

Alpine conservation in Scotland

A perspective!



- Monitoring
 - Condition assessment (SCM)
 - Targeted monitoring (snowbed vegetation)
- Management
 - Agri-Environment Climate Scheme
- Upland path work/restoration
- Off-site pressures
 - Nitrogen/Acid deposition
 - Climate Change
- Research
 - Translocation
 - Upland birds e.g. Dotterel
 - Etc etc...



Site Condition Monitoring

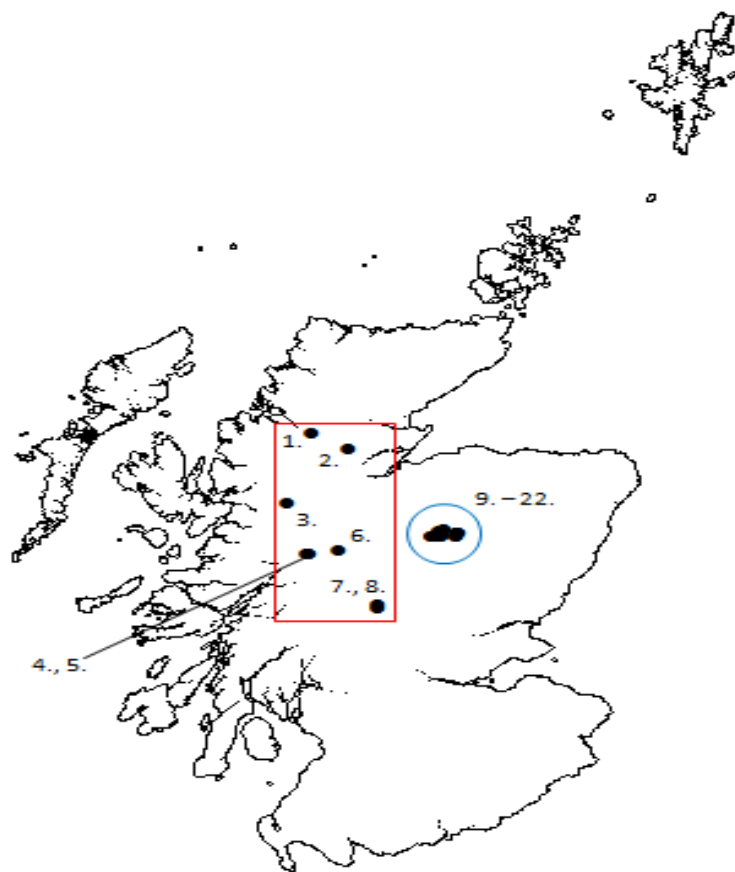
- Six year cycle
- Attributes and Targets
- Condition Assessment
- Favourable condition



Scottish Snowbed Vegetation Monitoring Network

1. Resurvey 1989 snowbed vegetation plots in 2007/8 to determine gross changes in snowbed vegetation community composition
2. Detailed transects to monitor changes in the extent and composition of bryophyte dominated snowbed vegetation. Set up 2007/8 and resurveyed 2015/16 – analysis ongoing.





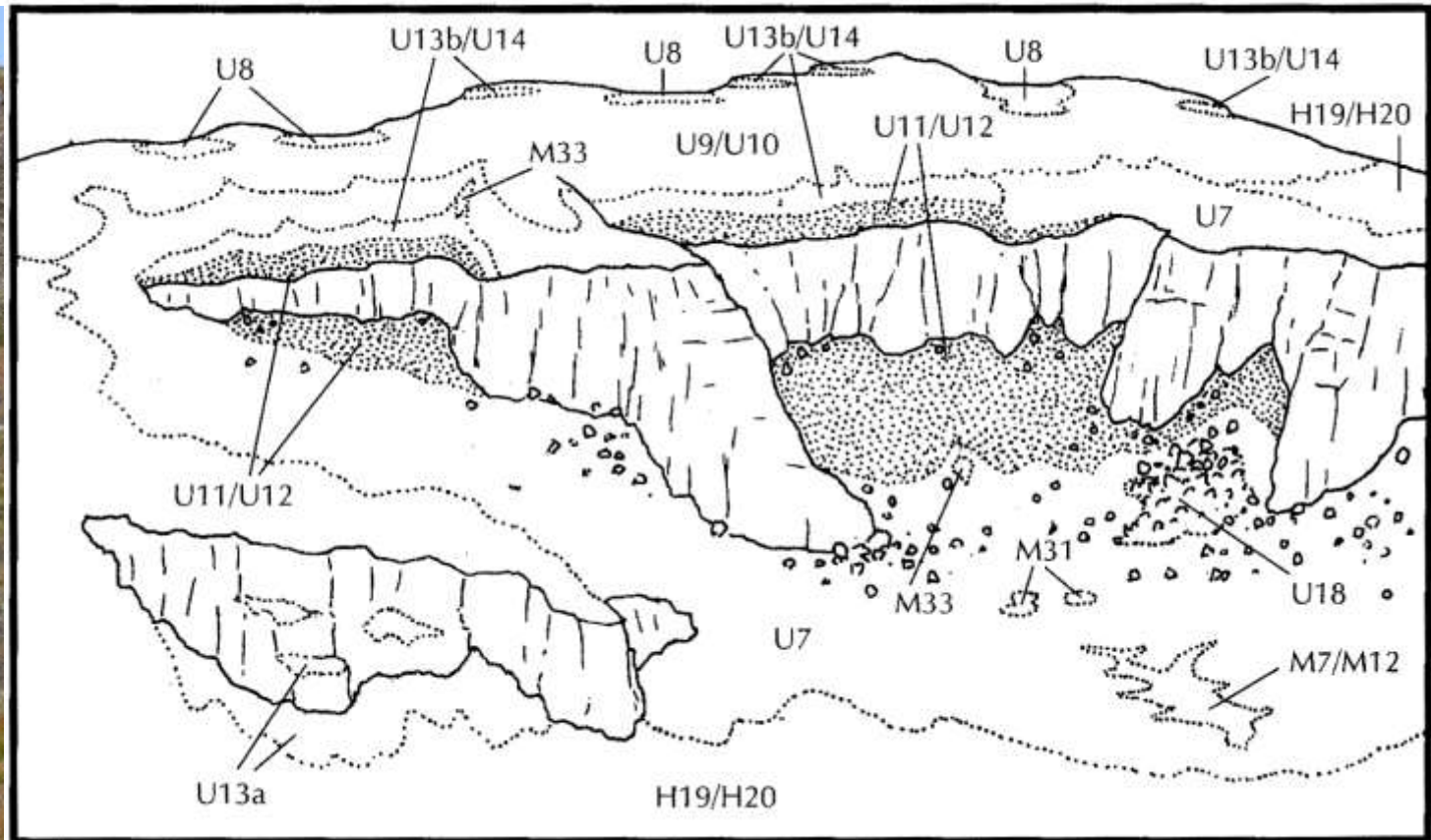
Region	Site Code	Site Name
Western	S1.	Beinn Dearg
	S2.	Ben Wyvis, North Coire
	S3.	Mam Sodhail, Lochan Uaine
	S4.	White Mounth, Coire Boidheach
	S5.	White Mounth, Glas Allt
	S6.	Creag Meagaidh, West Coire
	S7.	Ben Lawers, An stuc
	S8.	Ben Lawers, NE Face
Eastern	S9.	Cairngorm, Ciste Mhearad
	S10.	Carn Lochan, Coire Domhain
	S11.	Carn Lochan, Coire Domhain
	S12.	Ben Macdui, Lower Garbh Uisge Beag
	S13.	Ben Macdui, Upper Garbh Uisge Beag
	S14.	Ben Macdui, North Slope
	S15.	Ben MacDui, Upper Garbh Uisge Mor
	S16.	Ben MacDui, Bealach 1232m
	S17.	Braeriach, Garbh Coire Mor
	S18.	Braeriach, Garbh Coire Mor E Gully
	S19.	Beinn a Bhuid, Coire an t'Snaechda
	S20.	Beinn a Bhuid, Dubh Lochan
	S21.	Beinn a Bhuid, North Top
	S22.	Beinn a Bhuid, Garbh Coire



Snowbed community types

Scottish Natural Heritage

Dualchas Nàdair na h-Alba



Source: Averis A *et al.* (2004) An illustrated guide to British upland vegetation

U7 – *Nardus stricta*-*Carex bigelowii* grass-heath

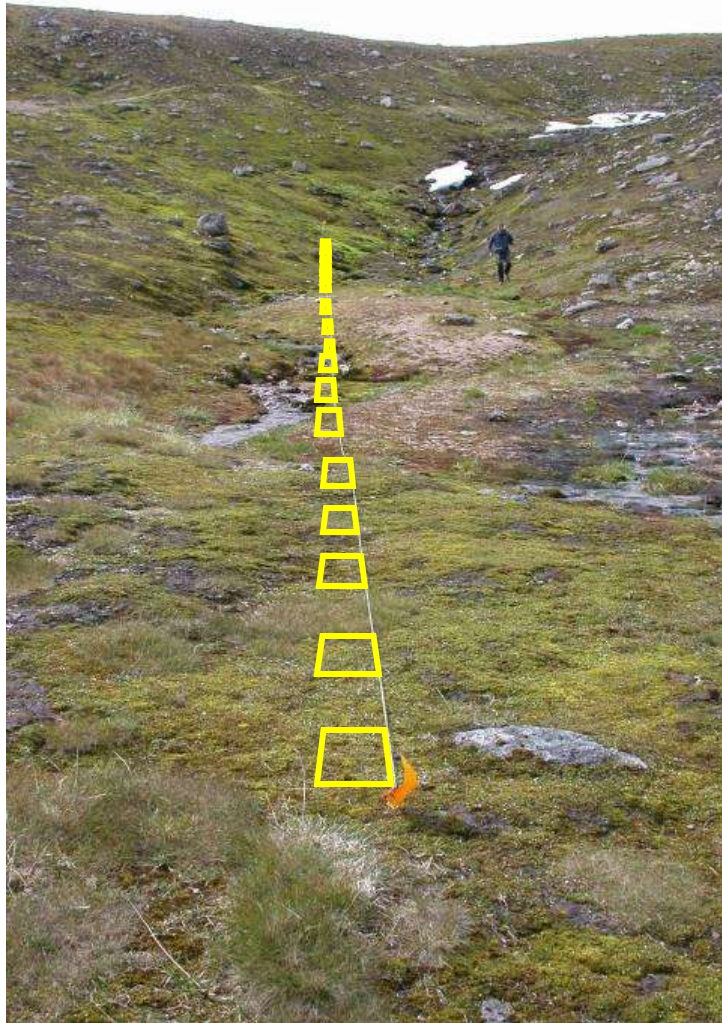
U9 – *Juncus trifidus*-*Racomitrium lanuginosum* rush heath

U10 – *Carex bigelowii*-*Racomitrium lanuginosum* moss-heath

U11 – *Polytrichum sexangulare*-*Kiaeria starkei* snowbed

(U12) – *Marsupella brevissima*-*Anthelia juratzkana* snowbed

***Pohlia ludwigii* wet snowbed**



Establishment of monitoring network in the Cairngorm mountains in 2008

13 transects set up to span the gradient from snowbed to non-snowbed vegetation (e.g. U7, U9, U10) between 48 and 132 m in length



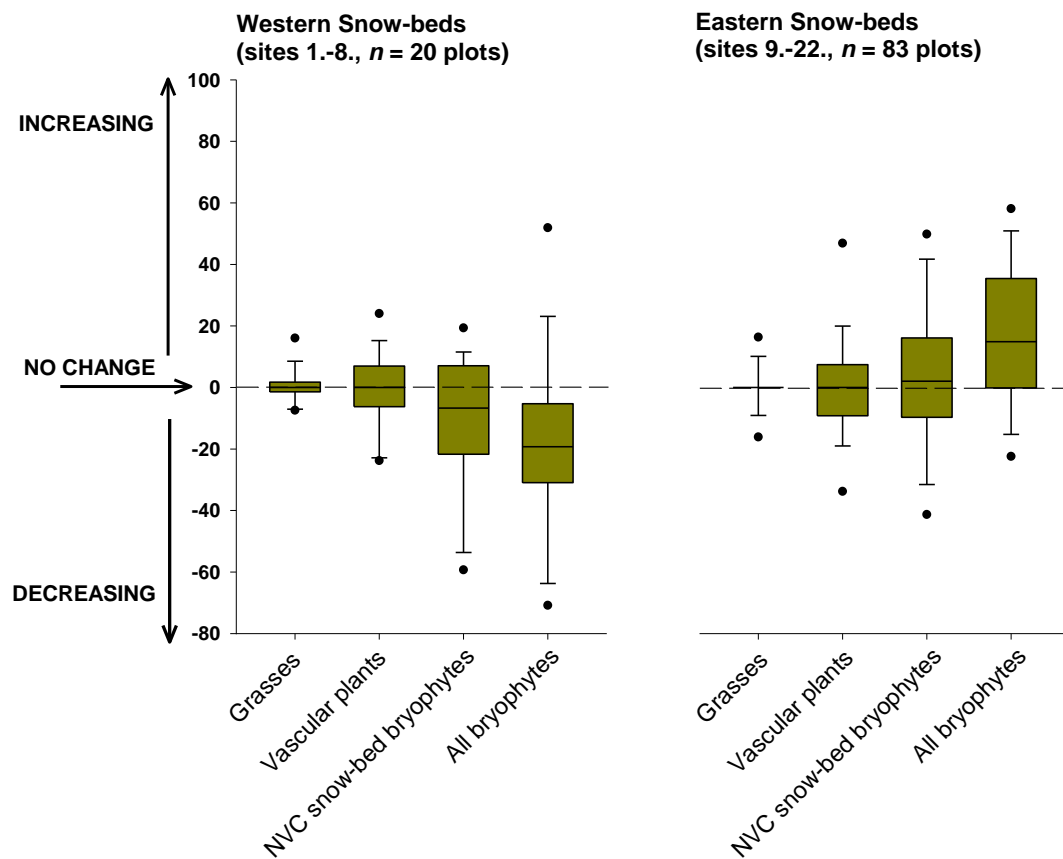


Fig. 2: Change in the frequency of snow-bed vegetation: time-series comparison (1989/90-2007) in the percent cover of four vegetation parameters – (i) grasses, (ii) all vascular plants (including ferns), (iii) NVC snow-bed dominant bryophytes (*Kiaeria starkei*, *Polytrichum alpinum*, *Polytrichum sexangulare* and *Racomitrium heterostichum*), and (iv) all bryophytes.



Agri-Environment Climate Scheme

[News update - 17 January, 2018](#)

The Agri-Environment Climate Scheme promotes land management practices which protect and enhance Scotland's magnificent natural heritage, improve water quality, manage flood risk and mitigate and adapt to climate change.

It will also help to improve public access and preserve historic sites.

The funding available under the scheme will help to:

- deliver the [2020 Challenge for Scotland's Biodiversity](#) by supporting appropriate management for vulnerable and iconic species and habitats, strengthening ecological networks, controlling invasive non-native species and enhancing the condition of protected nature sites
- contribute to Scotland's world-leading climate change targets by reducing greenhouse gas emissions from agriculture and securing carbon stores in peatlands and other organic soils
- meet obligations to improve water quality under the EU Water Framework Directive by reducing diffuse pollution
- control flooding through natural flood risk management
- support organic farming
- preserve the historic environment
- improve public access

The scheme will be delivered jointly by the Rural Payments and Inspections Division (RPID) of the Scottish Government and Scottish Natural Heritage (SNH).

2015 applications



All schemes

[Overview of schemes](#)

[National loan schemes](#)

[Basic Payment Scheme](#)

[National Reserve](#)

[Scottish Suckler Beef Support](#)

[Scheme \(Mainland and Islands\)](#)

[Scottish Upland Sheep Support Scheme](#)

[More...](#)

Related content

[Book an appointment](#)

[News update - 22 June, 2017](#)

[News update - 13 April, 2017](#)

[News update - 30 January, 2017](#)

[News update - 28 December, 2016](#)

[Common application mistakes](#)



**Upland, peatland, moorland
and heath options**

- [Moorland Management](#)
- [Stock Disposal](#)
- [Away Wintering Sheep](#)
- [Summer Hill Grazing of Cattle](#)
- [Heath Management \(Coastal, Serpentine, Lowland and Special Interest\)](#)
- [Predator Control](#)
- [Wildcat Friendly Predator Control](#)

- [Deer Fence](#)
- [Enhancing or Modifying a Deer Fence](#)
- [Deer Census – Helicopter Counts](#)
- [Upland Habitat Impact Assessment for Deer Management](#)



Moorland Management

Date published: 13 December, 2017

For recent changes to this guidance, please see the [bottom of the page](#).

Aim

The aim of this option is to benefit a range of moorland habitats, including upland heath and peatland habitats, by maintaining appropriate levels of wild and domestic stock. It is also intended to protect sensitive peatland areas at risk of soil erosion from herbivore trampling and vehicle tracking.

Moorlands cover a range of habitat types from dry and wet heath through to blanket bog. It can also include some grasslands. Sustainable grazing levels and careful use of vehicles will ensure that both the vegetation and soils remain as intact and undisturbed as possible. Moorlands support a range of important wildlife and biodiversity, and peatlands in particular can contribute to climate change by storing carbon.

This option is an entry option for all upland management, including peatland restoration, where livestock and / or deer are present. It provides a foundation to build in additional options or capital items where further benefit to the habitat or species present can be achieved from undertaking works such as grip / ditch blocking, stock reduction, muirburn or summer cattle grazing. A full list is given below.



Summer Hill Grazing of Cattle

Date published: 12 January, 2018

For recent changes to this guidance, please see the [bottom of the page](#).

Aim

The aim of this option is to maintain or improve the quality of the moorland habitat by grazing with cattle during the summer.

Grazing with cattle during the summer can benefit moorlands because they graze less selectively than sheep, creating a more diverse vegetation structure which in turn benefits fine-leaved grasses, flowering plants, moorland birds and other wildlife.



Upland path restoration – *Racomitrium* heath restoration on Ben Wyvis



Off-site pressures

- Nitrogen/Acid deposition
- Climate Change

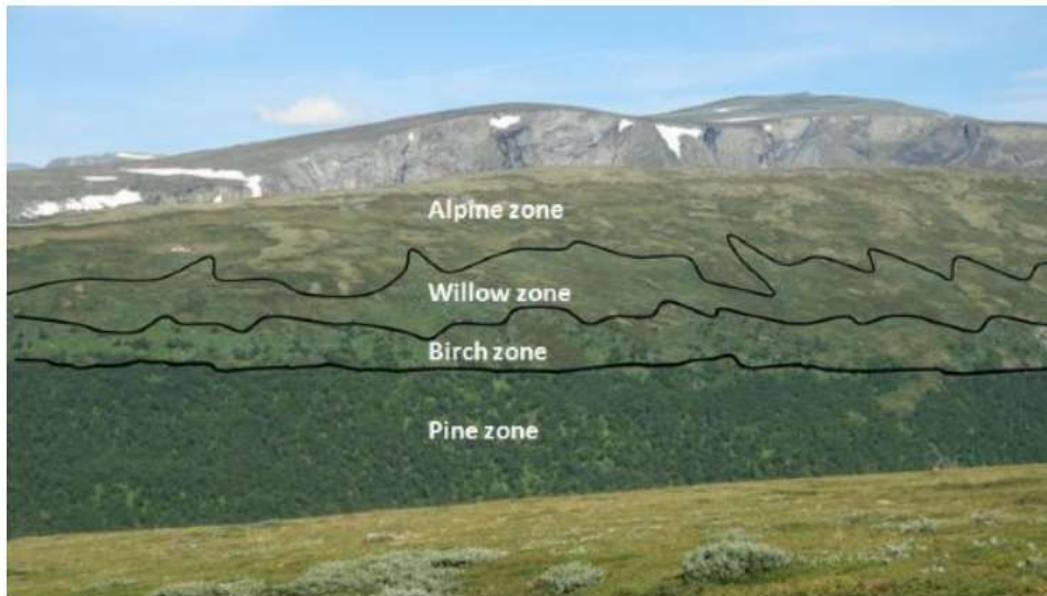


RESEARCH: Translocation – Assisted colonisation





Bringing back our mountain woodland



In parts of south western Norway, Scots pine woodland typically gives way at higher altitude to low scrubby birch woodland, which then in turn gives way to a zone of stunted willow scrub. Given that the geology and climate there are very similar to that in the Cairngorms, it seems likely that high altitude birches, willows and junipers would have been much more prevalent here in the past. Centuries of burning and heavy grazing by livestock and deer would have taken their toll on these palatable trees and shrubs which

grow only slowly amid the poor soils and exposed conditions found high in the Cairngorms.



Cairngorms Nature is bringing landowners in the core of the national park together to help identify where all the remnants are and the condition they're in, and explore ways of enhancing and expanding them. We're working to enrich our upland landscapes by restoring this vanishingly rare habitat and in so doing, create opportunities for the wealth of plant and animal life that depends on it.

