



Lowland heathland

a cultural and endangered landscape



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for nature tomorrow



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What is lowland heathland?

Lowland heathland is a broad term that refers to a mosaic of wet, damp and dry habitats, characterised by attractively flowering dwarf shrubs such as heathers (ling, bell and cross-leaved heaths) and gorses (common, western or dwarf). They are generally found on poor, acidic soils, in relatively wet areas with a mild temperature and below about 300 metres altitude. They support many rare plants and animals, such as the marsh gentian, southern damselfly, nightjar and sand lizard, which often live only in these areas.

Most heathlands developed during or after the Stone Age (some 3,500 ago) in areas with poor soils, where trees were removed and grazing or burning prevented their regrowth. Lowland heathland also occurs naturally in some coastal areas, where the harsh environmental conditions prevent tree growth.



Roydon Common NNR, Norfolk Peter Wakely/English Nature 17,032

Open heathland is rarer than rain forest. In the UK we have only about 16% left of the area that existed in 1800. That means that from an area similar to the size of Cornwall, only the equivalent of the Isle of Wight remains. The process of loss and

disintegration has been particularly fast in recent decades. However, this country still holds 20% (more than 60,000 hectares) of the whole world's lowland heathland. Thus there

is a need, not only to preserve and improve our remaining heathlands, but if possible, to re-create them in areas where they have recently been lost. There is a special case for linking small fragments of heathlands, where the few remaining species are stretched for space and risk disappearing in the event of a fire, to create areas which can maintain a wider range of wildlife and can survive in the future.

Where does lowland heathland occur?

The most significant areas for lowland heathland in the UK include the counties of Cornwall, Devon, Dorset, Hampshire, Norfolk, Staffordshire, Suffolk, Surrey, Pembrokeshire, West Glamorgan and West Gwynedd. There are small areas in Kent, Lincolnshire, the Vale of York and the Midlands.

There is little lowland heathland in Scotland. However, some forms of heathland occur at low altitudes, which are similar in character to those in England, Wales and Northern Ireland. They appear usually near the farms or agricultural holdings, although mostly as small fragments. The most distinctive and extensive are the coastal heaths.

Lowland heathland distribution in the UK

Why are heathlands important for wildlife?

A heathland is much more than heathers and gorses. Areas of heathland may also contain grasses, a few flowers, some trees, bare ground and, in some cases, ponds or running water. In many sites, heathlands form part of bigger landscape units together with other habitats such as grasslands, woodlands, mires or scrub.

As mentioned, lowland heathlands are home to many plants and animals whose distribution range has decreased along with the disintegration or disappearance of the habitat or the lack of management of many heaths. Although there are no mammals that live only on lowland heaths, some are very characteristic inhabitants of this landscape. Rabbits, for example, an introduced species which used to be considered an agricultural pest, have shaped the



Great sundew Roger Key/English Nature



Cladonia fimbriata, Wyre Forest NNR, Herefordshire Peter Wakely/English Nature 15,181

Stone curlew Geoff Higginbotham



Nighthjars Simon Nobes/English Nature



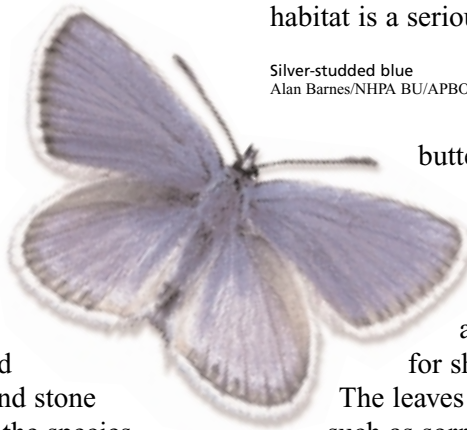
vegetation, and maintained the openness of the heaths. Rabbits are particularly important in the East Anglian heaths, where they were originally bred for food and fur. Cattle, sheep and ponies also grazed the heathlands for centuries.

There are few birds restricted to heathlands, but some are very specialised. Dartford warblers, nightjars and stone curlews are some of the species primarily associated with lowland heathland, but many others live in areas where heathland is one of the components of the landscape, such as kestrels, hobbies and stonechats; Dartford warblers and nightjars use mosaics of scrub and open heath to forage, breed and perch. It is therefore important to keep some scrub as part of the heathland landscape.

However, small plants like the yellow centaury can only grow in open sandy or peaty bare ground. Animals as diverse as the black and red sand wasps, the ladybird spider and sand lizard rely on the presence of bare sand to hunt and lay their eggs.

Many insects have heathlands as their primary habitat and feed on grasses and flowers typical of the heaths. Some of them are not very mobile, so fragmentation and deterioration of the habitat is a serious threat to them.

Silver-studded blue
Alan Barnes/NHPA BU/APB000451A

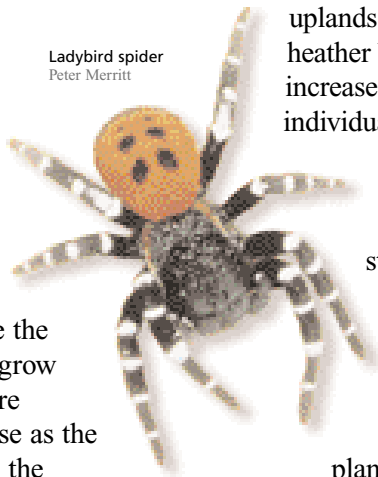


Some species, such as silver-studded blue butterfly, require a continuous supply of young heather, a warm microclimate and vegetation with a varied age structure for shelter and roosting.

The leaves and flowers of plants such as sorrel, ragwort or yarrow are vitally important for moths and nectar-feeding invertebrates.

A particularly controversial inhabitant of the heathlands, in both the uplands and the lowlands, is the heather beetle. Sporadic increases in the number of individuals can cause severe damage to the vegetation, especially to the mature, uniform stands. However, they are a natural part of the environment and most sites regenerate naturally in a few years. Stands with plants of different ages are

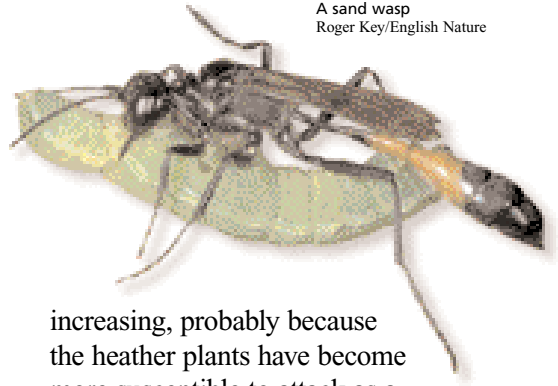
Ladybird spider
Peter Merritt



less likely to suffer from severe outbreaks. Recently, however, the number of outbreaks seems to be



A sand wasp
Roger Key/English Nature



increasing, probably because the heather plants have become more susceptible to attack as a result of atmospheric pollution increasing the nutritive value of the plants.

Management issues

The management of heathland for its wildlife can be complicated, as some species require very specific conditions. When heathlands were



larger and exploited economically, it is likely that there was enough variation in the environment to cater for all its species. Marsh gentian is a plant only common in damp areas in the southern heathlands. The ideal management to maintain it is light grazing, which eliminates or reduces stronger competitors for light and nutrient, such as purple moor-grass. Small scale turf-cutting or controlled winter burning will also help to produce a nice blue dotted carpet in late summer.

Bogs, pools and mires are also part of the heathland complex. Where the soil is very acidic and nutrient-poor, one can often find a fascinating group of plants that specialise in trapping insects to supplement their diet. Some of the more characteristic are

the sundews, whose leaves have red-tipped sticky hairs to capture insects. This sort of habitat is also home to raft spiders and amphibians. Among the amphibians, the natterjack toad is found only in open habitats, such as sand dunes and lowland heathland. A lack of management results in the vegetation growing too high and too





dense, and this means a loss of shelter and hunting areas for the toads. The same is true for the sand lizard, another typical inhabitant of the heaths. Sand lizards require unshaded areas of sand and mature, also sunny stands of heather on south-facing slopes. When near to urban areas there is an increased risk of destruction of the habitat by fires, hunting by domestic cats and severe pressure from public recreation. All six native British reptiles are found in some lowland heaths in Britain.

It is, therefore, important to maintain not only all the elements of the habitat but also keep the structural variety to benefit all the potential heathland inhabitants.

Heathlands as pieces of ancient and modern history

The agricultural use and management of heathlands has been very similar all over Western Europe and is part of our common cultural heritage. Most heathlands have traces of human use and occupation from their origin, thousands of years ago, right up to the present day. Earthworks, barrows, ditches and trenches are some of the remains of these past activities.

Mesolithic people (8,000 to 6,000 BC) almost certainly herded animals before the agricultural period, and cleared the forest, probably by burning it, to provide pasture. This drastic change



led to the degradation and impoverishment of the soils, on which heathers then grew. Up until the beginning of the 20th century heathlands were a part of the farming system, being used for cutting turf, cutting vegetation for fodder and fuel, and being burnt to supply continuous forage. Turf was used for building or fuel and, in some countries, mixed with animal dung and spread over the arable fields as fertiliser. Some secondary products are also typical of heathlands, for example honey and wax, cheese, heather beer and liquors, wild fruits and some handcrafted objects.

The areas where lowland heathland occurs have a mild climate that allowed domestic cattle, which were

mostly hardy breeds, to graze throughout the year. Often it was not necessary even to provide shelter, so farmers did not need to do much shepherding, and could concentrate on other farming activities. Increasingly, intensive farming practices have resulted in different, more profitable breeds being selected, and grazing on heaths being all but abandoned in the lowlands. In contrast, intensification has resulted in upland heaths being overgrazed.

Nowadays the importance of lowland heathlands is recognised by national and international designations which should help to ensure their protection against further losses.



Why is heathland a rare habitat?

At one time, heathlands occurred over several million hectares along the Atlantic coasts of Europe, but habitat losses have been substantial during the last 200 years in all countries. The main causes of loss in the UK have been:

- Development – towns and roads have been built on what used to be heathland, for example around Bournemouth. Many of the remaining heaths in the south of Britain are threatened by their proximity to urban areas from pollution, arson and disturbance.
- Conifer planting – heaths were considered a ‘waste land’ and commercial plantations were seen as a way of obtaining some economic benefits from the land.





- Changes in agricultural practices – on one hand, the availability of cheap artificial fertilisers made it easier to reclaim heathland areas, on otherwise poor soils, for agriculture. On the other, traditional grazing practices have disappeared in all but a few places, for example The New Forest.
- Mining – some of the soils where heathlands occur are poor for agriculture but rich in mineral resources such as gravel or China clay.
- Misconceptions – a commonly shared view is that heaths are “a waste and barren land”, with little wildlife or other value.

Nowadays, the lack of appropriate management is the main threat to the remaining heathlands. Although they are very valuable for wildlife and public enjoyment, their economical value is small and their abandonment has led to the invasion of undesired species, or the overgrowth of some of the typical heathland species.

Being a mostly man-made landscape, with a tendency to develop into woodland, heathlands cannot survive without active management. All the plants and animals that have specialised and adapted to the open habitats over thousands of years would disappear if their habitats become shaded and overgrown.

Cattle grazing on heathland Rob McGibbon



Restored heathland, Surrey Peter Watcely/English Nature 21,478



What do we need to do to conserve and restore our lowland heathlands?

Many lowland heathlands provide peaceful enjoyment, scenic views and recreation for millions of visitors every year. In the UK most lowland heathlands are designated as Sites or Areas of Special Scientific Interest (SSSIs/ASSIs) under the Wildlife and Countryside Act 1981. Many of these are also part of the European Natura 2000 network, protected under the Birds and the Habitats Directives. However, the attachment of a designation does not automatically guarantee the conservation of the habitat. Appropriate active management must be carried out regularly to maintain the remaining heathland areas. For example:



- **Grazing:** grazing was a fundamental part of traditional management of the lowland heathland areas. The use of the right animals and at the right time of the year is believed to be in most cases the best possible management to maintain the openness and diversity of the habitat.
 - **Control of invasive species:** some heathland species, such as bracken, gorse and scrub, were cut as fodder for the farm animals. Nowadays they do not have any economic value and they have increased in area beyond advisable conservation limits. Exotic species, such as rhododendron and gaultheria (or shallon), have escaped from gardens and spread aggressively on heathlands, shading and excluding the native species.
 - **Maintaining low nutrient levels:** the enrichment of the soils, through litter accumulation, fertilisation or atmospheric deposition of nutrients tilts the ecological balance towards less specialised vegetation which can out-compete the heathers.
 - **Management of recreational pressure:** heathlands and their wildlife are susceptible to damage by excessive trampling, motorbikes and horse-riding in sensitive areas, as well as by arson fires.
- The need for restoration and recreation is recognised in the Government's UK Biodiversity Action Plan. Some of the aims of this plan are to restore all existing heaths and re-create a further 6,000 hectares by 2005. Maintaining the current heathlands and creating new ones

Arable reverting to heath at Stoborough Heath NNR, Dorset



Peter Wakely/English Nature 18,569

Heathland re-creation in former plantation Isabel Alonso/English Nature



require a great economic and human effort which has resulted in the formation of strong partnerships among organisations interested in nature conservation.

Several programmes have taken place in recent years in Britain, which aim to restore heathlands or to re-create them on sites where they have been lost. There may be funds available to manage, restore and re-create heaths on designated sites from the country conservation agencies and other conservation organisations. These and other areas can also benefit from voluntary environmental land management schemes, which operate throughout the UK.

Further reading

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UK BIODIVERSITY GROUP, 1995. *Lowland Heathland, A costed Habitat Plan*. HMSO. London.

TOMORROW'S HEATHLAND HERITAGE, 2002. *Enjoying your heathland heritage*, a free guide to heathland access and walks in this area and elsewhere in the UK. Peterborough: English Nature.

Contact names and addresses:

Butterfly Conservation

Manor Yard, East Lulworth, near Wareham, Dorset BH20 5QP
Tel: 01929 400209
www.butterfly-conservation.org
Charitable body concerned with the conservation of butterflies and moths and their habitats.

Countryside Agency

John Dower House, Crescent Place, Cheltenham GL50 3RA
Tel: 01242 521381
www.countryside.gov.uk
Contact for National Parks, Areas of

Outstanding Natural Beauty and a wide range of countryside matters.

Countryside Council for Wales

Plas Penrhos, Ffordd Penrhos, Bangor Gwynedd LL57 2LQ, Wales.
Tel: 01248 385500
www.ccw.gov.uk
Contact for all matters concerning countryside conservation, Sites of Special Scientific Interest in Wales and the Tir Gofal Scheme.

Department of Agriculture and Rural Development Northern Ireland

Countryside Management Division, Dundonald House, Upper Newtownards Road, Belfast BT4 3SB
Tel: 01232 520100
www.dardni.gov.uk
Contact for information on Environmental Land Management Schemes in Northern Ireland.

Department for Environment, Food & Rural Affairs

Nobel House, 17 Smith Square, London SW1P 3JR.
Tel: 020 7238 6000
www.defra.gov.uk
Contact for information on Environmental Land Management Schemes in England. Co-ordinates implementation of the UK Biodiversity Action Plan

English Nature

Northminster House, Peterborough PE1 1UA
Tel: 01733 455101
www.english-nature.org.uk
Contact for all matters concerning nature conservation, Sites of Special

Scientific Interest and the Wildlife Enhancement Scheme. Lead agency for the conservation of lowland calcareous grassland under the UK Biodiversity Action Plan.

Environmental & Heritage Service

Commonwealth House, 35 Castle Street, Belfast BT1 1GU, Northern Ireland.

Tel: 029 9025 1477

www.nics.gov.uk/ehs/

Contact for matters relating to the conservation of the natural and built heritage including responsibility for Areas of Special Scientific Interest.

The Herpetological Conservation Trust

655A Christchurch Road,

Boscombe, Bournemouth,

Dorset BH1 4AP

Tel: 01202 391319

www.hcontrst.f9.co.uk

Charitable organisation concerned with the conservation of reptiles and amphibians.

National Assembly for Wales Agriculture Department

Crown Buildings, Cathays Park,

Cardiff CF1 3NQ

Tel: 029 20825111

www.wales.gov.uk/subiagriculture

Contact for information on ESAs in Wales.

National Trust

33 Sheep Street, Cirencester,

Gloucestershire GL7 1RQ

Tel: 01285 651818

www.nationaltrust.org.uk

Charitable body concerned with the conservation of places of historic interest and natural beauty in England, Wales and Northern Ireland.

Plantlife

21 Elizabeth Street, London SW1W 9RP

Tel: 020 7808 0100

www.plantlife.org.uk

Charitable body concerned with the conservation of wild plants and their habitats.

Royal Society for the Protection of Birds

The Lodge, Sandy,

Bedfordshire SG19 2DL

Tel: 01767 680551

www.rspb.org.uk

Charitable body concerned with the conservation of wild birds and their habitats.

Scottish Executive Rural Affairs Department

Pentland House, 47 Robb's Loan,

Edinburgh EH14 1TY

Tel: 0131 556 8400

www.scotland.gov.uk

Contact for information on Environmental Land Management Schemes in Scotland (ESAs and the Rural Stewardship Scheme).

Scottish Natural Heritage

12 Hope Terrace, Edinburgh EH9 2AS

Tel: 0131 447 4784

www.snh.org.uk

Contact for all matters concerning countryside conservation and Sites of Special Scientific Interest in Scotland.

The Wildlife Trusts

UK Office, The Kiln, Waterside,

Mather Road, Newark, NG24 1WT

Tel: 01636 677711

www.wildlifetrusts.org

Voluntary conservation organisation concerned with the conservation of wildlife throughout the UK. Contact for information on Local Wildlife Trusts.





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