Wildlife
conserving biodiversity

The Yorkshire Dales National Park is home to nationally and internationally recognised landscapes, habitats and wildlife. These include important habitats such as species-rich hay meadows of the valley floors, calcareous grasslands on the thin limestone soils and fell top blanket bog and heathland. The National Park also has more than 120 species which are national priorities for conservation action, such as the red squirrel, peregrine falcon and lady's-slipper orchid.

Conserving this biodiversity is critically important and is one of the central purposes of the Yorkshire Dales National Park Authority (YDNPA). The Environment Act 1995 defines the purposes of National Park Authorities in England and Wales, as:

- **to conserve and enhance the natural beauty, wildlife, and cultural heritage of the national parks;**
- **to promote opportunities for the understanding and enjoyment of the special qualities [of the national parks] by the public.**



Lapwing: A 'priority species' and classified in the UK as Red under the Birds of Conservation Concern (©YDNPA)

Commitment to biodiversity: globally, nationally and locally

Global

The world's governments assembled at the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012, to further negotiate practical measures for implementing sustainable development, following the Earth Summits in 1992 and 2002. The majority of those

governments pledged to consider the implementation of green economic policies and urgent action against unsustainable production and consumption, in order to address environmental sustainability.

The Rio framework, which includes the 'UN Convention for Climate Change', is well publicised for its Paris agreement (signed in 2016), where governments agreed to report their contribution to mitigating global warming and to maintain the average global temperature below an increase of 2°C.

Its sister convention, (also part of the Rio framework), 'The Convention on Biological Diversity, was established to encourage governments to commit to adopting ways and means of conserving habitats and species, and to ensure that benefits from using biological diversity are equitably shared. The most recent meeting was held in 2018, where governments pledged to accelerate action to achieve biodiversity targets set in 2010 (known as the 'Aichie Targets'), by the end of the decade - and on a global, national and regional level.

National

In 1994, the UK was the first country in the world to produce a national UK Biodiversity Action Plan. In response to agreements at international conventions, the UK's most recent national framework is the 'UK Post-2010 Biodiversity Framework', which shows how the work of the four UK countries will work to achieve the 'Aichi Targets'. The document was revised in 2018 (See 'Revised Implementation Plan') and simplified to focus on high-priority activities, such as *'improving the status of biodiversity by safeguarding ecosystems, species and genetic diversity'.*

Local

In August 2001, the Yorkshire Dales Biodiversity Forum published the first Local Biodiversity Action Plan (LBAP), known as, 'Nature in the Dales'. A revised plan was published in 2010, 'Nature in the Dales: 2020 Vision', setting out actions to conserve and enhance biodiversity within the National Park between 2010-2020, as there was still a lot of work to do to secure a biodiversity-rich future. The plan took national priorities from the UK Biodiversity Action Plan, translating them into practical actions at a local level. The strategy formally ended in 2020. The Yorkshire Dales National Park Management Plan 2019 – 24, contains the current objectives relating to wildlife conservation within the National Park.

Short timeline of the changing landscape

The existing biodiversity of the Yorkshire Dales National Park is the response of the native ecology to the land management practices of the people who have lived and worked in the area for thousands of years. This influence began from around 10-11,000 years ago, as the most recent period of glaciation came to an end. By about 2000 years ago, little habitat remained in its natural state.

11000BC - 8000BC

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%.

6000BC - 2500BC

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.

800BC - 1000

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.

1700 - 1850

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.

1950’s - Present

Since the 1950's a host of agricultural and land management practices have impacted significantly on wildlife, these include: artificial fertilisers; using slurry in place of farmyard manure; growing silage in place of hay and burning of heather moorland to encourage new growth to feed grouse. The negative impacts of land management practices on wildlife have now been recognised and the YDNPA and other organisations are working closely with landowners and farmers to help maintain or restore habitats.



Red Squirrel at Snaizeholme within the Widdale Red Squirrel Reserve (©Whitfield Benson)

Conserving biodiversity today for the future

A vision for 2040...

Yorkshire Dales National Park Management Plan 2019-24 is a five year work programme produced and monitored by a partnership of local organisations that operate across the area. It contains 49 specific objectives that are being focused upon and range from various challenges from recreation to climate regulation. There are a number of objectives that relate directly or indirectly to conserving wildlife and biodiversity; some of these are listed below:

- Support farmers and landowners to restore and manage landscape-scale mosaics of priority habitats.
- Work with farmers and landowners to achieve and maintain stable or increasing populations for 90% of priority species by 2026.
- Work with farmers and landowners to improve the condition of the Aire, Eden, Lune, Ribble, Swale, Ure and Wharfe so that at least 90% of all rivers achieve 'good ecological status' by 2027.
- Work with moorland managers and other key stakeholders to devise and implement a local approach to end illegal persecution of raptors, including independent and scientifically robust monitoring, and co-ordinated Hen Harrier nest and winter roost site protection.
- Support landowners to create at least a further 450 hectares of native broadleaved and mixed woodland that enhances the National Park's landscape by 2024, with priority given to projects that strengthen habitat networks, increase carbon storage and help to reduce flooding.
- Work with farmers and landowners to ensure that at least 70% of all woodland is in 'active management' by 2023, including positive management of conifer plantations to increase suitable habitat for red squirrels and black grouse.
- Produce an online, interactive habitat network map that helps farmers and land managers to develop connected, climate-resilient habitats

Who is the national park working with?

Achieving these objectives will be challenging and therefore will involve working in collaboration with an extensive list of other organisations, such as: Natural England; Forestry Commission; , Environment Agency; Northern Upland Chain Local Nature Partnership; People's Trust for Endangered Species; RSPB; British Association for Shooting and Conservation; Millennium Trust; National Trust; Woodland Trust.

What are the Priority Habitats and Species?

A list of Priority Habitats and Species were first listed in the UK Biodiversity Action Plan and of these, those relevant to the National Park are listed in the Yorkshire Dales Local Biodiversity Action Plan (2011). Some of these are described below:

Priority Habitats

Assessing the value of habitats 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

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 National Park has more than 50% of the UK resource.

Threats: Over grazing and illegal stone removal.

Conservation: Ensure no further loss and encourage land owners and managers to reduce grazing impacts and particularly rabbit numbers.



Limestone Pavement (©YDNPA)

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 is 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: There is an estimated 10,000 ha of upland calcareous grasslands in England, with the Yorkshire Dales being an important area for this habitat, particularly in the Craven district.

Threats: Over grazing and improvement to more productive pasture.

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

Upland Heathlands

Significance: Upland areas of drier thinner acidic soils mainly to the east of the National Park, dominated by Heather and occasionally Bilberry. These are the breeding grounds of Hen Harrier, Merlin and Golden Plover.

Resource: 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.

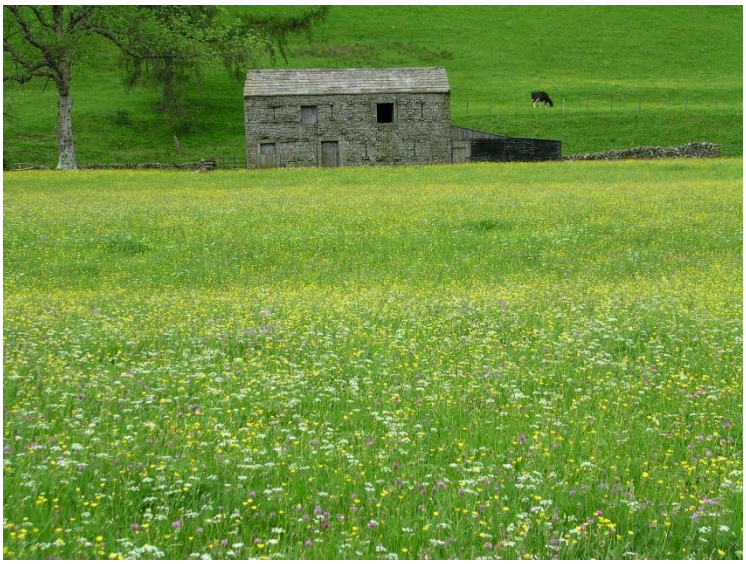
Hay Meadow

Significance: Present on valley floors and lower slopes these are the product of traditional farming methods. Stocks 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 reseeding; etc.

Resource: Less than 1000 ha remaining in northern England, mainly in Yorkshire Dales and parts of Lancashire, Cumbria and Co. Durham. 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; through agri-environment schemes or Environmentally Sensitive Areas.



Hay meadow at Muker, Swaledale (©Gareth Evans)

Blanket Bog

Significance: 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 National 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: 20-25% of total land surface in the National Park (around 51,000 ha). 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.

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: e.g., Grey Partridge and Song Thrush and bats, butterflies and moths. Nationally hedgerows are the primary habitat of around 50 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, funding from agri-environment schemes.

River Systems

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

Resource:

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; reducing diffuse pollution, restoring adjacent habitats and improving fish stock and range.

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, providing agri-environment funding for farmers



Cot Park Wood: a special area of limestone woodland managed by Natural England and part of the Inglebrough National Nature Reserve (©YDNPA).

Priority Species

Assessing the value of species 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 requirement 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 (©Whitfield Benson).

Lady's Slipper Orchid

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



Lady's Slipper Orchid (credit IC)

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

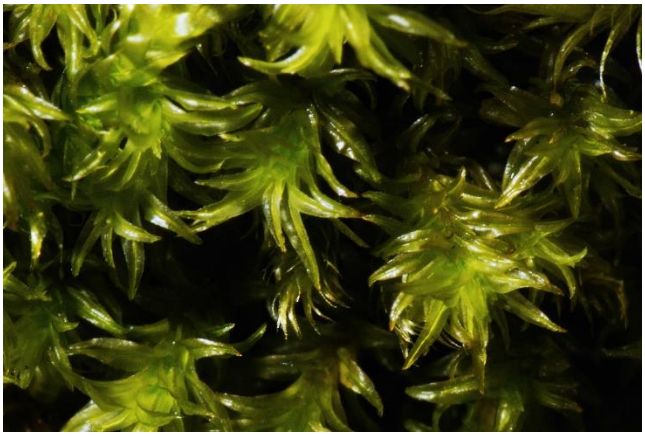
This is threatened by the influx of the Signal Crayfish which escaped from fish farms, spreading crayfish plague to which they are highly susceptible.



White-clawed crayfish (©Paul Bardley)

Nowell's Limestone Moss

A species that was frequently found in areas of carboniferous limestone within the YDNP, including old limestone dry stone walls. Damage to and inappropriate maintenance of these walls has resulted in this species declining and being at risk.



Nowell’s Limestone Moss ©Robert Goodison