

Wales Upland Ecosystem Group Priority Action

Montane Vegetation on the Carneddau Mountains

Montane heaths and grasslands encompasses a range of vegetation types found in the high mountains above the former natural tree-line, including montane heaths and grasslands, willow scrub and snowbed vegetation. They are mainly found in the Scottish Highlands in the UK, but some of them extend south to Wales, which holds less than 1% of the UK total. As they reach their southern limit in the UK, Welsh examples tend to be small, fragmented and more degraded than those in the Scottish Highlands and are largely confined to the highest Welsh mountains in Snowdonia. The most extensive examples occur on the tops of the Carneddau. These are right on the edge of their range and this increases their importance, as edge-of-range habitats and species are often the first to respond to the effects of environmental change and so can act as early indicators of more widespread change in future years.

In the UK, these montane habitats are at risk from overgrazing, localised recreational impact and possibly atmospheric deposition and climate warming. The montane heaths in Wales are subject to all of the above impacts, particularly that from overgrazing.

A study on the Carneddau mountain group has demonstrated a significant deterioration in the condition of stands of H19 *Vaccinium myrtillus* -*Cladonia* spp. heath and U10 *Carex bigelowii* -*Racomitrium* moss heath over the past forty years, with a trend of montane heath being converted to acid grassland. More recent research on the links between species composition, grazing impacts, nitrogen pollution and the nitrogen status of these Carneddau communities investigated the role of overgrazing in their decline and whether a reduction in grazing levels might result in their restoration. The studies found that *Racomitrium*-dominated communities can survive under the current atmospheric nitrogen deposition regime, and so reduction or removal of grazing should aid conservation and restoration of the more degraded areas.

Some of these Welsh heaths are part of possibly the most heavily grazed common land in Wales and are now in such a degraded state that if conservation protection/management measures are not implemented in the near future, then restoration may not be possible due to erosion, nutrient input and change in species composition, resulting in the loss of this important habitat from Wales. Urgent conservation measures are therefore needed to prevent this loss.

This montane vegetation is included in Annex I of the European Habitats Directive and is a feature of the Eryri Special Area of Conservation and SSSI. Furthermore, due to its restricted distribution, and to the adverse effects of ongoing impacts and threats, it has recently been designated as a priority BAP habitat. The site is also in the National Park and partly owned by the National Trust. The project would therefore require collaboration between CCW, NT, SNPA, WAG, Llanllechid commoners and private landowners.

Action Required

- Management of grazing by erection of exclosures in key areas
- Footpath work to better define path through the montane area and avoid damage by trampling
- Continued monitoring and research