

## INLAND ROCK OUTCROP AND SCREE HABITATS

### Nationally

This habitat covers a wide range of rock types, varying from acidic to highly calcareous and includes five Habitats Directive Annex 1 habitat types. The habitat occurs throughout the uplands, and is particularly characteristic of high altitudes, but is also found at low altitudes notably in northern Scotland.

Natural rock exposures support a wide range of communities. Screes are typically dominated by parsley fern *Cryptogramma crispa* and other ferns, lichens and bryophytes. On cliff ledges, tall herbs such as roseroot *Sedum rosea* and wild angelica *Angelica sylvestris* are generally abundant. Chasmophytic vegetation (in rock crevices) is usually dominated by ferns such as green spleenwort *Asplenium viride* and small herbs such as wild thyme *Thymus polytrichus* and saxifrages *Saxifraga* spp. Bryophytes and lichens also occur in crevices but are able to flourish on the open rock surfaces where there is a lack of competition from vascular plants.



Limestone dale scree habitats © Karen Shelley-Jones

Many rock habitats, especially cliff faces, rock ledges, gorges and boulder fields are inaccessible to grazing animals and are unmanaged. Others are more accessible, such as fine screes and gently sloping rock outcrops, where accessible grazing may keep the vegetation in check. Burning can affect the more heather-rich rock faces with fires spreading up on to rocky slopes from muirburn below. The inaccessibility of rock habitats to grazing animals, especially of rock ledges, provides a refuge for many vascular plants that are sensitive to grazing, including numerous local and rare species.

Notable species of upland rock and scree habitats include Alpine lady fern *Athyrium distentifolium*, oblong woodsia *Woodsia ilvensis*, rock sedge *Carex rupestris*, Alpine blue sow-thistle *Cicerbita alpina*, Norwegian mugwort *Artemisia norvegica*, a hawkweed *Hieracium sect. Alpestris*, woolly willow *Salix lanata*, tufted saxifrage *Saxifraga cespitosa* and drooping saxifrage *S. cernua*.

The botanically rich rock habitats support a number of notable invertebrate species. Key groups include beetles such as *Leistus montanus* and *Nebria nivalis*, flies such as species of crane fly *Tipula* spp, *Thricops* spp and *Helina vicina*, and spiders such as *Pardosa trailli*. Several key species of birds use inland cliffs for nesting, notably peregrine, golden eagle and raven.

**Extent in UK:**  
88,040 - 125,050  
ha

### In the Peak District

The striking gritstone edges and boulder slopes of the moor provide not only a distinct and awesome sight but are an important habitat. The cliffs of the edges can support a range of plant communities including those rich in ferns, lichens and mosses. The inaccessible crevices and ledges are also used as nesting sites by, for example, peregrines and ravens. The boulder slopes and other rocky outcrops add diversity to the moorlands and are sometimes important for lichens, as well as being a favoured habitat for ring ouzel and the sole English population of mountain hares.



Ring Ouzel © PDNPA

The spectacular limestone cliffs which are found within many limestone dales also support very variable vegetation types on the ledges and within rock crevices. These include communities of small annual plants, ferns, mosses and lichens, calcareous grassland plants, tall herbs, woodland ground flora and occasional trees and shrubs. Almost inaccessible, cliffs support perhaps the most natural type of vegetation in the Peak District. Rich in a variety of rare vascular plants, lichens, mosses and liverworts, cliffs are also important as nest sites for breeding birds such as ravens, and hibernation roosts for bats.



Limestone screes are commonly found on the dalesides, often at the foot of the cliffs. These support a restricted flora commonly composed of specialist plants including the nationally scarce limestone fern and dark-red helleborine. Some areas of scree have been, or are being, colonised by a vigorous growth of ash in the first stages of succession to ash woodland.

*Herb Robert* © Karen Shelley-Jones

**Extent in PD:**  
**>409 ha**

### Current Factors Affecting the Habitat & Habitat Condition

Many rock habitats, especially cliff faces, rock ledges, gorges and boulder fields are inaccessible to grazing animals and are unmanaged. Others are more accessible such as fine screes and gently sloping rock outcrops and in such situations, grazing may keep the vegetation in check. Burning can affect the more heather-rich rock faces with fires spreading up on to rocky slopes from fires below.

The habitat itself is under less of a risk than many of the species it supports. Rock faces and ledges tend to be protected from damage by fire and grazing by their inaccessibility but there can be impacts round the margins. Physical damage to the habitat can be very localised e.g. through quarrying or use of scree for footpath repair. Heavy grazing pressure on adjacent habitats may lead to increased pressure on these areas. Screes can be threatened locally by erosion due to trampling by grazing animals and by recreational activities, both of which can reduce vegetation cover and may result in the loss of important fern species. Conversely, in some cases, lack of disturbance or grazing can result in the overgrowth of vegetation and consequent loss of characteristic species.

Climate change poses particular threats for arctic-alpine species of high-altitude rock habitats, which may become locally extinct. The increasing confinement of grazing-sensitive vascular plant species to rocky, inaccessible localities creates small isolated populations in which sexual reproduction is restricted, thus reducing genetic variation which could affect the adaptability of these populations, making them more susceptible to the effects of climate change. The impact of air pollution on these habitats is uncertain. Specific management is needed to reduce pressures on these habitats and allow the vegetation to spread beyond its currently restricted sites onto adjacent, accessible rocky ground. This would not only improve the habitat extent and condition, but also increase the population sizes of a number of upland rare species.

These habitats provide important refuges for grazing-sensitive species which can colonise adjacent habitats if restored e.g. through reduction of grazing. Some of these vegetation types, particularly those with arctic-alpine species, are represented at the edge of their range in the UK and so could be indicators of the early effects of climate change. *Barbara Jones, CCW. Produced on behalf of the UK BAP Upland Group, January 2010*

### Recent Work

No known recent work related to this habitat in the Peak District.

### Associated BAP Species in the Peak District

Ring ouzel	<i>Turdus torquatus</i>
Frog orchid	<i>Coeloglossum viride</i>
Red Hemp-nettle	<i>Galeopsis angustifolia</i>
Small-white orchid	<i>Pseudorchis albida</i>
Derbyshire feather-moss	<i>Thamnobryum angustifolium</i>

### Locally Significant Species in the Peak District

Peregrine	<i>Falco peregrinus</i>
Raven	<i>Corvus corax</i>

### NVC Communities

The principal vegetation types (and their associated sub-communities) included in this habitat are:

- U16** - *Luzula sylvatica* – *Vaccinium myrtillus* tall-herb community
- U17** - *Luzula sylvatica* – *Geum rivale* tall-herb community
- U18** - *Cryptogramma crispera* – *Athyrium distentifolium* snow-bed community
- U21** - *Cryptogramma crispera* – *Deschampsia flexuosa* community
- OV38** - *Gymnocarpium robertianum* – *Arrhenatherum elatius* community
- OV39** - *Asplenium trichomanes* – *Asplenium ruta-muraria* community
- OV40** - *Asplenium viride* – *Cystopteris fragilis* community