with recent records:** none.