

Flora Protection Order - bryophytes

Brachydontium trichodes

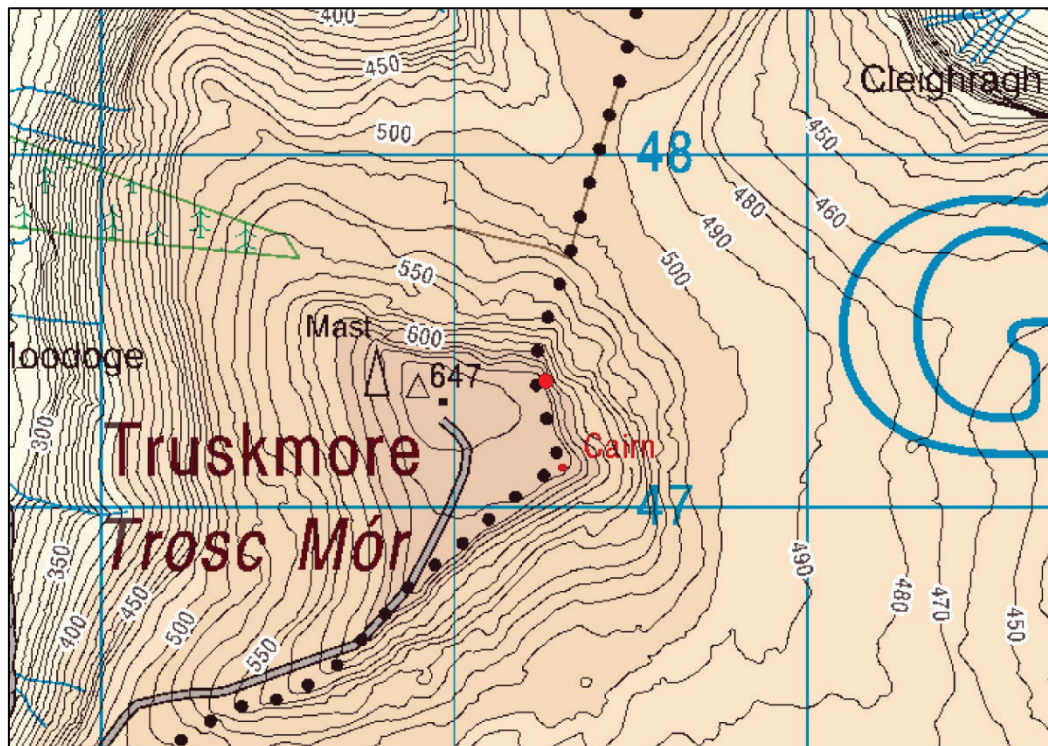
Status: Endangered; listed on the Flora Protection Order

Location: Truskmore, Co. Leitrim

Species Records

Taxon	Vice County number	Taxon Site	Locality / habitat	Grid Reference	Date	Recorder	Protected site
<i>Brachydontium trichodes</i>	29	08	Northern slopes of Truskmore	G7625947359	2016.10.11	Rory Hodd	SAC000623

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

Species <i>Brachydontium trichodes</i>	County Leitrim	6" Map le003d	Discovery Map 16
Locality/ Site name Northern slopes of Truskmore	Vice-county (No.) H29	SAC/NHA 000623 Ben Bulben, Gleniff And Glenade Complex SAC	
Grid ref (GPS, National Grid) G7625947359(±6)	2005 Aerial Photo 0809-C	Recorder(s) R.L. Hodd	
Elevation (m) 615	Solid geology Pale orthoquartzitic sandstone	Survey date 11/10/2016	
Site description	Steep northeast-facing slope of mountain, with a number of small exposed rock outcrops.		
Population description	Hundreds of plants occur over a 1x1m area of two small adjacent rock outcrops, abundant sporophytes present.		
Associated species	Growing with <i>Diplophyllum albicans</i> , <i>Tetradontium brownianum</i> , <i>Scapania umbrosa</i> and <i>Pellia epiphylla</i> .		
Vegetation	ER1 Exposed siliceous rock		
Current management	Sheep grazing occurs on these slopes, but would not impact this species directly, and there is a large mast located on the summit above.		
Threats	Few threats, possibility of erosion by grazing animals or pollution/littering from mast.		
Conservation measures	Ensure that no litter/debris from the mast is deposited on the slopes of the mountain.		
Ownership	Commonage		
Access	There is a carpark in Glenade to the north of Truskmore, from where a track leads up on to the plateau below this site.		
Other remarks			

Synonymous habitat/vegetation types :

First record and other comments:

This is a new 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 Unpublished report to National Parks and Wildlife Service.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: General location of *B. trichodes* on Truskmore, as indicated by red arrow, viewed from the northeast.



Photograph 2: Habitat of *B. trichodes*, scattered across siliceous rocks on north-facing slope.



Photograph 3: Damp face of siliceous rock, on which *B. trichodes* grows.



Photograph 4: Close-up of *B. trichodes* on rock surface shown in Photograph 3.

Maps and Aerial Photographs:

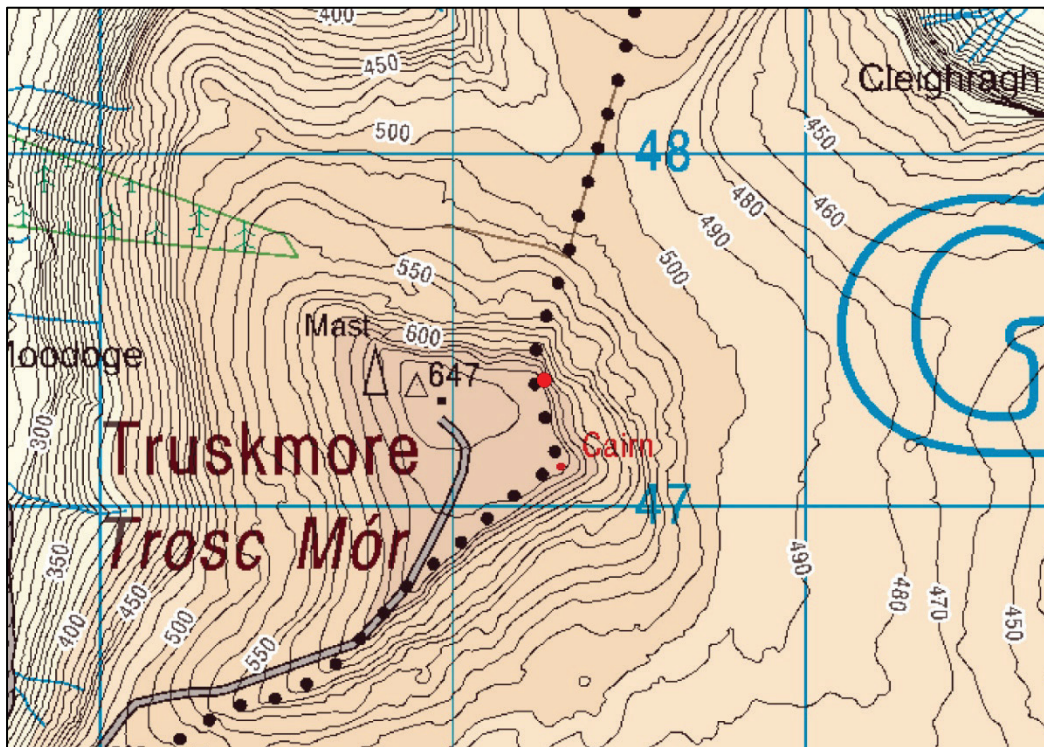


Figure 1: OSI Discovery Series map showing the location of *B. trichodes* (marked by a red dot) on Truskmore (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).

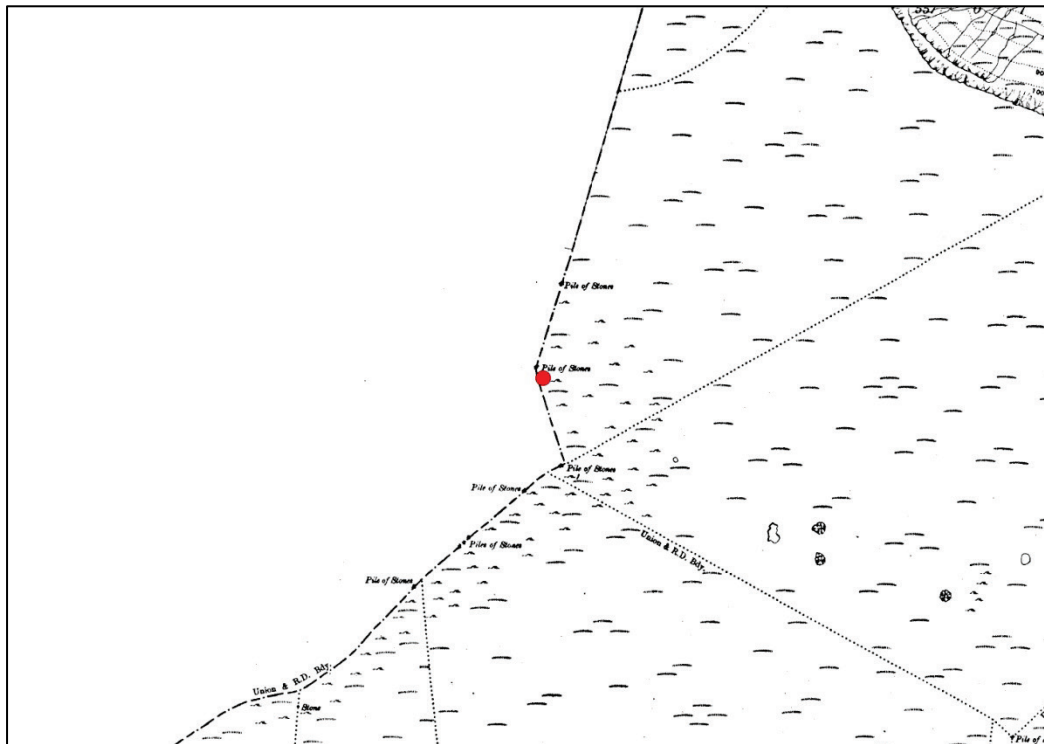


Figure 2: 6-inch map showing the location of *B. trichodes* (marked by a red dot) on Truskmore (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).

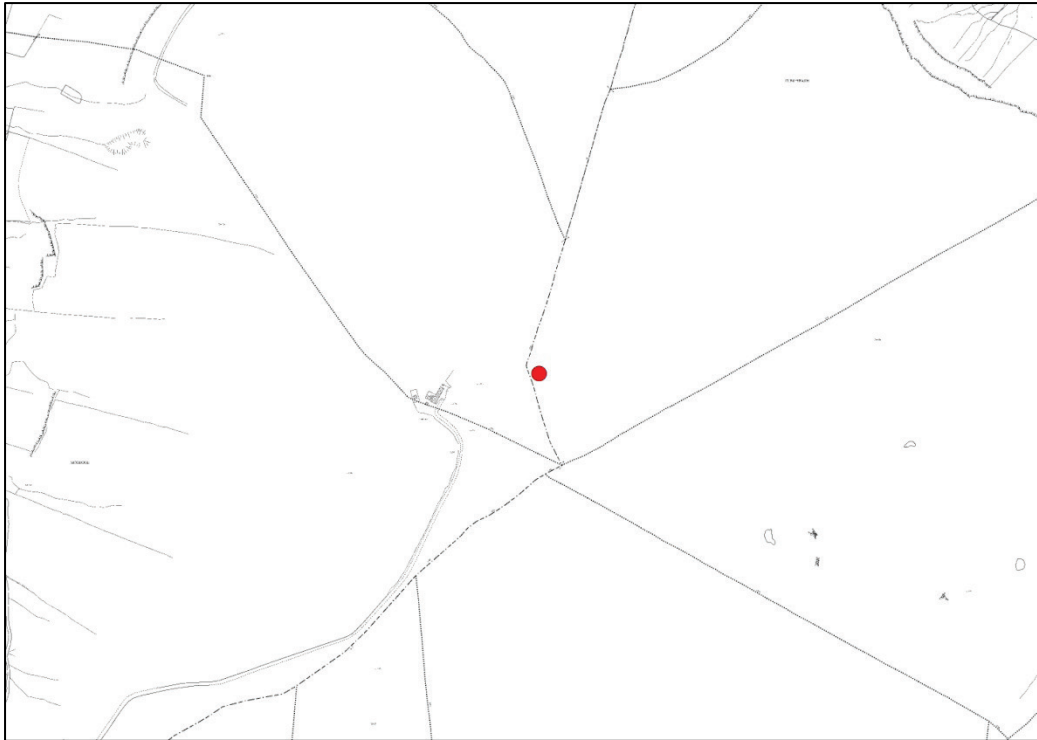


Figure 3: 1:5,000 map showing the location of *B. trichodes* (marked by a red dot) on Truskmore (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).

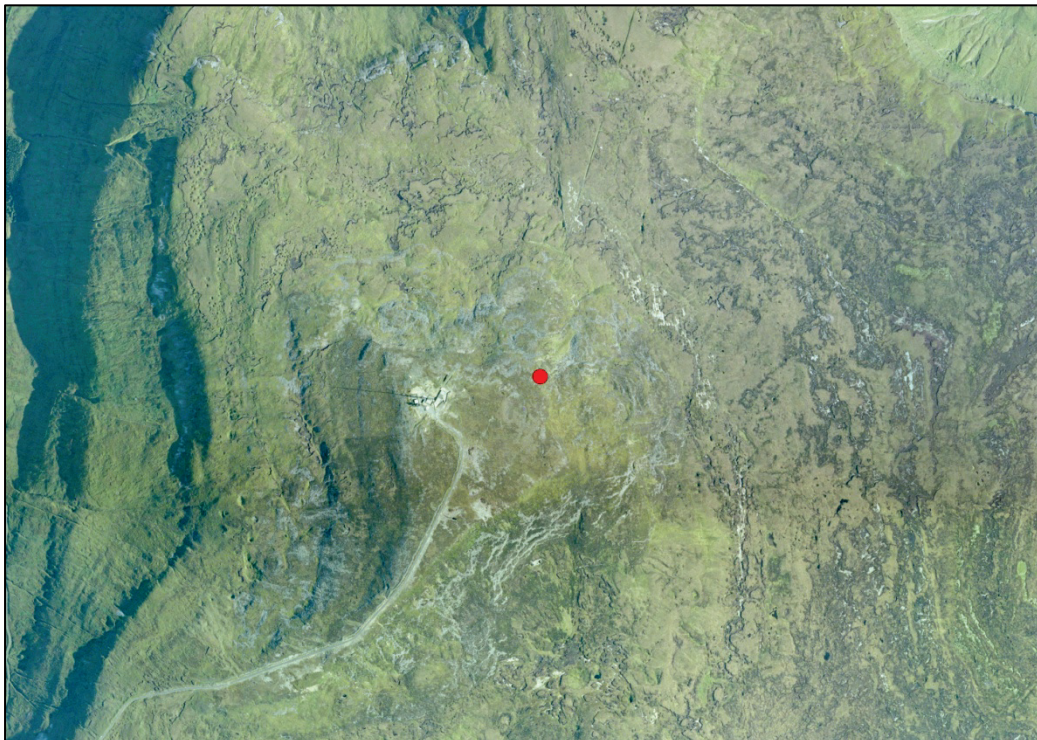


Figure 4: 2005 aerial photo showing the location of *B. trichodes* (marked by a red dot) on Truskmore (Ordnance Survey Ireland Licence No EN 0059214 © Ordnance Survey Ireland/Government of Ireland).



Figure 5: Satellite image showing the location of *B. trichodes* (marked by a red dot) on Truskmore (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

- Possibly vulnerable to eutrophication
- Competition from coarse vegetation

Potential site-specific threats/issues

- Few threats, possibility of erosion by grazing animals or pollution/littering from mast.

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

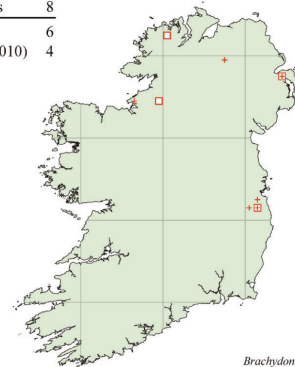
RARE AND THREATENED BRYOPHYTES OF IRELAND

Brachydontium trichodes (F.Weber) Milde

Bristle-leaf

syn. *Brachyodus trichodes* (F.Weber) Nees & Hornsch.**Status in Ireland:** Endangered (B2a, bi, bii, iv); **Status in Europe:** Rare

Number of Hectads	8
+ Old (pre-1970)	6
□ Recent (1970–2010)	4

*Brachydontium trichodes***Identification**

B. trichodes is a minute olive green to yellowish-green or brownish acrocarpous moss that grows in small colonies on sheltered rock surfaces. The erect plants are only 1–2 mm high and grow in open patches (low turfs). The leaves are few in number and bristle-like, comprising an ovate-lanceolate basal part from which the costa extends in a long subula. Capsules are borne on an erect seta 2–3 mm tall. They are ovate to obloid, striate when mature and furrowed when dry and empty. Several species of *Seligeria* that occur mainly on more basic rocks are similar in general appearance to *B. trichodes*, as is *Campylostelium saxicola*. However, none of these other tiny rock mosses has the striate or furrowed capsule of *B. trichodes*. The young capsule of *B. trichodes* is covered by a calyptra that is erect with several basal splits (mitrate); in *Seligeria* the calyptra sits more obliquely on the capsule and has only a single basal split (cucullate). Plants lacking capsules are probably unidentifiable.

Distribution in Ireland

Recent records are from four scattered localities in three vice-counties: Wicklow (River Liffey, NW of Sally Gap, 2010); Leitrim (Dough Mountain above Killea, 2005); W. Donegal (N. slope of Muckish, 2002) and Down (Scrabo Hill quarry, 1933–2002). Old records in areas where it has not been refound recently are from a further five localities: Wicklow (Lough Bray area, 1835 and

1878; Kelly's Glen, 1863); Dublin ('Dublin', 1817); Sligo (Benbulbin, 1879–1937) and Londonderry (Inishgore, W. of Draperstown, 1937).

Ecology and biology

The species grows on steep to vertical or slightly overhanging surfaces of soft to hard siliceous rocks of neutral to strongly acidic reaction. It apparently prefers rather humid or sheltered places, occurring in unshaded sites only on N.-facing slopes. Its substrata have been recorded as sandstone, quartzite, granite and decomposing chert, on boulders, natural outcrops and quarried rocks, over an altitudinal range of at least 100–590 m. The species is reported to occur also on calcareous rock in Britain (Corley in Hill *et al.* 1992) and Norway (Lönnell in Hallingbäck *et al.* 2006), but it has apparently never been found on limestone or chalk in Ireland.

It is a perennial that can be seen in all months of the year. Both sexes occur on the same plant, the female inflorescences at the stem tip, the male inflorescences on short branches (autoicous). Capsules are common, with spores maturing in autumn and early winter. There are no reports of gemmae or tubers.

World distribution

The species occurs widely but rather sparsely in Europe, mainly in mountain regions, from SW Norway and Poland southwards to Portugal and east to the Caucasus.

It is listed as *Critically Endangered* in Switzerland, *Endangered* in Spain and Portugal, *Vulnerable* in Bulgaria and 'declining' in Germany and Norway. Distribution maps showing it is locally frequent in Germany (Meinunger & Schröder 2007) suggest that its treatment as 'Rare' in the *Red List* for Europe as a whole may be unnecessary. It is classified as a Suboceanic Temperate floristic element in Europe. Elsewhere, it is recorded from N. America (New Hampshire, North Carolina, Tennessee and Washington State) and Colombia (Vitt & Spence in FNA 2007). Reports from Australia (Vitt & Spence *loc. cit.*) may be based on *B. intermedium* I.G.Stone (cf. Streimann & Klazenga 2002).

Threats

Threats to the species are poorly understood, but at Scrabo Hill quarry it is clearly at risk from shading of boulders on the quarry floor by growth of scrub and saplings. More generally, its occurrence on predominantly acidic, nutrient-poor substrata may imply that it is vulnerable to eutrophication.

Conservation

The preponderance of old records may suggest *B. trichodes* has declined in Ireland, but it is tiny and easily overlooked, so further bryological surveys may rediscover some of the old sites or disclose additional populations. Scrabo Hill quarry is a protected site where maintaining a viable population of *B. trichodes* will depend on

appropriate habitat management, especially cutting scrub and saplings around the boulders on which it grows. *B. trichodes* is listed as a Northern Ireland Priority Species.

Protected sites with recent records: Dough/Thur Mountains NHA; Muckish Mountain SAC; Scrabo ASSI; Wicklow Mountains SAC; **Unprotected sites with recent records:** none.



River Liffey, south-west of Sally Gap, Co. Wicklow.