Upland Heathland

Upland heathland, also known as heather moorland, lies typically between 250m and 750m in altitude (though can occur at close to sea level in northern Scotland). The broad habitat includes wet and dry heath plant communities and can occur in mosaic with acid grassland, blanket bog and montane plant communities as well as with upland broadleaved woodlands. This section does not directly consider blanket bog (which is covered in the Wetlands Habitat statement) except where upland heathland vegetation occurs on degraded bogs or where the habitats occur in close mosaics. At lower altitudes, the boundary between upland and lowland heathland can be difficult to determine.

Much of the upland heathland resource within Aberdeenshire and Moray lies within the Cairngorms National Park. The descriptions below apply to upland heathland across the whole of North East Scotland.

Importance

Upland heathlands are largely cultural landscapes. They are successional habitats which are primarily maintained by human management. Since the late nineteenth century, management and maintenance of substantial areas of upland heathland as we see them today have been driven by the shooting of Red Grouse, as a sporting activity. This particularly involves burning of the dominant plant, the dwarf-shrub, Heather, on a rotational basis. Heather is the primary foodplant for Red Grouse and this management maintains an age structure in which some Heather is young and nutritionally rich, whilst other areas are tall enough for nesting. Management to maintain high Red Grouse numbers also, typically, includes intensive predator control.

Some important species associated with upland heathland habitats

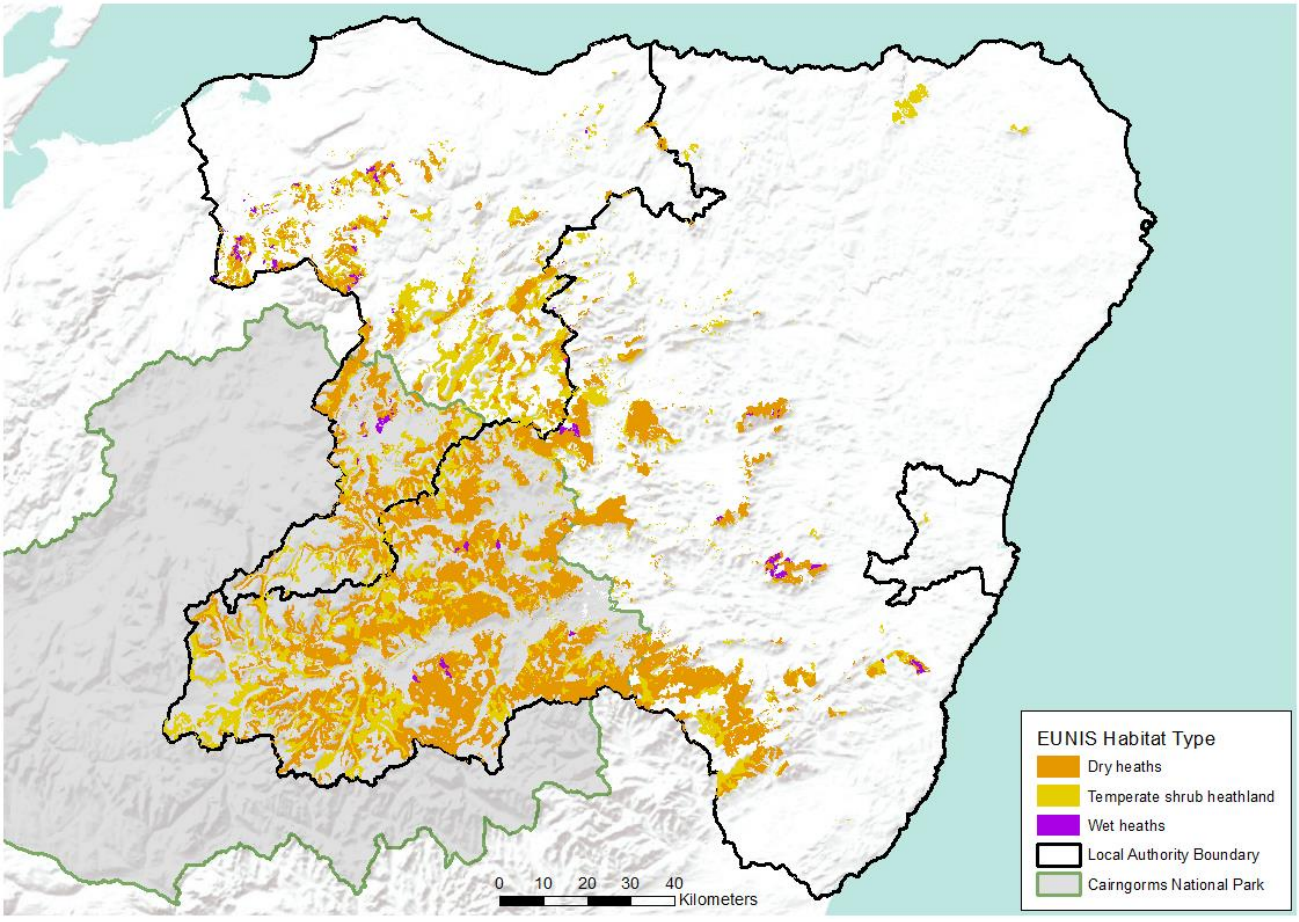
Red Grouse
Black Grouse
Hen Harrier
Golden Eagle
Golden Plover
Curlew
Short-eared Owl
Merlin
Mountain Hare
Adder
Small Dark Yellow Underwing
Netted Mountain Moth
Bilberry Bumblebee
Bearberry

Upland heathlands are relatively species-poor but do host some plant communities that are virtually confined to the UK. Plant diversity is especially low on the most frequently burned sites but, where management is carried out at a lower intensity, species such as Bilberry, Crowberry, Cross-leaved Heath, Bell Heather and Deergrass can become more significant elements in the assemblage, with a richer understorey of mosses present, including *Sphagnum* species on wetter sites.

A range of animal species are better represented in this habitat than elsewhere. Some of these, such as Golden Eagle and Mountain Hare, can benefit from maintenance of open non-wooded landscapes while others, such as Golden Plover and Curlew, are at higher populations than elsewhere, at least in part due to extensive predator control. Some invertebrates, such as Small Dark Yellow Underwing and Netted Mountain Moth, benefit from long-term retention of early successional habitats. Upland heathlands can be important for Adders and Common Lizards, especially where there is a varied vegetation structure.

Influential factors

- Upland heathlands are largely maintained by management, especially burning
- Climate change policy is pushing for a reduction in moorland burning to reduce carbon emissions
- There is pressure to reduce moorland burning as part of flood mitigation measures
- Over-grazing and/or nitrogen deposition can lead to the replacement of upland heathland by acid grassland
- High deer numbers can also drive conversion to acid grassland
- Loss to upland broadleaved woodland from natural woodland spread or woodland establishment programs as part of woodland expansion policies
- Loss to afforestation by commercially-grown conifers, as part of woodland expansion policies
- Societal pressures on sporting management may lead to restrictions on this land use and to consequent senescence of Heather



Status and Management

Upland heathland is a dominant habitat in much of western Aberdeenshire and southern Moray, but smaller areas occur further east, including within Aberdeen City. In total, North East Scotland (including that part which lies within the Cairngorms National Park) contains 8% of the Scottish resource and 4 % of the UK resource of this habitat. The upland heathlands of North East Scotland are among the most intensively managed in Scotland.

There was an 18% loss of this habitat in Scotland from the 1940s to 1970s and a reduction in habitat quality in much of the remaining resource. More recently, the extent of upland heathland has stabilised. Trends in the extent of upland heathland in North East Scotland are not known, though it is likely that there have not been significant changes in recent years.

Most upland heathland is managed by privately owned estates for sporting purposes, especially the production of high numbers of Red Grouse for shooting. The intensive habitat and predator management that forms part of this management is coming under increasing societal pressure, especially due to carbon emissions and silt release from Heather burning, the magnitude of legal predator control, frequent instances of illegal killing of protected species and other management practices such as culls of Mountain Hares and installation of new hill tracks to facilitate greater access for sporting purposes. This statement does not take a view on what the role of sporting activities should be in the future management of upland heathland but does recognise the role of such management in the origins of our current open Heather-dominated moorlands. In absence of sporting activities, subsequent habitat management may be less intensive. Increases in use for grazing livestock could drive changes to acid grassland whilst absence of economic use (if combined with low deer numbers) could create opportunities for native woodland expansion on moors.

Some of the moors fringing the eastern and northern edges of the Cairngorms National Park are characterised by the relative abundance of Bearberry among the plant assemblages. Bearberry is an early successional plant within moorland assemblages and relies on the continuation of Heather burning or other disturbances to facilitate its persistence. There appears to have been a reduction in the extent of moors with Bearberry and, concomitantly, populations of invertebrates that are associated with Bearberry.

On some estates, upland heathlands are managed for wider biodiversity aims. This may involve reducing the actual extent of upland heathland vegetation in favour of some woodland expansion or blanket bog restoration. Where opportunities arise for appraising upland management options, upland heathland should be considered in the wider landscape context of such alternative upland habitats.

Opportunities for upland heathland habitats

- Restoration/management to reduce loss to acid grassland

- Increase in management rotation time to encourage greater diversity of vegetation structure
- Expansion of heather cutting rather than burning to reduce carbon emissions and release of sediment into waterways
- Recovery of some predator populations, especially raptors, through tackling wildlife crime
- Encouraging more natural upland heathland/broadleaved woodland boundaries
- Reducing management intensity of upland heathland vegetation where it occurs over or alongside degraded blanket bog
- Blocking of remaining hill grips
- Maintaining low deer numbers
- Opportunities for removal of existing hill tracks and restoration of habitat
- Opportunities for restoration of decommissioned windfarm sites following agreed decommissioning plans

Resources

Woodland expansion: Woodland Expansion Advisory Group report

Natural England: Review of Upland Evidence

Conservation Evidence: Shrubland and Heathland Conservation Synopsis

Scottish Natural Heritage: Constructed tracks in the Scottish Uplands

For further information about how protection and enhancement of upland heathland is supported across North East Scotland, see also Local Development Plans for Aberdeen City, Aberdeenshire and Moray Council - see Introduction for further details.