



Wildlife

conserving biodiversity

WHY CONSERVE BIODIVERSITY?

Biodiversity is the total variety of life on earth, this includes plants, animals, habitats and ecosystems. Perhaps most importantly, biodiversity is the indicator of the health of the biosphere. On a global scale, the greater the overall variety of species and habitats, the greater the health of the environment and the greater the benefits for all living things. Biodiversity is more than variety alone, for example increasing variety may actually destroy locally valuable habitat.

Biodiversity is also fundamentally important to humans for their quality of life, their natural resources, their cultural heritage, a source of wonder, spiritual enrichment and pleasure, and an economic resource to many. Biodiversity is also the investment account for future generations that may have different needs from their natural world.

In recent times, there has been an unprecedented loss of wildlife and natural areas on a global scale, as a result of human activities, the Yorkshire Dales National Park (YDNP) has been no exception.

COMMITMENT TO BIODIVERSITY

In 1992 the world's governments met at the Earth Summit in Rio de Janeiro. The majority of those governments went away from the Earth Summit promising to; 'develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity'.

Government guidance for National Parks on achieving their aims states that they 'should have regard to the principle of sustainable development, widely agreed within the framework of the Rio Earth Summit of 1992'. The Rio framework includes 'The Convention on Biological Diversity' which 'requires that countries adopt ways and means to conserve the variety of living species, and ensure that benefits from using biological diversity are equitably shared'.

In January 1994, the UK government did just that by publishing 'Biodiversity: The UK Action Plan.' The document identifies 1250 species of national importance and

establishes a 20 year action plan for government agencies and partners. National targets have been set for the 116 species and 14 habitats of immediate concern. Some 15 of these species action plans and 8 of the proposed habitat action plans are particularly relevant to the Yorkshire Dales.

National Park Authorities have a statutory duty to conserve the special qualities of natural beauty, wildlife and cultural heritage, this makes the conservation of local biodiversity a central purpose. Within the YDNP the wide diversity of species and habitats include examples of regional, national and international significance. In August 2001 the Yorkshire Dales Biodiversity Forum published our Local Biodiversity Action Plan (LBAP) called 'Nature in the Dales'. The key topics in our LBAP are outlined overleaf.

THE HISTORY OF THE LANDSCAPE

The existing biodiversity of the YDNP is very much the response of the native ecology of the area to the land management practices of the local people. This influence began about 11000 years ago following the last glaciation. By about 2000 years ago, little habitat remained in its natural state.

As the ice retreated vegetation returned as tundra, with Willow and Birch scrub, which was replaced as the climate warmed, by a succession of grassland, heath and eventually woodland. The first woodlands were of Birch, Scots Pine and Hazel, while Oak, Elm and Alder developed later.

The first people arrived in the Dales 11000 years ago. Small scale tree clearance began about 8000 years ago, adding to the reduction in tree cover brought about by the wetter climate. At its maximum, woodland cover was about 90%.

Woodland clearance for grazing animals and the first arable crops began around 6000 years ago. Scots Pine began to dominate the existing woodland and the first extensive limestone grasslands probably appeared at this time.

As tree cover diminished the area of blanket bog continued to extend. Oak began to

dominate woodland around 4000 years ago giving way to Ash about 2500 years ago.

The Iron Age people established small hill farms in the Dales at this time. The bogs and heaths present were probably similar in extent to those of today.

Common arable farming continued to expand on the lower valley floors while the remaining thin woodland of the valley sides was gradually reduced by grazing sheep and cattle to become open pasture and scattered scrub. By 1000 years ago the agriculture of the area took the form of small meadows on the valley floor, centred on the early villages with ploughed fields on the gentler slopes.

Between 1700 and 1850 the Parliamentary Enclosures greatly increased the lengths of dry stone walls while lead mining activity increased the naturally occurring lead loving plant communities. The Industrial Revolution ended self sufficiency and arable crops declined giving way almost completely to sheep and cattle.

Since the 1950's a host of improvements in agricultural and land management practices have all influenced the existing wildlife, these include: artificial fertilisers; using slurry in place of farmyard manure; growing silage in place of hay.



Barn near Thwaite (David Tarn)

PRIORITY HABITATS

Assessing the value of habitats in 'Nature in the Dales' takes into account:

- national and international importance;
- local distinctiveness;
- species importance;
- local status of the habitat;
- proportion of the UK habitat in the local area;
- local threat to habitat;
- local rarity of the habitat.

Twenty-three habitats have been identified as priorities for conservation in the YDNP. Some examples of these are described here.

LIMESTONE PAVEMENT

Significance: These are flat and sometimes broad, exposed limestone surfaces. The existing cracks (grikes) in the limestone have been enlarged by naturally acidic rain water, and become home to a wide variety of specialised plants.

Resource: Scarce and non-renewable, covering less than 1% of the National Park, the YDNP has more than 50% of the UK resource.

Threats: Over grazing; illegal stone removal.

Conservation: Ensure no further loss and encourage land owners and managers to reduce grazing impacts and particularly rabbit numbers. Limestone Pavement Orders. Designation as SSSI's.



Harts tongue fern in limestone pavement (YDNPA)

UPLAND HEATH

Significance: Upland areas of drier thinner acidic soils mainly to the east of the Park, dominated by Heather and occasionally



Heather Moorland (YDNPA)

Bilberry. These are the breeding grounds of Hen Harrier, Merlin and Golden Plover.

Resource: 7% of the National Park. Habitat confined to UK and Western Europe.

Threats: Overgrazing by sheep; uncontrolled burning; agricultural improvement.

Conservation: Maintain the existing Resource; restore and develop greater structural diversity; block drainage systems; reduce stocking; reduce winter grazing; designate as SSSI's; agri-environment schemes.

LIMESTONE GRASSLAND

Significance: Mainly extensive sheep pasture in large hillside enclosures. Low fertility limestone soils produce a rich sward of lime loving plants with the absence of any highly competitive species. Characteristic flora are becoming increasingly rare. Breeding Lapwing numbers are important nationally. The Northern Brown Argus butterfly depends on the presence of Rockrose and its distribution is limited to these areas.

Resource: 4% of the National Park, mainly in the Craven district.

Threats: Over grazing, improvement to more productive pasture.

Conservation: Maintain the existing resource and restore where possible; designation as SSSI's; agri-environment schemes.



Thyme on limestone (YDNPA)

HAY MEADOW

Significance: Present on valley floors and lower slopes these are the product of traditional farming methods. Stock are cleared soon after the beginning of the growing season to allow vegetation to grow for a later cut for hay. Species present vary a great deal due to variations in: soil type; drainage; fertiliser applications; time of hay cut; previous ploughing or reseeded; etc.

Resource: 27% of neutral grassland in the National Park: includes hay meadow, pasture and some rough pasture. Prime quality flower-rich hay meadow covers about 1.5% of the YDNP. A recent national

survey recorded a 95% loss of hay meadow between the mid-forties and mid-eighties in the UK.

Threats: fertiliser application; silage production; conversion to pasture; fragmentation.

Conservation: Maintain current meadows at the same quality and restore where possible; agri-environment schemes; Environmentally Sensitive Areas.



Hay meadow (YDNPA)

WET ACID GRASSLAND

Significance: Much has developed from woodland and heath through heavy grazing and less intensive management. Mainly high altitude, poorly drained acidic soils with low plant species variety. They are important nationally for breeding birds such as Skylark, Redshank, Curlew and Snipe.

Resource: 12% of the YDNP.

Threats: Increasing sheep numbers; drainage for agricultural improvement; increasing use of fertiliser; increasing use of machinery.

Conservation: Prevent further degradation; control grazing numbers; graze seasonally; agri-environment schemes.

BLANKET BOG

Significance: These moors, over 300m above sea level, within the western Yoredale and Gritstone series are the major semi-natural habitat of the upland areas of the Park. Usually deep peat and waterlogged, with the wettest dominated by Sphagnum moss and Cotton grass. Important for breeding birds such as Dunlin and Golden Plover.

Resource: 20% of total land surface in the National Park. A major part of the European resource is in the UK (mostly Scotland).

Threats: Drainage; heavy grazing; peat erosion; acidification; burning.

Conservation: Limit drainage; control grazing; control burning.

ANCIENT SEMI-NATURAL WOODLAND

Significance: Mostly mixed Ash woodland plus Oak, Birch, Alder and Willow woods. The Red Squirrel is spreading from the Cumbrian woods of the Park. There is a continuing threat from Grey Squirrels competing for food and living space.

Resource: 1% cover compared to 90% cover 8000 years ago.

Threats: Over grazing; poor stock proofing; rabbits; lack of positive woodland management; acid deposition; lack of market for products.

Conservation: Increase the quality of existing woodland and extend the resource.



Wood Anemone (YDNPA)

HEDGEROWS

Significance: Ancient and species rich are relatively rare. Dominated by Hawthorn with Elder, wild rose species and Blackthorn. Restricted to lower lying localities mainly In Wensleydale, Airedale and the Cumbrian Dales. Important for farmland birds eg, Grey Partridge and Song Thrush and bats, butterflies and moths. Nationally hedgerows are the primary habitat of 47 species of conservation concern including 13 globally threatened species.

Resource: There is about 100km total length of hedges in the National Park.

Threats: Neglect; removal; aggressive trimming; stock grazing; use of herbicides and pesticides; loss of hedgerow trees.

Conservation: Improve management, halt net loss. EC Habitat Directive; UK Hedgerow Regulation; agri-environment schemes.

RIVER SYSTEMS

Significance: Particularly important because they include a wide variety of habitats and permeate the entire park area.

Threats: River bank erosion, increased drainage, drainage methods and varying water quality, all significantly affect species.

Conservation: Issues are increasingly resolved through whole catchment management schemes. River bank maintenance works and stock management schemes are increasing.

PRIORITY SPECIES

Assessing the value of species in 'Nature in the Dales' takes into account:

- listing in the IUCN Red Data Book or a scarce species list;
- whether the conservation of the species is covered by habitat management;
- the need for further information.

THE BLACK GROUSE

The status of the Black Grouse population is an important indicator of environmental health for the area. The Black Grouse requires a mosaic of varied vegetation types to provide a year round diet and areas for breeding:

- tall vegetation for nesting and food;
- short vegetation for lekking;
- heather moorland for breeding, year round cover and food;
- native woodland (Birch, Willow; Hawthorn) provides food and shelter;
- species rich hay meadows for Winter feeding.



Black Grouse (RSPB Images)

LADY'S SLIPPER ORCHID

This species was once widespread across much of northern England. The species has declined, due to uprooting by botanical



Lady's Slipper Orchid (English Nature)

collectors and gardeners and loss of suitable habitat, to such an extent that in the UK it is now only found at one naturally occurring site in the National Park.

NORTHERN BROWN ARGUS

This butterfly is restricted to the north of England and is primarily associated with limestone grassland habitats. The main threat to this species comes from inappropriate levels of grazing of common Rockrose, the larval food plant.

WHITE-CLAWED CRAYFISH



Northern Brown Argus (English Nature)

This is threatened by the influx of the Signal Crayfish which escaped from fish farms, spreading crayfish plague to which they are highly susceptible.

NOWELL'S LIMESTONE MOSS



White Clawed Crayfish
(Paul Bradley - University of Sheffield)

A species endemic to areas of carboniferous limestone within the YDNP, including old limestone dry stone walls. Consequently, this species is at risk from damage to and inappropriate maintenance of these walls.

OUR LOCAL BIODIVERSITY ACTION PLAN – ‘NATURE IN THE DALES’

‘Nature in the Dales’ was published in August 2000. It is a 10 year Action Plan listing 259 Actions. Actions range from wildlife surveying, and advising farmers to reintroducing species into the wild and influencing government legislation. The YDNPA Wildlife Conservation Team co-ordinate this plan and team up with other local organisations and individuals to make it a success.

ACHIEVEMENTS: 2000-2005

- 65 Actions (25%) have been completed including the whole plan for the Lady’s Slipper Orchid, the Yellow Marsh Saxifrage and the Hen Harrier.
- Another 61 Actions (24%) are underway. For example, collecting seeds from rare trees to propagate and increasing the area of habitat for rare butterflies.
- Wildlife surveying and monitoring has been completed for 13 plans including Limestone Pavement, Road and Rail Verges, the Northern Brown Argus butterfly and the Red Squirrel and is underway for a further 6 plans including the Peregrine Falcon.
- All information is being used to advise planning, farm conservation and woodland planting decisions in the National Park.

COMPLETING THE PLAN: 2006-2010

- We are currently working on a long-term project, a GIS-based Habitat Map which will enable us to progress about 50% of the remaining Actions.
- 17 plans need further wildlife surveying, including Upland Wildflower Haymeadows and Wetland habitats.
- The people who live in and love the Dales are essential in safeguarding its wonderful landscape and wildlife.

For more information about conserving biodiversity in the Yorkshire Dales National Park have a look at our website: http://www.yorkshiredales.org.uk/index/learning/nature_in_the_dales-2.htm

PARTNERS

As well as the Yorkshire Dales National Park Authority the local Biodiversity Forum includes the following organisations listed:

- British Trust for Conservation Volunteers.
- Cumbria Wildlife Trust.
- Environment Agency.
- Farming and Wildlife Advisory Group.
- Forestry Commission.
- Limestone Pavement Action Group.
- Learning in Limestone Country Project
- Local conservation groups.
- Department of Environment, Food and Rural Affairs.
- National Trust.
- Natural England.
- Royal Society for the Protection of Birds.
- Yorkshire Dales Millennium Trust.
- Yorkshire Wildlife Trust.
- Yorkshire Naturalists Union.
- Moorland Association.

LIMESTONE COUNTRY PROJECT



Belted Galloway Cattle (YDNPA)

The project seeks to restore limestone country through better land management and conservation. Providing grants to farmers will support a return to mixed farming, using hardy upland cattle breeds. Invasive plant species such as thistles and bracken, along with rabbit grazing will be controlled by environmentally sensitive means.

The Limestone Country Project is a multiple agency partnership with landowners and the local farming community working together.

Visit www.limestone-country.org.uk for more information.

For further information please contact:
The Education Service
Yorkshire Dales National Park Authority
Colvend, Grassington
Skipton, North Yorkshire BD23 5LB

Telephone 0870 1 666333
Fax 01756 751699
Email: education@yorkshiredales.org.uk
Web site: www.yorkshiredales.org.uk

Information updated July 2006
Printed on environmentally friendly paper
© Yorkshire Dales National Park Authority