



# Upland Oak Woodland

Upland Oakwoods are one of the most distinctive landscape features of the Lake District. In the past these woods supported a thriving industry, supplying charcoal to the iron foundries of Britain. Evidence of this can still be found in many woods in the form of coppice stools and pitsteads - platforms upon which coppiced oak was burnt to form charcoal.

## Current status

Upland oakwoods occur throughout the north and west of the UK with major concentrations in Argyll and Lochaber, Cumbria, Gwynedd, Devon and Cornwall. Related woodland does occur on the continent, particularly in the more oceanic areas, but the British and Irish examples are recognised as internationally important because of their extent and distinctive plant and animal communities. For some of the species associated with upland oak woodland, Britain and Ireland hold a substantial part of the world or European population.

Upland oakwood is present throughout Cumbria, with the main concentrations in the Cumbria Fells and Dales, Eden Valley and Border Uplands Natural Areas. Upland oakwoods make a major contribution to the landscape character of parts of Cumbria, notably in the Lake District National Park.

There are no precise figures for the total extent of this woodland type, but it is believed to be between about 70,000 and 100,000 ha in the UK.

Kelly and Perry (1990) stated that there are over 19,700 ha of semi-natural broadleaved woodland in Cumbria, with the highest densities in the south and west of the county. Phillips, in the Provisional Inventory of Ancient Woodland (1994), gives a figure of 15,593 ha of ancient woodland (woods >2ha) in Cumbria, 62% of which is in the Lake District National Park. While the majority of this woodland will be upland oakwood, accurate information is not available on the relative proportions of the different woodland types.

Nationally, upland semi-natural woods have declined by about 30-40% in area over the past 60 years. There has been a considerable amount of change in the extent and composition of woodland in Cumbria during the previous century. Phillips (1994) gives a figure for Cumbria of approximately 5% clearance of ancient woodland and 37% replanting (primarily with non-indigenous conifers and broadleaves). A survey of the Lake District National Park (LDSPB 1978) concluded that over the previous 30 years the most significant change in the National Park, since fellings during World War II,

had been the widespread introduction of conifers, both through underplanting and complete conversion. Some broadleaved woodland had also disappeared through felling for agricultural purposes. While specific cases are well documented, it is not known what proportion of these changes affected upland oakwoods. The Lake District National Park report also recognised that new woods, including upland oakwoods, were developing through natural regeneration on open ground.

There are 29 Sites of Special Scientific Interest designated for upland oak woodland in Cumbria, six of which form a candidate Special Area of Conservation, identified under the European Community Habitats Directive (*old oak woods with Ilex and Blechnum in the British Isles are listed on Annex 1 of the Directive*). There is one Cumbrian National Nature Reserve for upland oak woodland.

### Characteristic wildlife

Upland oakwoods are characterised by a predominance of oak (most commonly sessile, but locally pedunculate) and birch in the canopy, with varying amounts of holly, rowan and hazel as the main understorey species. The range of plants found in the ground layer varies according to the underlying soil type and degree of grazing. These include: bluebell, bramble and fern communities; grass and bracken dominated zones; and heathy, moss-dominated areas. Most oakwoods also contain areas of more base-rich soils, often along streams or towards the base of slopes, where much richer communities occur, with ash and elm in the canopy, hazel in the understorey and ground plants such as dog's mercury and ramsons. Elsewhere, small alder stands, or peaty hollows covered by bog mosses may occur. These elements are an important part of the upland oakwood system.

The wet climate in the north and west of the UK favours ferns, mosses and liverworts and these groups form a very important and characteristic component of upland oak woods. Many also hold very diverse lichen communities. Upland oakwoods also have a distinctive breeding bird assemblage, with redstart, wood warbler, pied flycatcher and tree pipit being associated with them throughout much of their range. The invertebrate communities are not particularly well studied compared to those

in some other woodland types, but this habitat supports a range of notable species.

### Key species

The following rare or threatened species are associated with upland oak woodland in Cumbria. Species were selected on the basis that they are UK BAP Priority Species (marked P) or species of County importance in Cumbria. Where species of County importance are also UK BAP Species of Conservation Concern, they are marked C.

|                              |                                    |   |
|------------------------------|------------------------------------|---|
| pine marten                  | <i>Martes martes</i>               | C |
| dormouse                     | <i>Muscardinus avellanarius</i>    | P |
| Brandt's bat                 | <i>Myotis brandtii</i>             | C |
| Natterer's bat               | <i>Myotis nattereri</i>            | C |
| noctule bat                  | <i>Nyctalus noctula</i>            | C |
| red squirrel                 | <i>Sciurus vulgaris</i>            | P |
| spotted flycatcher           | <i>Muscicapa striata</i>           | P |
| black grouse                 | <i>Tetrao tetrix</i>               | P |
| song thrush                  | <i>Turdus philomelos</i>           | P |
| northern wood ant            | <i>Formica lugubris</i>            | P |
| red wood ant                 | <i>Formica rufa</i>                | P |
| a weevil                     | <i>Procas granulicollis</i>        | P |
| high brown fritillary        | <i>Argynnis adippe</i>             | P |
| pearl bordered fritillary    | <i>Boloria euphrosyne</i>          | P |
| oak bush-cricket             | <i>Meconema thalassium</i>         |   |
| forester moth                | <i>Adscita statices</i>            | C |
| goat moth                    | <i>Cossus cossus</i>               |   |
| netted carpet moth           | <i>Eustroma reticulata</i>         | P |
| argent and sable             | <i>Rheumaptera hastata</i>         | P |
| square spotted clay moth     | <i>Xestia rhomboidea</i>           | P |
| sword grass moth             | <i>Xylena exsoleta</i>             | P |
| a snail-killing fly          | <i>Pteromicra leucopeza</i>        |   |
| a fly                        | <i>Suillia oxyphora</i>            |   |
| a fly                        | <i>Tachypeza heeri</i>             |   |
| a lacewing                   | <i>Nothochrysa fulviceps</i>       |   |
| a pill woodlouse             | <i>Armadillium pictum</i>          | C |
| tender slug                  | <i>Limax tenellus</i>              | C |
| a true bug                   | <i>Sehirus biguttatus</i>          |   |
| white-egg bird's-nest fungus | <i>Crucibulum laeve</i>            |   |
| a fungus                     | <i>Hapalopilus rutilans</i>        |   |
| a fungus                     | <i>Hygrocybe spadicea</i>          | P |
| a fungus                     | <i>Lentinellus ursinus</i>         |   |
| hedgehog puffball            | <i>Lycoperdon echinatum</i>        |   |
| a lichen                     | <i>Lobaria amplissima</i>          |   |
| a lichen                     | <i>Micarea stipitata</i>           |   |
| a lichen                     | <i>Pseudocyphellaria intricata</i> |   |
| a liverwort                  | <i>Lepidozia cupressina</i>        |   |

|                |                                  |   |
|----------------|----------------------------------|---|
| a liverwort    | <i>Plagiochila atlantica</i>     |   |
| a liverwort    | <i>Plagiachila killarniensis</i> | C |
| a moss         | <i>Antitrichia curtipendula</i>  |   |
| a moss         | <i>Campylopus setifolius</i>     | P |
| a moss         | <i>Sematophyllum micans</i>      |   |
| juniper        | <i>Juniperus communis</i>        | P |
| Killarney fern | <i>Trichomanes speciosum</i>     | P |

### Best management practice

Upland oak woodlands are often unmanaged and in many circumstances this is not detrimental to their nature conservation interest. However where they are managed, or where the introduction of management is being contemplated, a number of factors should be taken into consideration:

- Upland oak woodlands are highly susceptible to damage by heavy machinery and where ever possible a low impact approach to management should be taken.
- Many upland oak woodlands have been traditionally managed as coppice, and this is generally more appropriate than high forest.
- Moderate to heavy grazing is detrimental to woodland ground flora and inhibits natural regeneration of trees. Grazing stock should generally be excluded; however, occasional light grazing may be acceptable.

### Current issues

Losses of existing upland oakwoods through clearance and replanting is not seen as a major issue at present. The main current factors affecting the habitat which need to be addressed are:

- Uncontrolled grazing by stock (including supplementary winter feeding) and deer throughout much of the range of the woods.
- Invasion by non-native species such as *Rhododendron ponticum*.
- Development pressures, including illegal tipping.
- Effects of air pollution and climate change, especially on lichen and bryophyte communities.
- Unsympathetic forest management (including unsympathetic felling rates, the choice of broadleaved species planted, or the methods of working) can be detrimental to woodland biodiversity.
- Perceived conflicts between the landscape policies of National Parks Authorities and the requirement for fencing to extend existing woodland, and for new woodland planting.

### Current action

#### Regulatory Framework

The UK Forestry Standard recommends that the total area of semi-natural woodland should not be reduced and that the ecological interest of ancient semi-natural woodland should be maintained. National priorities are contained in the England Forestry Strategy. Management of semi-natural woodlands, including upland oakwoods, has to be in accordance with guidelines published by the Forestry Commission to receive felling licences or grant-aid. Statutory protection such as the Habitats Directive, Wildlife and Countryside Act 1981, Regional Planning Guidance and Planning Policy Guidance provides the basis for habitat protection. In Cumbria, key statutory policy documents include the Cumbria and Lake District Joint Structure Plan, the various Local Plans and the Lake District National Park Management Plan. Further guidance is through the Cumbria Woodland Vision, Cumbria Landscape Strategy, The Countryside Character Profiles and Natural Area Profiles.

#### Native Woodland Initiative

A national concordat between the Forestry Commission and National Park Authorities to promote the sympathetic management and expansion of native broadleaved woodland, locally implemented through an Accord Group with representatives from all the signatories.

#### Challenge Fund

A partnership project between the Forestry Commission and National Park Authorities to promote the creation of new native woodland. Forestry Commission provides 100% funding towards the capital cost of establishing suitable schemes. In the first two years of the Challenge Fund 145 ha (5 schemes) of new woodland has been agreed in Lake District. This is predominantly upland oakwood.

#### Forestry Commission Heritage Lottery Fund Bid - Our Native Woodland Heritage

A partnership bid between Forestry Commission, National Park Authorities, Nature Conservation Agencies, Department of Environment, Transport and the Regions, Department of Agriculture Northern Ireland and others at a local and national level. The main thrust of the Project would be improving, restoring and expanding semi-natural woodlands.

### Long Term Forest Plans

Forest Enterprise is continuing to prepare Forest Design Plans for each of its properties. Forest Enterprise is implementing its Habitat Action Plan for Upland Oakwood. Long-term forest plans are being prepared by the Graythwaite Estate and the National Trust for its woodlands in Borrowdale.

### Restoration of Atlantic Oakwoods LIFE Project

The National Trust has obtained European funding through the Restoration of Atlantic Oakwoods LIFE Project to secure and maintain favourable condition of the cSAC upland oakwoods in Borrowdale.

### English Nature Ullswater Study

The Ullswater area was one of three study sites in the UK which were assessed for their potential to create new native woodland. The Lake District study assessed sites between the lakeshore and the treeline.

### Helvellyn and Skiddaw Massif Management Plans

These two management plans contain proposals for extending existing woodland in gills, crags and screes and for small scale new native woodland planting.

### Grant-aid and Advice

Main source of grant-aid: Forestry Commission Woodland Grant Scheme. Other sources: Farm Woodland Premium Scheme, Lake District and Pennine Dales Environmentally Sensitive Area Schemes, Lake District National Park Authority, Countryside Stewardship, English Nature.

Advice from: Forestry Commission, Farming and Rural Conservation Agency through agri-environment schemes, East Cumbria Countryside Project, Cumbria Broadleaves, Lake District National Park Authority, English Nature, Cumbria County Council and publications such as Forestry Practice Guide No. 5 *Upland Oakwoods*.

## Context in relation to other plans:

### UK Habitat Action Plans

There is a UK Biodiversity Action Plan for upland oak woodland in *Biodiversity: the UK Steering Group Report* (1995), which sets the following UK objectives and targets:

- Maintain the existing area (70,000 to 100,000 ha) of upland oakwoods and improve its condition, by a mixture of management for timber (predominantly as low intensity high forest), as

sheltered grazing, and minimum intervention.

- Avoiding other habitats of high nature conservation value, expand the area of upland oakwood by about 10% on to currently open ground, by some planting but particularly by natural regeneration, by 2005.
- Identify and encourage the restoration of a similar area (about 10%) of former upland oak woodland that has been degraded by planting with conifers or invasion by rhododendron.

### National Lead Agency

Forestry Commission

### Local contacts

Phil Taylor, Lake District National Park Authority, Murley Moss, Oxenholme Road, Kendal, LA9 7RL. Phone: 01539 724555.

### Associated plans in the Cumbria BAP

The following Cumbria species/habitat action plans are of relevance to upland oak woodland:

#### Phase I

- upland mixed ash woodland
- wet woodland
- ancient and/or species-rich hedgerows
- *Lobaria amplissima* (a lichen)
- red squirrel
- bats
- song thrush
- juniper
- netted carpet moth

#### Phase II

- scrub communities (other than juniper)
- parkland, wood pasture and veteran trees
- black grouse
- red wood ant

## References

Kelly, P.G. and Perry, K.A. 1990. *Wildlife habitat in Cumbria*. Research and Survey in Nature Conservation No 30. Nature Conservancy Council. Peterborough.

Lake District Special Planning Board. 1978. *Broadleaved woodlands of the Lake District*. LDSPB, Kendal.

Phillips, P.M. 1994. *Cumbria inventory of ancient woodland (provisional)*. English Nature. Peterborough.

## Objectives, targets and proposed actions for upland oakwood in Cumbria

| Broad Objective A   | Maintain the existing area of upland oakwood and improve its condition  |   |            |      |  |
|---|---|---|------------|------|--|
| Operational Objective   | Action Required   | Suggested organisational involvement    | Time-scale | Type |  |
| <b>I Improve the information base and knowledge of the distribution, extent and management of upland oakwoods</b>   | 1 Repeat Monitoring Land Use Change Survey for LDNPA.   | LDNPA, FC, EN, NWW, MAFF                | S          | RM   |  |
|   | 2 Identify three sites for long-term monitoring and research on upland oakwoods, including managed and minimum intervention sites.  | FC, EN, NT, LDNPA                       | S          | RM   |  |
|   | 3 Co-ordinate surveys of ancient woodland invertebrates.  | Woodland Focus Group                    | M          | RM   |  |
|   | 4 Improve information on veteran trees in Cumbria, as part of national recording schemes, through day to day work and specific surveys, e.g. National Trust and LDNPA properties and ESA schemes.                 | EN, LDNPA, NT, CWT, FC, CCC, ECCP, MAFF | O          | RM   |  |
|   | 5 Maintain advisory service on the marketing and use of products from upland oakwoods.  | CB, FC, ECCP                            | O          | A    |  |
|   | 6 Targeting owners and managers, implement one training course per year on the conservation and management of semi-natural woodland, including the special features and conditions that apply to upland oakwoods. | CB, FC, EN, LDNPA                       | O          | A    |  |
|   | 7 Develop joint database on semi-natural broadleaved woodland, making information widely available in a useful format such as GIS.  | FC, LDNPA, EN, NT, CCC, CWT, MAFF, ECCP | M          | RM   |  |
| <b>2 Initiate measures to secure management to achieve favourable condition in 100% of upland oakwoods within SSSIs by 2004. Overall aim to achieve favourable condition for 50% of the sites by 2010</b> | 1 Target Woodland Grant Schemes and Forest Design Plans to bring designated upland oakwoods into conservation management.   | FC, FE, EN                              | M          | SS   |  |
|   | 2 Complete Site Management Statements on SSSIs not in management/grant schemes. By 2004.  | EN                                      | M          | SS   |  |

| Broad Objective A   |  | Maintain the existing area of upland oakwood and improve its condition |            |      |
|---|--|--|------------|------|
| Operational Objective   | Action Required  | Suggested organisational involvement                                   | Time-scale | Type |
| <b>3</b> Initiate measures to secure management to achieve favourable condition in 70% of non-SSSI upland oakwoods by 2004. Overall aim to achieve favourable condition for 50% of the total resource by 2010   | 1 Target Woodland Grant Schemes and Forest Design Plans to bring upland oakwoods into conservation management.   | FC, LDNPA, EN, NT, ECCP, CCC, CWT, MAFF, FWAG                          | O          | SS   |
|   | 2 Identify as Wildlife Sites the most important areas for wildlife in the County outside of statutory sites, including areas of upland oak woodland, by 2006.            | CWT, LAs   | L          | SS   |
|   | 3 Implement FE Endangered Habitat Action Plan for Upland Oakwood.  | FC   | S          | SS   |
| Broad Objective B   |  | Expand the area of upland oakwood                                      |            |      |
| Operational Objective   | Action Required  | Suggested organisational involvement                                   | Time-scale | Type |
| <b>1</b> Avoiding other existing sites of importance for nature conservation, cultural heritage and amenity, and, where acceptable in the landscape, expand the area of upland oakwood on currently open ground by some planting but particularly by natural regeneration | 1 Establish new upland oakwood sites at suitable locations. EN target for new upland oakwood in Cumbria is 1150ha by 2005 (minus achievements between 1995 and present). | FC, LDNPA, EN, ECCP, NT, CB, CWT, NWW, MAFF, FWAG                      | M          | SS   |
|   | 2 Extend the period and eligible area for the Forestry Commission Challenge Fund to other parts of Cumbria.  | FC   | M          | PL   |

| Broad Objective C   | Restore former upland oak woodland   |   |            |      |
|---|--|---|------------|------|
| Operational Objective   | Action Required  | Suggested organisational involvement                | Time-scale | Type |
| I Restore former upland oak woodland that has been degraded by planting with conifers or invaded by non-native species such as Rhododendron. Target for restoration of upland oakwood sites 500ha by 2005 (minus achievements between 1995 and present) | 1 Identify prime sites for eradication of Rhododendron in upland oakwood sites, and undertake eradication.   | <b>FC</b> , LDNPA, EN, ECCP, CB, CWT, NWW, MAFF     | M/<br>O    | SS   |
|   | 2 Identify prime sites for removal of non-native conifers in upland oakwood (where appropriate on cultural and landscape grounds), and undertake this removal. | <b>FC</b> , EN, LDNPA, ECCP, NT, CB, CWT, MAFF, NWW | M/<br>O    | SS   |
|   | 3 Implement Forest Enterprise Upland Oakwood Habitat Action Plan.  | <b>FC (FE)</b>                                      | M          | SS   |

## Key to Tables

**Suggested organisational involvement:** Key Deliverers in bold type; Partners in plain type.

CB = Cumbria Broadleaves; CCC = Cumbria County Council; CWT = Cumbria Wildlife Trust; ECCP = East Cumbria Countryside Project; EN = English Nature; FC = Forestry Commission; FE = Forest Enterprise; LAs = Local Authorities; LDNPA = Lake District National Park Authority; MAFF = Ministry of Agriculture, Fisheries and Food; NT = National Trust; NWW = North West Water Limited.

**Timescale:** O=ongoing; S=short term (2000-2001); M=medium (2002-2005); L=long (2006-2010).

**Type:** Type of action; PL=Policy & Legislation; SS=Site Safeguard & Management; SP=Species Management and Protection (species plans only); A=Advisory; RM=Research & Monitoring; CP=Communications and Publicity.