

## BIODIVERSITY OF NORTHUMBERLAND NATIONAL PARK

There are five habitats within Northumberland National Park that are highly significant in terms of its biodiversity:

**1. Heather Moorland:** 70 % of the National Park is wide open moorland but most of this is dominated by grass. True heather moorland covers around 7% of the Park and is found on the long sandstone ridge of the Simonside Hills and in the Cheviot Hills. Such moorland habitat is of international significance as it occurs mainly in the British uplands and nowhere else in the world. Modern farming and forestry have removed significant areas of heather moorland in the past, but more recently there has been a swing back to grouse moor management particularly in the Cheviots. Together with reductions in stock numbers, this is beneficial to the moorland wildlife. The quality of moorland is being improved and diversified to encompass new broadleaved woodlands and wetlands in addition to increasing heather cover.

**2. Mire:** The key habitat for the Park is mire, which includes blanket bog and raised bogs. These are extremely important habitats within Europe and Northumberland National Park contains several bogs that form part of the Border Mires Special Area for Conservation (SAC). Over the past 10,000 years the bogs have developed in cool, wet conditions that encourage peat formation. The living top layer of the mire, dominated by Sphagnum Moss and specialist plants such as bog asphodel and bog rosemary, is a thin membrane over a layer of peat. Peat is the partly decomposed remains of these bog plants and some of the mires may have over 10 metres depth of peat and these 'raised' bogs literally grow above the surrounding land into a dome. The flatter, high hills of the Park are even cooler and wetter and have been covered by a thin layer of peat which is referred to as blanket bog - here plants grow much slower and species found include cloud berry and crowberry.

**3. Ancient woodland:** This covers less than 1 % of the park and is rare due to centuries of human activities such as clearing the primeval forest and grazing the land with stock. The woodlands that remain in the Park contain mainly oak, alder and birch and rowan, are highly significant and host specialised plant species. Great efforts have been made to save the last of these woodlands and many are now being protected. Initiatives to extend existing woodlands by natural regeneration and new planting of native species are in progress. Such 'new native woodland' is now a high conservation priority.

**4. Water:** The rivers, burns and Loughs (lakes) are some of the cleanest in the country. This is probably related to the extensive nature of the farming which has conserved the moorland character of the Park in their catchment areas. Sites of Special Scientific Interest (SSSI) include the River Coquet and the Roman Wall Loughs - 3 glacial lakes with a rich flora and fauna which are also internationally important.

**5. Hay meadows:** Species rich hay meadows are now rare in the uplands but a few remain in the National Park including some of international importance. Traditional management is encouraged, which means no additions of artificial fertiliser and ensuring that they are cut late in the season. This management means that flowers such as wood cranesbill, yellow rattle and ox-eye daisy can grow with the grasses and have a chance to set the seed to grow the following year. Conservation work to increase the number of flower rich meadows is underway using the seed from existing sites.

These habitats form part of the working landscape of the National Park. Their conservation co-exists with other land management be it farming, forestry or military training. The National Park, on behalf of the visitors and wildlife, works closely with land managers to achieve the best possible outcome for all interested parties.

There are many specialist species associated with these habitats. Some are relatively common in Northumberland but are rare in the rest of the UK and Europe. Others are more common elsewhere and need to be nurtured to bring them back into areas of Northumberland where they once were. Habitat conservation and re-creation are key to sustaining species in their rightful habitat and increasing biodiversity.

## KEY SPECIES

There are many species in Northumberland which conservation efforts are focused upon:

### Plants:

Jacob's Ladder - A very rare native. It is planned to introduce it into suitable locations in the Cheviots. Bog orchid - Nationally rare and confined to one site in the Park.

Dwarf cornel- Found at a few high altitude locations. First recorded in the 16th century.

Juniper - Rare in the Park and reproduces slowly. New plants from local stock are being introduced.

Heather - This dwarf shrub is found on moorland and is a key indicator of grazing pressure.

Chives - Known as a culinary herb this native species grows on several locations on Hadrian's Wall.

Serrated wintergreen - Rare in England, this plant is very difficult to find amongst the rough heather.

Bog rosemary - An indicator of undisturbed bogs.

Sundew- These plants are adapted to the nutrient-poor peat, and have sticky leaves to trap insects.

Sphagnum Moss - The accumulation of peat in bogs is due to partly-decayed remains of mosses.

Each species is adapted to a particular degree of wetness. About 1 cm of peat is made every ten years.

### Birds:

- Black grouse – In England, this bird has become virtually extinct, but the Otterburn Training Area provides a refuge. Concern for the species has resulted in habitat improvements, and on the Cheviot grouse moors an ambitious conservation programme is underway.
- Curlew - The symbol of the National Park is becoming more rare. They return from the coast to the moors in the spring to breed. They prefer moorland edge areas that provide them with insects for *food*.
- Merlin – They are at home on the extensive moorlands where they can have the large territories they need to breed.

### Other animals:

- Salmon - These are born in the headwaters, swim to the sea and then return to their traditional spawning grounds to breed as an adult fish. The cleaning of Tyneside's heavy industry and pollution in the 1980s allowed the Salmon to return to the upper reaches of the river.
- Large Heath butterfly - Due to land drainage this bog dwelling species is extinct in England except for Cumbria and Northumberland and the National Park now contains over half (108) its remaining sites. Emperor moth - A spectacular moth with large eye markings on the wings, which flies across moorland during the day.
- Red squirrel - Perhaps the last refuge of the red squirrel in England will be in Kielder Forest. The spread of the introduced grey squirrel has wiped out the red from its broadleaved woodland habitat in most of England but conservation work in Northumberland will hopefully keep this native mammal around for future generations to see.
- Freshwater pearl mussel- This river mollusc can live for 100 years, shown by shell growth rings.
- Otter - A symbol of clean waters and a good supply of fish. The otter has never died out in Northumberland unlike most other counties where pollution which was disastrous for the species.

## **SITES**

Greenlee Lough National Nature Reserve - GR NY 770697 Access to path, boardwalk across a reed bed and bog where mosses and plants can be seen in safety; bird hide with views across the lake.

Nature Reserves - Barrow Burn Wood LNR - GR NT 923055 Ancient woodland in a fine landscape of moorland, river and meadow. Grasslees Burn Wood LNR - GR NT 951975 Wet ancient woodland, access difficult.

Simonside - GR NZ 052988 Prime heather moorland and forest, good moorland walks available from the main car parks in Simonside, Lordenshaws and Grasslees. A good chance to see red squirrel in the pine woods.

Upper Coquet - part of the Otterburn Training Area where there is informal all year round access to the River Coquet and spectacular paths leading north onto the border ridge.