

In search of the clubmoss *Lycopodium lagopus* in Westernness (VC 97)

Background

The clubmoss *Lycopodium lagopus* was newly reported from Britain this year by Fred Rumsey of the Natural History Museum (Rumsey, 2007). Its taxonomy is controversial and until recently was considered to be a subspecies or variety of the stag's-horn clubmoss *Lycopodium clavatum* (sometimes named var. *monostachyon*). Key differences relate to the cones, or strobili, which are predominantly single in *L. lagopus*, and on short stalks (peduncles), whereas they are usually in twos or threes in *L. clavatum*, on longer peduncles (typically 30-70 mm). Other differences are described in the paper.

This taxon is predominantly found in the Arctic and sub-arctic, and had not been previously recognised in Britain. Rumsey identified two herbarium specimens as *L. lagopus*: one from Geal Carn in Glen Feshie (VC 96), found by Clive Jermy in 1974, and an earlier specimen collected in 1896 by the notable botanist E.S. Marshall from VC 97, labelled as being from Garbh Bheinn, Fersit Forest, at 2800 ft (c.853m).

The hunt

On 10 October 2007, hoping to relocate Marshall's find, I visited the hill named Garbh-bheinn (858m high) on the east side of Loch Treig, south of Fersit. We were unable to find any fertile *Lycopodium* on the hill, and none at all on the summit area so continued north to Meall Garbh where a single non-fertile patch of uncertain identity was found at GR NN371724, at c.913m altitude. Then, after passing over Stob Coire Sgrìodain, my sons discovered a large colony with abundant strobili on **Sron na Garbh-bheinne**, at c.840m altitude, at GR NN356752. Was this it?

This population included a good number of healthy plants scattered over an area of about 25m by 10m on the east side of the ridge, just below the path. They were growing in dwarf-shrub vegetation intermediate between NVC types H13 *Calluna-Cladonia* heath and H14 *Calluna-Racomitrium* heath. Associates included:

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|-------------------------------------|-------------------------|
| Calluna vulgaris | Racomitrium lanuginosum |
| Empetrum nigrum ssp. hermaphroditum | Pleurozium schreberi |
| Vaccinium vitis-idaea | Rhytidiadelphus loreus |
| Carex binervis | Hylocomium splendens |
| Carex bigelowii | Cladonia portentosa |
| Potentilla erecta | Nardus stricta |
| Alchemilla alpina | |

Description

The specimens seem to match quite well with the description of *L. lagopus* in Rumsey's paper (though not in all respects) as follows:

- strobili (cones) predominantly single
- strobili with relatively short peduncles (stalks) - but varying between about 1-3cm (intermediate between the two species as described by Rumsey)
- strobili paired in a few cases, but if so without individual peduncles above the branching point
- predominance of congested, upright branches
- noticeable annual growth zones ('waisted' rather like *L. annotinum*)
- yellowish-green colouring (especially newer growth)
- microphylls ('leaves') incurved

Another character not mentioned by Rumsey but given in Flora Europaea for this taxon in Scandinavia which fits these specimens is the shorter cones, 1-2.5cm, cf. 2.5-6cm in typical *clavatum*. Flora Europaea also refers to the peduncles being less than 3cm long, rather than only up to 12mm. Note that Rumsey describes Marshall's specimen as having very short peduncles

(average 4 mm) with the hairpoints missing from older microphylls, features which I did not observe.

The altitude of this site (840m) is similar to that for the two locations identified in Rumsey's paper. I suspect that the plant found on Meall Garbh at 913m was also the same taxon. No doubt further searching on these hills would have found more.

Pending further research into genetics and environmental influences, the jury must be out on the taxonomy of *L. lagopus*, but it is surely worth looking out for on other Scottish hills – and it can be looked for in winter (snow permitting!). I would be interested to hear of any more sightings.

Reference

Rumsey, F.J. (2007) An overlooked boreal clubmoss *Lycopodium lagopus* (Laest. Ex Hartm.) Zinserl. Ex Kusen. (Lycopodiaceae) in Britain. *Watsonia* **26**: 477-480.

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