



# EXMOOR BIODIVERSITY ACTION PLAN

EXMOOR NATIONAL PARK AUTHORITY (2001)

1. **What is biodiversity?**
2. **The policy background**
3. **The Exmoor Biodiversity Action Plan**
4. **Habitat Action Plans**

- Blanket bog
- Upland heath
- Lowland heath
- Bracken and Scrub
- Neutral grassland
- Parkland, Wood pastures and Veteran trees
- Upland oakwood

5. **Species Action Plans**

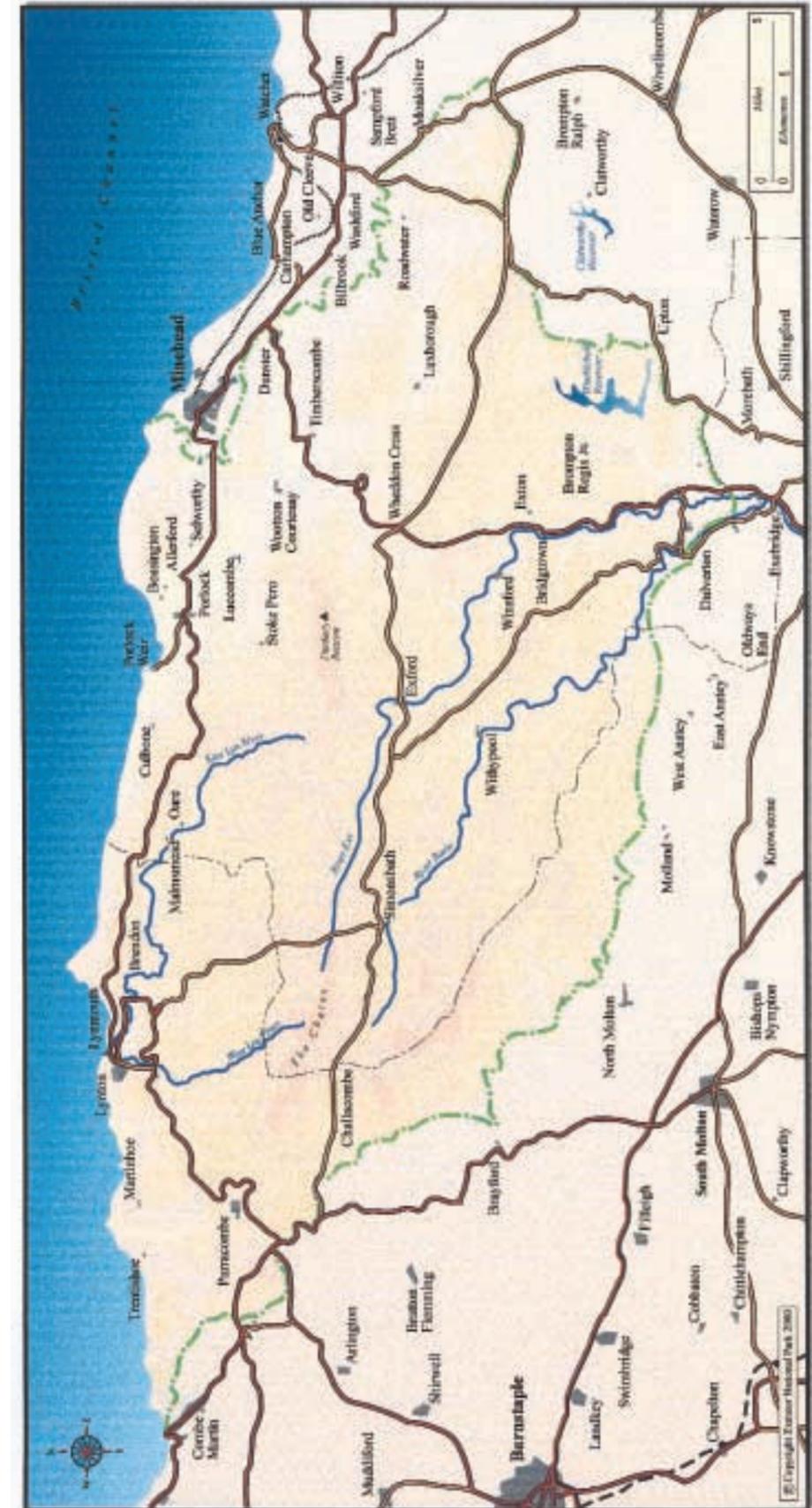
- Ballerina waxcap
- Lungwort lichens
- Endemic whitebeams
- Heath fritillary
- High brown fritillary
- Nightjar
- Dormouse

Appendix 1. Important Habitats occurring in Exmoor National Park.

Appendix 2. Important Species occurring in Exmoor National Park

Appendix 3. Abbreviations used in the text.

# EXMOOR



## 1. What is biodiversity?

Biodiversity has been defined as:

“The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems.”

Put more simply, we can define biodiversity as the variety of life.

## 2. The policy background:

### 2.1. National and international context.

In June 1992, the United Kingdom was among 150 signatories to the **Convention on Biological Diversity** at the Rio Earth Summit. This identified the need for immediate action by governments in order to arrest the global loss of biodiversity.

The response of the UK was to produce **Biodiversity: The UK Action Plan** in 1994. The UK Action Plan aims “to conserve and enhance biological diversity within the UK and to contribute to the conservation of global biodiversity through all appropriate mechanisms.” Underpinning this goal, the objectives are “to conserve and where practicable enhance:

- the overall populations and natural ranges of native species and the quality and range of wildlife habitats and ecosystems;
- internationally important and threatened species, habitats and ecosystems;
- species, habitats and natural and managed ecosystems that are characteristic of local areas; and
- the biodiversity of natural and semi-natural habitats where this has been diminished over recent decades.”

The UK Action Plan went on to set out broad targets coming from the above actions. These were:

- “developing costed targets for our most threatened and declining species and habitats;
- improving the accessibility and co-ordination of biological datasets and considering future information management requirements which include the monitoring of agreed targets;
- increasing public awareness and involvement by targeting key sectors; and

- recognising the importance of local Biodiversity Action Plans (BAP) which complement national Action Plans – Action Plans need to be implemented and monitored using both a top down and a bottom up approach.”

The government set up a UK Biodiversity Group to implement the policies set out in the UK Action Plan. The UK Biodiversity Group comprised representatives from both local and central government, public and private conservation organisations and academic organisations, as well as farming, landowning and business interests.

The UK Biodiversity Group was charged by government with a number of tasks:

- developing costed targets for key species and habitats;
- suggesting ways of improving the accessibility and co-ordination of information on biodiversity;
- recommending ways of increasing public awareness and involvement in conserving biodiversity; and
- recommending ways of ensuring that commitments in the Plan were properly monitored and carried out.

In 1995, the UK Biodiversity Group published its response to government, **Biodiversity: The UK Steering Group Report**. This contained 116 Species Action Plans (SAP) for some of our most threatened species. In June 1998, a further 56 SAPs were produced for the remaining priority vertebrates and vascular plants (**UK Biodiversity Group – Tranche 2 Action Plans. Volume 1 – vertebrates and vascular plants**). In December 1998 action plans for 10 habitats were produced (**Volume II – terrestrial and freshwater habitats**). In 1999 four additional volumes were produced, 75 action plans for plants and fungi (**Volume III – plants and fungi**), 103 action plans for invertebrates (**Volume IV – invertebrates**), 16 action plans for maritime species and 17 action plans for maritime habitats (**Volume V – maritime species and habitats**) and 25 action plans for upland species and 4 action plans for upland habitats in addition 53 species statement were included (**Volume VI – terrestrial and freshwater species and habitats**).

The UK Steering Group Report also included Action Plans for 14 key habitats. These UK Biodiversity Group documents have provided the basis for choosing most of the species and habitats included in the Exmoor BAP.

Subsequently, the UK Biodiversity Group and the Local Government Management Board published a series of **Guidance Notes**, which provide a format for the preparation of local BAPs and have been referred to in drawing up the Exmoor BAP.

### 2.2. Regional and local context.

The RSPB-led **Action for Biodiversity in the South-West** published in June 1997 sets the south-west regional context for biodiversity planning. Exmoor National Park Authority (ENPA) was considerably involved in the preparation of this document, co-ordinating the preparation of the upland oakwood and upland heath HAPs for the south-west. The Action Plans in this document and the habitat and species audit that preceded it have been drawn upon in the preparation of the Exmoor BAP.

**The Nature of Devon. A Biodiversity Action Plan** published in July 1998, has also been referred to. The ENPA is represented on the Devon BAP Working Group, has assisted in the preparation of a number of the Action Plans, and has been identified as the “champion” for implementation of the whitebeam Action Plan.

West Somerset District Council has published a BAP covering the area of the district outside the National Park and North Devon District Council are currently preparing a BAP. The ENPA has been involved with the former and is a member of the Working Group overseeing progress on the latter. The emphasis has been on maximising collaboration and coordination in the preparation of these various draft local BAPs and minimising duplication of effort.

The Countryside Commission report, **National Park Management Plan Guidance (1997)** stresses the importance of more detailed nature conservation plans in delivering the objectives set out in National Park Management Plans. It also highlights the need to cross-reference the National Park Management Plan (NPMP) with the local BAP. The Exmoor BAP has been developed in parallel with the Exmoor NPMP to ensure that these linkages exist.

The ENPA’s **Moorland Research Strategy (1996), Woodland Research Strategy (1997) and Woodland Action Plan (1998)** have also been referred to in the production of the BAP.

English Nature’s **Exmoor and the Quantocks Natural Area Profile (1997)**, which the ENPA co-authored, identifies key species of conservation concern in the Natural Area. It also provides data on the quantity and quality of the biodiversity resource and sets out nature conservation objectives, which are the basis of the objectives and targets in the Exmoor BAP. For this reason, the Natural Area Profile (NAP) has been especially valuable in providing much of the audit information which is a key element of the biodiversity planning process. This and the various Action Plans produced by the UK Biodiversity Group have been the most influential sources in the production of this document.

### 3. The Exmoor Biodiversity Action Plan

#### 3.1. The Challenge.

The challenge is to increase Exmoor’s biodiversity, targeting those species and habitats most valued nationally and locally, by building partnerships with others and by promoting understanding and support for biodiversity and its conservation.

#### 3.2. The Biodiversity Partnership.

Implicit in the above statement is the need to involve others in the biodiversity planning process. This is not simply a Plan for the ENPA, it should also engage relevant conservation organisations, local communities and other interested individuals. More detail on the various mechanisms that will ensure this involvement are laid out in the following sections. In addition the habitat and species Plans identify those organisations that will be expected to take a role in implementing the individual actions. In many instances, organisations have

already committed themselves to biodiversity actions in BAPs at a national, regional or county level. Other related documents such as the Environment Agency’s Local Environment Agency Plans (LEAPs) contain similar commitments. The Exmoor BAP has attempted to extract all relevant actions from these sources and to convert these into local actions for identified partners.

English Nature are the government’s statutory adviser on nature conservation issues. They are responsible for the Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI) networks which protect respectively Europe and England’s most important wildlife sites. On Exmoor, 18903 ha (27% of the National Park) is notified as SSSI. English Nature will be a key partner in meeting targets for all of the habitats and species in this Plan.

#### 3.3. Promoting public understanding and support.

The establishment of a Biodiversity Partnership will, in itself, be of great benefit in promoting public understanding, but the key will be to incorporate actions within the individual Plans that specifically aim to raise awareness. Habitats and species which already generate considerable public interest, such as upland heathland and dormouse, may be particularly suitable for such projects. However, it is also important that we champion the more obscure elements of Exmoor’s wildlife.

Following the annual review of the Action Plans, a progress report will be produced that summarises achievements in meeting BAP targets. This will be circulated widely and may also be used to generate press releases. In addition to this document, other publicity materials will be produced that provide a general overview of the biodiversity planning process and focus in on specific habitats, species or issues. Existing ENPA publications such as Exmoor Life and The Exmoor Visitor can also be used to update local people and visitors on biodiversity issues.

Biodiversity issues are an important element of the Local Agenda 21 (LA21) process. LA 21 promotes a “bottom-up” approach involving public participation, involvement and ownership. It is therefore essential that we provide opportunities for local communities to participate in the biodiversity planning process. In particular, we should encourage local schools, groups and individuals, to devise projects which meet the objectives of this Plan.

It is proposed to produce a series of information sheets for local schools which relate to a selection of the habitats and species in the Exmoor BAP. These will suggest study areas and projects suitable for school groups and will be consistent with the requirements of the National Curriculum. A number of the Plans identify academic institutions as a key partner in delivering actions. It is hoped that this document will help to stimulate a much closer working relationship between the academic and conservation sectors. Such a relationship would help to realise Exmoor’s considerable potential as a teaching resource and would also generate high quality ecological and environmental data.

Information Technology will be an important tool in communicating biodiversity issues. The Exmoor BAP will be accessible through ENPA’s web-site, as will related educative and interpretative materials.

### 3.4. The Audit.

The UK Biodiversity Group and Local Government Management Board advice on preparation of a local BAP recommends the inclusion of an audit of the area's biodiversity resource. In our case, the Exmoor and the Quantocks Natural Area Profile provides much of this information. In particular, the NAP identifies a short list of key habitats and species and a longer list of species of conservation value which have been used as the basis for producing the lists shown in Appendices 1 and 2.

The 7 habitats and 7 species for which action plans have initially been prepared are chiefly those that have been identified as high priorities nationally by the UK Biodiversity Group and for which Exmoor is already committed to action in national and regional BAPs. However, the challenge for the Exmoor BAP is also to identify and conserve what is locally important. The second tranche of habitat and species action plans will particularly aim to address this requirement and will provide an opportunity to involve the public in the biodiversity process (see section 3.3 above).

LGMB advice recommends that Local Authorities should identify Prime Biodiversity Areas (PBA) where biodiversity action can be focussed. 3 PBA's were identified in the National Area Profile, Barle woods and moors, Holnicote and Porlock and West Exmoor. However as the whole National Park is of such high wildlife interest biodiversity action will not be specifically targeted at these areas but to areas where resources will be most effective.

### 3.5. The Action Plans.

ENPA's Nature Conservation Advisory Group will provide a forum for monitoring the overall direction of the Exmoor BAP. In addition, the individual action plans will be subject to annual review by groups comprising those with an interest in the particular habitat or species. The overall lifespan of this Plan will be from 2001 till 2010.

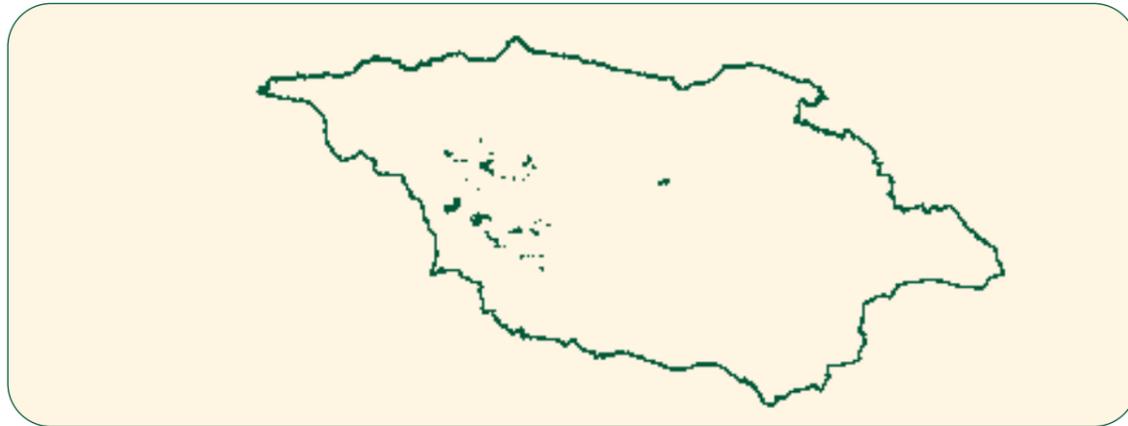
Action planning should be a dynamic process and the annual reviews should result in new actions being agreed. Where biodiversity targets have been met actions or even the entire action plan may be discontinued. Conversely, a second tranche of species and habitat action plans will be prepared as a result of consultation during 2000. This will focus on the identification of those habitats and species that are of local importance and it will provide an opportunity for the involvement of local communities and schools in the biodiversity planning process.

There are a number of common themes that run through many or all of the species and habitat plans and which can be seen as generic issues which must be addressed if we are to succeed in achieving the targets laid out in this Plan. Monitoring is a key task in all of the action plans and the monitoring actions included in the various habitat and species plans will provide a key indicator of our success in managing the National Park sustainably. Linked to this, is the need for species and habitat data to be collated in an accessible and ordered manner. The incorporation of such information onto computer databases and geographical information systems (GIS) provides us with an opportunity to radically improve the quality and utility of biological data.

The dissemination of information on the biodiversity planning process, whether it be to inform, educate or generate public support is a third common theme. The ambitious targets laid out in the action plans will require a substantial additional input of both human and

financial resources and to justify this we need to explain our actions. Good communication will also be vital in developing effective partnerships to conserve Exmoor's biodiversity.

The Exmoor BAP is only one of a number of Plans that impact on the wildlife of the National Park. It is important that strong links are developed between the BAP and other plans for which the ENPA has responsibility, notably the National Park Plan, the Structure Plan and the Local Plan. Additionally, the relationship of the Exmoor BAP to other BAPs at national, regional and local level must be maintained, as well as to other plans such as the Forestry Commission's Forest Design Plans (FDP) and the Environment Agency's Local Environment Agency Plans (LEAP). In addition to plans, there are a number of existing environmental land management schemes (ELMS) on Exmoor. The most important of these are MAFF's Exmoor Environmentally Sensitive Area (ESA) scheme and the Forestry Commission's Woodland Grant Scheme (WGS). Also significant is MAFF's Countryside Stewardship scheme. For a number of key habitats and species, input of the actions contained in this Plan into such schemes will be crucial in achieving biodiversity targets.



## 1. Introduction:

Blanket bogs are characterised by plants that thrive on waterlogged, acid peats such as bog-mosses, cottongrasses and deer sedge. They occur on deep peats on the moorland plateau, generally at altitudes of at least 400 metres. In addition to high quality blanket bog of the type described above, this Plan also includes degraded blanket bog which has become dominated by purple moor-grass, but which still retains some blanket bog species. Because blanket bog requires very wet conditions, it is concentrated in the south-western part of the National Park, where the prevailing winds result in the highest rainfall levels.

*Links with other Plans in this BAP:*

Upland heathland. Blanket bog forms part of the continuum of variation in vegetation communities which is found on our moorland. In some cases, it lies adjacent to upland heath and in practice it may be difficult to distinguish the communities in the transitional zone at their margins. More often blanket bog is found in association with purple moor-grass dominated vegetation, which has been considerably impoverished in biodiversity terms by overburning, and is not included in this BAP.

One key species, cranberry, is confined to blanket bog on Exmoor, where it is at the southern edge of its British range.

## 2. Current status:

Blanket bog is a globally rare habitat, for which Britain has international responsibilities. Though insignificant in comparison to the large areas that occur in Scotland, northern England and Wales, Exmoor's blanket bogs are still of much interest by virtue of their occurrence at the southern range limit of the habitat.

There are only 480 hectares of high quality blanket bog remaining in the National Park. However, there are another 4,000 hectares of purple moor-grass vegetation, of which a significant proportion has potential for reversion to blanket bog given sensitive management. Further analysis of vegetation and soil data is required to assess those areas where such reversion would be most likely to succeed.

*Key sites:*

Exe Plain.  
Deer Park.  
Burcombe.  
Squallacombe.  
Challacombe Common/Woodbarrow Hangings.  
Exford Common.  
Brendon Common.  
The Chains

## 3. Current factors affecting the habitat:

- 3.1 Ecological mis-management of blanket bog, primarily through frequent, uncontrolled burning, and more locally through overgrazing.
- 3.2 The presence of old ditches which drain and otherwise alter blanket bog hydrology.
- 3.3 Atmospheric pollution is known to have a detrimental effect on blanket bog vegetation.

## 4. Current action:

- 4.1 All high quality and degraded blanket bog lies within the North Exmoor and South Exmoor SSSIs.
- 4.2 Approximately half of the high quality blanket bog is also part of the Exmoor Heaths cSAC.
- 4.3 Approximately 400 ha of Exmoor's high quality and degraded blanket bog is owned by the ENPA, and a further 25 ha of high quality blanket bog is owned by the National Trust.
- 4.4 75 ha of the high quality blanket bog resource has been entered into the Exmoor ESA scheme. A further 50 ha are in ENPA management agreements.
- 4.5 An experimental project to improve blanket bog by blocking ditches has begun on ENPA land on the southern edge of Exe Plain jointly funded by ENPA, EA and EN.

## 5. Objectives and Targets:

- 5.1 Maintain all high quality blanket bog in favourable condition. TARGET: Ongoing.
- 5.2 Begin restoration of degraded, purple moor-grass dominated blanket bog. TARGET: 200 ha by 2010.
- 5.3 Restore soil hydrology and drainage patterns on degraded blanket bog. TARGET: 50 ha by 2010.
- 5.4 Evaluate the extent and quality of Exmoor's blanket bog resource. TARGET: By 2002.
- 5.5 Maintain and enhance populations of key species of conservation concern. TARGET: Ongoing.

## 6.

### BLANKET BOG ACTION PLAN

#### Policy and legislation

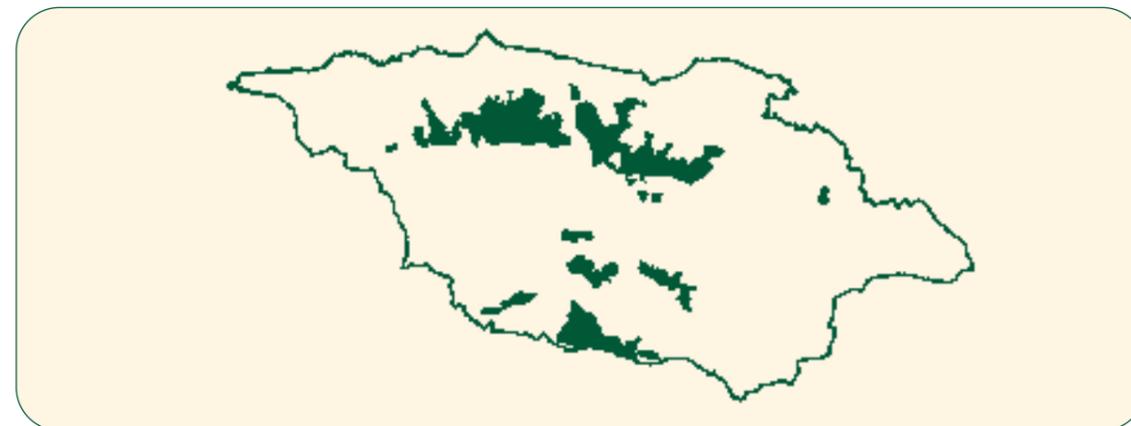
- 6.1 Incorporate objectives and targets of this Plan into relevant LEAPs (by 2005). Partner: EA

#### Site safeguard and management

- 6.2 Produce and implement management plans for all areas of high quality or degraded blanket bog on ENPA land that prevent burning and stipulate an appropriate level of grazing (by 2002). Partner: ENPA
- 6.3 Produce management plans for all other areas of high quality or degraded blanket bog which control burning and stipulate an appropriate level of grazing (review by 2002; 75% implemented by 2005; remainder by 2010). Partners: ENPA; EN; NT; MAFF.
- 6.4 Seek to ensure all areas of high quality and degraded blanket bog are in ELMS (by 2005). Partners: MAFF; EN; ENPA.
- 6.5 Seek to ensure all areas of high quality and degraded blanket bog are identified as non-burning areas in ELMS (ongoing). Partners: MAFF; EN; ENPA.
- 6.6 Ensure compliance with environmental conditions attached to livestock subsidies (ongoing). Partners: MAFF; EN; ENPA.
- 6.7 Review impact of ESA prescriptions in maintaining and improving blanket bog and make improvements where appropriate (ongoing). Partners: MAFF; EN; ENPA.
- 6.8 Initiate restoration management on 200 ha. of degraded blanket bog through ESA (by 2010). Partners: MAFF; EN; ENPA.
- 6.9 Begin experimental ditch-blocking on 50 ha of blanket bog (by 2010). Partners: EA; ENPA; EN; MAFF.

#### Future research and survey

- 6.10 Produce an inventory of all high quality and degraded blanket bog using GIS-database (by 2001). Partners: ENPA; EN; SERC; DWT/DBRC.
- 6.11 Continue ESA grazing monitoring until results unequivocally show that stocking levels are maintaining all areas of blanket bog in favourable condition (ongoing). Partners: EN.
- 6.12 Implement remaining actions in ENPA Moorland Research Strategy (by 2002). Partners: ENPA; EN; EA; Universities.



## 1.

### Introduction:

Upland heathland is defined as vegetation dominated by dwarf shrubs such as heather, bell heather, whortleberry and gorses which is generally found above the 300 metre contour. The mixture of these species is distinct from that found on lowland heaths, though on Exmoor, the two grade imperceptibly into each other making the distinction somewhat arbitrary in places.

In addition to a distinctive plant community, there are also an important range of animals that are very characteristic of upland heath. This is an internationally rare community, for which Britain holds a major part of the world resource. Despite this, there have been major losses of upland heathland to agricultural improvement and afforestation, with approximately 30% of moorland in Britain having been lost between 1950 and 1980.

*Links with other plans in this BAP:*

Lowland heathland, blanket bog and bracken and scrub. On Exmoor, lowland and upland heaths frequently occur adjacent to each other and it is often very difficult to distinguish the communities in the transitional zone at their margins. These transitions are most common on the heathlands of Exmoor and Dartmoor and have resulted in the designation of the Exmoor heaths as a cSAC. At higher altitudes, upland heath sometimes occurs in association with blanket bogs. Areas of bracken, european gorse and hawthorn scrub also form an important element of the moorland vegetation mosaic.

Heath fritillary. Found on the fringes of upland heathland in the transitional zone with lowland heathland.

Other key species associated with upland heath are merlin, whinchat, stonechat, skylark and red deer.

## 2.

### Current status:

There are approximately 7,000 hectares of upland heathland on Exmoor. MAFF figures suggest a loss of upland heath of approximately 20% between 1950 and 1980. This has predominantly been to agricultural reclamation, though there has also been a limited amount of coniferous planting.

*Key sites:*

Dunkery Beacon.  
 Brendon Common / Cheriton Ridge / Ilkerton Ridge.  
 Withypool Common.  
 Winsford Hill.  
 Molland Moor.

### 3. Current factors affecting the habitat:

- 3.1 Uncontrolled and unauthorised burning, resulting in the loss of heathland animal communities and the replacement of heathers with purple moor-grass.
- 3.2 Overgrazing, resulting in the replacement of dwarf shrubs with grasses.
- 3.3 Locally, undermanagement is resulting in scrub encroachment onto upland heath.
- 3.4 Invasion of bracken and rhododendron onto upland heathland.
- 3.5 The difficulty of entering large commons into the Exmoor ESA scheme.
- 3.6 Locally, erosion and disturbance through recreational and hunting activities can be a problem.
- 3.7 Past agricultural reclamation has resulted in the fragmentation of upland heathland.
- 3.8 The livestock subsidy system encourages the overgrazing of upland heathland.
- 3.9 The use of persistent veterinary chemicals can greatly reduce the diversity and biomass of the important dung invertebrate community.

### 4. Current action:

- 4.1 Approximately 1700 ha of Exmoor's upland heath is owned or managed by the National Trust, including the Dunkery heaths, and a further 250 ha is owned by the ENPA.
- 4.2 The vast majority of Exmoor's upland heath is notified within the North Exmoor and South Exmoor SSSI and has subsequently been included within the Exmoor Heaths cSAC.
- 4.3 Much of the Dunkery moorland is within the Dunkery and Horner Wood NNR.
- 4.4 Approximately 50% of the upland heath resource has been entered into the Exmoor ESA scheme. A further 200 ha are in ENPA management agreements. Porlock Common is in an EN management agreement.

- 4.5 The Exmoor ESA scheme now includes prescriptions for positive management of upland heathland and also has provision for its re-creation where appropriate.
- 4.6 The Badgworthy Land Company, who own Brendon Common, Cheriton Ridge and Ilkerton Ridge, are sympathetic to nature conservation objectives and are also in a management agreement with EN.
- 4.7 ENPA have produced a Moorland Research Strategy.

### 5. Objectives and targets:

- 5.1 Maintain all existing high quality upland heathland in favourable condition.  
 TARGET: Ongoing.
- 5.2 Restore sub-optimal upland heathland to favourable condition.  
 TARGET: All by 2010.
- 5.3 Re-create upland heathland where it formerly occurred, with particular emphasis on the linking of existing fragments.  
 TARGET: 100 ha by 2010.
- 5.4 Maintain and enhance populations of key species of conservation concern.  
 TARGET: Ongoing.
- 5.5 Increase public awareness and appreciation of upland heathland.  
 TARGET: Ongoing.

## 6.

### UPLAND HEATHLAND ACTION PLAN:

#### Site safeguard and management

- 6.1. Ensure compliance with environmental conditions attached to livestock subsidies (ongoing). Partners: MAFF; EN; ENPA.
- 6.2. Review impact of ESA prescriptions in maintaining and improving upland heathland and make improvements where appropriate (ongoing). Partners: MAFF.
- 6.3. Seek to enter all upland heaths into ELMS with priority given to cSAC and SSSI (by 2005). Partners: MAFF; EN.
- 6.4. Implement Habitats Directive to ensure favourable conservation status of upland heathland by;
  - a) agency review of consents,
  - b) EN seeking change to consents where conservation status is unfavourable,
  - c) establishing monitoring systems (all by 2002). Partners: EN; ENPA.
- 6.5. Begin restoration of sub-optimal upland heath to favourable condition by;
  - a) removal of scrub and rhododendron,
  - b) implementation of appropriate grazing and burning plans (all by 2010). Partners: MAFF; EN; ENPA; NT; BLC.
- 6.6. Begin recreation of upland heathland by experimental reversion of agriculturally improved land on former heathland sites (100 ha by 2010). Partners: MAFF; ENPA; EN.
- 6.7. Promote non-damaging use of veterinary chemicals on all SSSI/CWS upland heathland (by 2010). Partners: MAFF; EN; ENPA.

#### Future research and survey

- 6.8. Produce an inventory of all upland heathland using GIS-database, including an assessment of current condition (by 2001). Partners: ENPA; EN; SERC; DWT/DBRC.
- 6.9. Continue ESA grazing monitoring until results unequivocally show that stocking levels are maintaining all areas of upland heath in favourable condition (ongoing). Partners: EN; ENPA.
- 6.10. Use EN Grazing Index and other heathland condition survey techniques to monitor condition of ten areas of upland heathland (by 2005 and then every 5 years). Partners: ENPA; EN; Universities.
- 6.11. Implement remaining actions in ENPA Moorland Research Strategy (by 2001). Partners: ENPA; EN; Universities.



## 1.

### Introduction:

Lowland heath is defined as vegetation in which dwarf-shrubs such as heather, bell heather and western gorse are a prominent component. Generally lowland heath communities occur below the 300 metre contour, though in practice, there is considerable overlap with communities considered more typical of upland situations. The presence of lowland heath vegetation communities (eg. NVC types H4 and H8) and species such as dartford warbler, nightjar and heath fritillary is the most reliable indicator.

*Links with other plans in this BAP:*

Upland heathland and bracken and scrub. On Exmoor, lowland and upland heaths frequently occur adjacent to each other and it is often very difficult to distinguish the communities in the transitional zone at their margins. These transitions most common on the heathlands of Exmoor and Dartmoor and have resulted in the designation of the Exmoor heaths as a pSAC. Areas of bracken, european gorse and hawthorn scrub also form an important element of the moorland vegetation mosaic.

Heath fritillary and nightjar. Both exclusively associated with the fringes of lowland heathland sites on Exmoor.

Sea cliffs are a key habitat associated with lowland heath along the coast.

Other Key species associated with lowland heathland are dartford warbler, stonechat, whinchat and skylark.

## 2.

### Current status:

There are thought to be about 1,500 hectares of lowland heath within the Exmoor National Park. Most of the resource lies along the coastal fringe, though additional areas occur around the lower fringes of the inland moors. About one third of the lowland heath resource has been lost to agricultural improvement and forestry this century.

*Key sites:*

North Hill and Selworthy Beacon.  
 Alcombe and Hopcott Commons.  
 Dunkery fringes and Ley Hill.  
 Holdstone and Trentishoe Downs.  
 Haddon Hill.

**3.**

**Current factors affecting the habitat:**

- 3.1 Cessation of management leading to scrub encroachment.
- 3.2 Frequent, uncontrolled fires resulting in under-representation of mature stands of dwarf-shrubs.
- 3.3 Rhododendron invasion of lowland heathland.
- 3.4 Past agricultural reclamation for agriculture and forestry, has resulted in loss and fragmentation of lowland heath.
- 3.5 The use of persistent veterinary chemicals can greatly reduce the diversity and biomass of the important dung invertebrate community.

**4.**

**Current action:**

- 4.1 Protection within the Exmoor Coastal Heaths, North Exmoor, South Exmoor and West Exmoor Coast and Woods SSSI and inclusion within the Exmoor Heaths cSAC.
- 4.2 Ownership by NT, Crown Estate and ENPA of over 90% of the total lowland heath resource.
- 4.3 Approximately 50% of the lowland heath resource is in management agreements under MAFF's Exmoor ESA scheme.
- 4.2 Alcombe Common, Hopcott Common and Rodhuish Common are in MAFF's Countryside Stewardship scheme.
- 4.3 ENPA management agreement on lowland heath at Glenthorne. EN management agreements at Desolate, Porlock Common and North Hill.
- 4.4 Detailed vegetation survey data is available for approximately 80% of lowland heaths.
- 4.5 ENPA have produced a Moorland Research Strategy.
- 4.6 MAFF commissioned RSPB to carry out bird surveys that covered the majority of the lowland heath area in 1992-93. MAFF repeated the sample in 1997.
- 4.7 Invertebrate surveys were undertaken on North Hill and Bossington in 1996 and on Haddon Hill in 1998.

**5.**

**Objectives and targets:**

- 5.1 Maintain all existing high quality lowland heath in favourable condition. TARGET: Ongoing.
- 5.2 Initiate restoration of sub-optimal lowland heath to favourable condition. TARGET: All by 2010.

- 5.3 Re-create lowland heath on sites where it formerly occurred, with particular emphasis on the linking of existing fragments. TARGET: 200 hectares by 2010.
- 5.4 Increase public awareness and appreciation of lowland heathland. TARGET: Ongoing.
- 5.5 Maintain and enhance populations of key species of conservation concern. TARGET: Ongoing.

**6.**

**LOWLAND HEATHLAND ACTION PLAN:**

**Policy and legislation**

- 6.1 Seek to agree a policy for removal of trees from lowland heathland sites with relevant organisations (by 2001). Partners: EN; FC; FE; RSPB; CE.

**Site safeguard and management**

- 6.2 Seek to enter all lowland heath into ELMS with priority given to cSAC and SSSI (by 2002). Partners: MAFF; EN; ENPA.
- 6.3 Consider notification of further areas of lowland heathland where these meet SSSI criteria (by 2005). Partners: EN.
- 6.4 Ensure all non-SSSI standard lowland heath is designated as CWS where it meets selection criteria (by 2001). Partners: SERC; DWT/DBRC.
- 6.5 Implement Habitats Directive to ensure favourable conservation status by;
  - a) agency review of consents,
  - b) EN seeking change to consents where conservation status is unfavourable,
  - c) establishing monitoring systems (all by 2002). Partners: EN; ENPA.
- 6.6 Ensure compliance with environmental conditions attached to livestock subsidies (ongoing). Partners: MAFF; EN; ENPA.
- 6.7 Begin restoration of sub-optimal lowland heath to favourable condition by;
  - a) removal of scrub and rhododendron,
  - b) re-introduction or reduction of grazing and burning (areas with cSAC designation and /or BAP species by 2005, all by 2010). Partners: MAFF; ENPA; EN CE.
- 6.8 Re-create lowland heathland by removal of coniferous woodland from former heathland sites. Partners: FC; FE; ENPA; EN; RSPB; CE.
- 6.9 Begin recreation of lowland heathland by experimental reversion of agriculturally improved land on former heathland sites (50 ha by 2010). Partners: ENPA; MAFF; EN; NT.

- 6.10 Promote use of non-persistent veterinary chemicals on all SSSI/CWS lowland heathland (by 2010). Partners: ENPA; SWT; DWT; FRCA

### Future research and survey

- 6.11 Produce an inventory of all lowland heathland using GIS-database, including an assessment of current condition (by 2002).  
Partners: ENPA; SERC; DWT/DBRC.
- 6.12 Monitor and review impact of ESA in maintaining and improving lowland heathland and make improvements where appropriate (ongoing).  
Partners: EN; ENPA.
- 6.13 Continue ESA grazing monitoring until results unequivocally show that stocking levels are maintaining all areas of lowland heath in favourable condition (ongoing). Partners: EN; ENPA.
- 6.14 Implement monitoring to assess compliance with, and impact of, burning programmes on ESA agreement areas (by 2001 then annually).  
Partners: ENPA; EN.
- 6.15 Use EN Grazing Index and other heathland condition survey techniques to monitor condition of selected areas of lowland heathland (5 areas by 2005 and then every 5 years). Partners: EN; ENPA.
- 6.16 Implement remaining actions in ENPA Moorland Research Strategy (by 2002).  
Partners: ENPA; EN; Universities.

### I. Introduction:

This is a difficult habitat to define, but generally comprises vegetation in which bracken, european gorse, hawthorn, blackthorn and hazel are the dominant species. Such habitats are transitional in nature, and without management intervention, will in time change to broadleaved woodland. Bracken and scrub occur both within the enclosed farmed landscape and on the open moor, in the latter habitat being a characteristic feature of sheltered combs.

In the past, bracken and scrub habitats have been considered of low wildlife value, but recent studies indicate that this is not always the case, and on Exmoor, a number of our rarest and most important species are restricted to such habitats. It is important to make a distinction between important bracken and scrub sites, and other areas where they are colonising wildlife habitats such as heathland and unimproved grassland and where control is required.

*Links with other Plans in this BAP:*

Neutral grasslands. Frequently bracken and scrub occur in habitat mosaics on enclosed farmland with neutral grassland communities.

Upland heathland and lowland heathland. On unenclosed heathland, areas of bracken, european gorse and hawthorn scrub form an important element of the moorland vegetation mosaic.

Dormouse, heath fritillary and high brown fritillary. These three species are dependent on the warm, sheltered “edge” habitats provided by bracken and scrub.

Nightjar. Occurs where bracken and scrub forms a mosaic with lowland heath.

Other key species associated with bracken and scrub are; dartford warbler, stonechat, whinchat, greater broomrape and pearl-bordered fritillary butterfly.

### 2. Current status on Exmoor:

There is very poor information on the extent of this habitat on Exmoor. This reflects the low value that has been placed on bracken and scrub in the past by those involved in wildlife conservation.

*Key sites:*

Lyncombe and Nethercott.  
Dunkery fringes.  
Heddon Valley.  
Mounsey.  
Gorse slopes near Luckwell Bridge and Wheddon Cross.  
Ashton Cleave.  
Ashway Side / Whiterocks Down.

### 3.

#### Current factors affecting the habitat:

- 3.1 Cessation of grazing and bracken cutting resulting in succession to woodland.
- 3.2 Burning of gorse and bracken to promote better grazing.
- 3.3 Burning and eradication of bracken which aims to control tick numbers.
- 3.4 Cutting and grubbing out of wildlife-rich scrub to promote better grazing.
- 3.5 Tree planting schemes are very often targeted at bracken and scrub habitats.
- 3.6 Our poor understanding of the value of bracken and scrub habitats for wildlife prevents us from making informed management decisions.

### 4.

#### Current action:

- 4.1 The Exmoor ESA scheme has recognised the value of bracken slopes and encourages the retention and management of important examples.
- 4.2 Some important bracken and scrub sites are within SSSI.
- 4.3 The majority of bracken and scrub sites are identified as CWS.
- 4.4 A recent EN-ENPA-MAFF survey has investigated the importance of bracken habitats for invertebrates.
- 4.5 The National Trust and Somerset Wildlife Trust have re-instated bracken management on a number of important sites.

### 5.

#### Objectives and targets:

- 5.1 To maintain all important bracken and scrub sites in favourable condition.  
TARGET: By 2010.
- 5.2 To increase our knowledge of the importance of bracken and scrub for wildlife.  
TARGET: By 2005.
- 5.3 Maintain and enhance populations of key species of conservation concern.  
TARGET: Ongoing.
- 5.4 Increase public awareness and appreciation of bracken and scrub.  
TARGET: Ongoing.

### 6.

#### BRACKEN AND SCRUB ACTION PLAN:

##### Site safeguard and management

- 6.1 Seek to ensure all important bracken and scrub sites are in ELMS (by 2010).  
Partners: MAFF; ENPA; EN.
- 6.2 Review and monitor impact of ESA in maintaining and improving bracken and scrub and make improvements where appropriate (ongoing).  
Partners: MAFF; ENPA; EN.
- 6.3 Ensure all non-SSSI standard bracken and scrub sites are selected as CWS where they meet the criteria (by 2002). Partners: SERC; DWT/DBRC.
- 6.4 Review CWS criteria for bracken and scrub.  
Partners: EN; SERC/SWT; DWT/DBRC.
- 6.5 Resist planting of trees on all important bracken and scrub sites (ongoing).  
Partners: FC; ENPA; SWT; DWT; EN.
- 6.6 Promote uptake of ESA Unimproved Grassland Management Plan on sites with particularly high quality bracken or scrub habitats and/or important biodiversity species (5 sites by 2005, a further 10 sites by 2010).  
Partners: MAFF; ENPA; EN.

##### Future research and survey

- 6.7 Produce an inventory of all important bracken and scrub sites using GIS-database, including an assessment of current condition (by 2001).  
Partners: SERC; DWT/DBRC; ENPA.
- 6.8 Carry out detailed botanical surveys of selected bracken and scrub sites in order to identify areas of high wildlife value and to suggest appropriate management (by 2003). Partners: ENPA; SWT; DWT; EN; NT.
- 6.9 Survey the invertebrate fauna of gorse and scrub and identify important sites (publish report by 2001). Partners: EN; ENPA; SERC; DWT; NT; ES.
- 6.10 Implement monitoring to assess compliance with, and impact of, burning programmes on ESA agreement areas (by 2001 then annually). Partners: ENPA; EN

##### Advisory

- 6.11 Provide advice to all CWS owners of important bracken and scrub on the value of the habitat and its management (by 2002). Partners: SWT; DWT; ENPA;
- 6.12 Organise training event for ESA field staff and others on the wildlife value of bracken and scrub and appropriate management (by 2001).  
Partners: MAFF; EN; ENPA; NT; SERC.
- 6.13 Promote public awareness of bracken and scrub, by articles in the Exmoor Visitor and Exmoor Life and preparation of a leaflet on this habitat (by 2005).  
Partners: ENPA; EN.

## 1. Introduction:

Neutral grassland is characterised by a species-rich sward in which grasses such as common bent, crested dog's-tail and sweet vernal grass are mixed with flowers like black knapweed, bird's-foot trefoil, ribwort plantain and red and white clovers. In hay meadows and lightly grazed stands, this can be one of our most attractive vegetation types, but on Exmoor, where most stands of neutral grassland are heavily stocked, the floral diversity can be easily overlooked without close inspection.

Though substantially unimproved, light applications of farmyard manure and lime in the past may be important in permitting this community of neutral conditions to flourish on Exmoor's acid soils. Indeed, neutral grasslands on Exmoor are mostly referable to a neutral grassland type in which species of acid soils such as devil's-bit scabious, betony, tormentil, field wood-rush and heath grass are well represented (NVC type MG5c).

Where fertilisation has been more intense, a "semi-improved" neutral grassland may result, which is less botanically diverse, but still has considerable biodiversity interest and potential (NVC type MG6). Such grasslands are included within the remit of this Plan.

*Links to other Plans in this BAP:*

Bracken and scrub. Frequently lowland neutral grassland occurs in habitat mosaics on enclosed farmland with bracken and scrub communities.

Ballerina wax-cap. This species usually occurs on lowland neutral grassland sites.

Another key species associated with lowland neutral grassland is the hornet robber fly.

## 2. Current status:

The Exmoor Grassland Survey of 1990 has identified the National Park as containing a very significant resource of neutral grassland. In addition to pristine sites, there is a large resource of semi-improved neutral grassland, which, whilst being less diverse, still contains a reasonably "natural" mix of species and could become increasingly important given appropriate management. The latter is also included within the scope of this Action Plan. Though this survey has provided a useful starting point, it is now known that a number of sites were missed or incorrectly classified, and that sites have also since been destroyed. There is thus an urgent need for the inventory to be updated and refined.

*Key sites:*

Higher Bumsley and Skilly Cottage.  
Ranscombe.  
Pennycombe Water.  
Exe Valley above Winsford.  
Ashway.  
Northcombe.

## 3. Current factors affecting the habitat:

- 3.1 Tree planting schemes are very often targeted at neutral grassland habitats.
- 3.2 Neutral grasslands continue to be lost due to fertilising and ploughing.
- 3.3 Neutral grasslands are easily missed during surveys and consequently, important sites may be incorrectly identified and subject to inappropriate management.
- 3.4 Many neutral grasslands are overgrazed, resulting in an excessively short sward, or even poaching.
- 3.5 A few neutral grasslands are no longer grazed, resulting in a rank, grass-dominated sward which is of lower biodiversity interest.
- 3.6 The use of persistent veterinary chemicals can greatly reduce the diversity and biomass of the important dung invertebrate community.

## 4. Current action:

- 4.1 The majority of neutral grassland sites are entered into the Exmoor ESA scheme.
- 4.2 New prescriptions in the Exmoor ESA scheme promote positive management which aims to enhance the interest of neutral grasslands.
- 4.3 ENPA's FCS promotes sensitive management of a number of important neutral grasslands.
- 4.4 Some neutral grassland at Ashway is included within the Barle Valley SSSI and is subject to an EN top-up management agreement.
- 4.5 SWT funded a three-year survey, being undertaken by SERC, which assessed the importance of unimproved grasslands for fungi.
- 4.6 The majority of neutral grassland sites are identified as CWS, and SWT Wildlife Liaison Team are visiting owners / occupiers to give advice on management of the sites.

## 5. Action Plan objectives and proposed targets:

- 5.1 To maintain all high quality MG5 in favourable condition.  
TARGET: Ongoing.
- 5.2 To encourage the reversion of semi-improved MG6 grassland to MG5.  
TARGET: 200 ha by 2010.
- 5.3 To increase our knowledge of the importance of neutral grassland for wildlife.  
TARGET: By 2005.
- 5.4 Maintain and enhance populations of key species of conservation concern.  
TARGET: Ongoing.
- 5.5 Increase public awareness and appreciation of neutral grassland.  
TARGET: Ongoing.

6.

**NEUTRAL GRASSLAND ACTION PLAN:**

**Site safeguard and management**

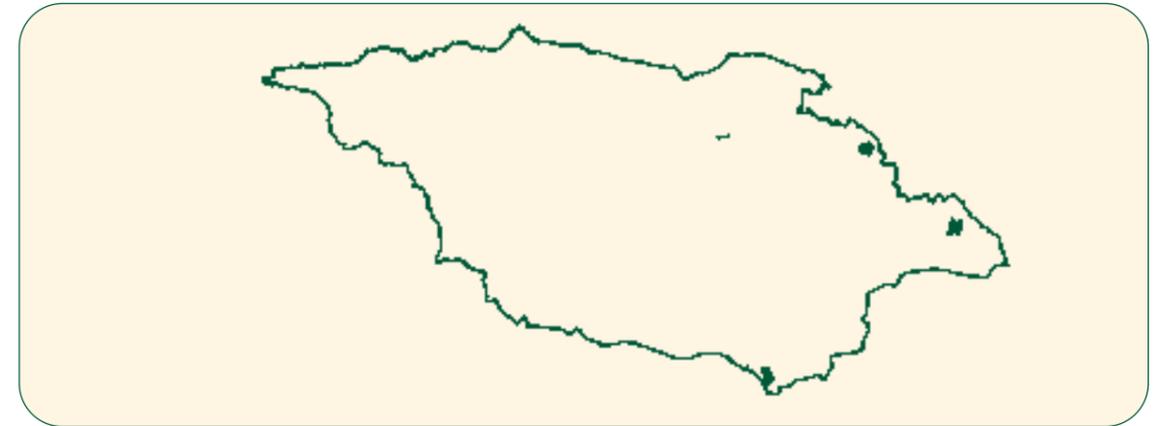
- 6.1 Enter all eligible CWS semi-improved neutral grassland into at least Tier 1 Part 2B of the ESA scheme (by 2010). Partners: MAFF; SWT; ENPA.
- 6.2 Enter 200 ha of CWS semi-improved grassland into Tier 1 Part 3 (by 2010). Partners: MAFF.
- 6.3 Promote uptake of ESA Unimproved Grassland Management Plan on sites with high quality neutral grassland and/or important biodiversity species (10 sites by 2005, a further 10 sites by 2010). Partners: MAFF.
- 6.4 Resist planting of trees on all unimproved neutral grassland (ongoing). Partners: FC; ENPA; SWT; EN.
- 6.5 Ensure all SSSI/CWS neutral grassland sites are in ELMS (by 2010). Partners: ENPA; SWT.
- 6.6 Promote non-damaging use of veterinary chemicals on all SSSI/CWS neutral grasslands (by 2010). Partners: ENPA; EN; SWT; DWT; MAFF.
- 6.7 Ensure all non-SSSI neutral grassland is designated as CWS where it meets selection criteria (by 2002). Partners: SERC; DWT/DBRC.

**Future research and survey**

- 6.8 Produce an inventory of all important neutral grassland sites using GIS-database, including an assessment of unimproved/semi-improved status (by 2003). Partners: ENPA; SERC; DWT/DBRC.
- 6.9 Survey the invertebrate fauna of neutral grassland and identify important sites (by 2003). Partners: ENPA; EN; ENHS; BC.
- 6.10 Make recommendations for management to be incorporated into ELMS based on the Grassland Fungi Project findings (by 2001). Partners: SWT; ENPA.
- 6.11 Monitor and review impact of ESA in maintaining and improving neutral grassland and make improvements where appropriate (ongoing). Partners: ENPA.

**Advisory**

- 6.12 Provide advice to all CWS owners of important neutral grassland on the importance of the habitat and its management (by 2002). Partners: SWT; DWT; ENPA.
- 6.13 Organise training event for ESA field staff on the wildlife value of unimproved grassland and appropriate management (by 2001). Partners: MAFF; ENPA; SWT; DWT; EN.



**1.**

**Introduction:**

Parklands and wood-pastures were primarily created as a result of the pursuit of multiple objectives of timber production and grazing of domestic stock or deer. In more formal parklands, a further objective was often the landowners desire to create an attractive landscape. The most important wildlife feature of these parklands and wood pastures has been the retention of a large number of overmature “veteran” trees. There are also a good number of such trees scattered through the wider countryside. Veteran trees are increasingly rare throughout Europe, and provide habitat for a wide range of special wildlife, from hole-nesters such as woodpeckers and bats to more obscure groups such as lichens, invertebrates and fungi. The latter two groups in particular contain a large number of species that are dependent on dead and dying wood and are now very rare in Europe. Veteran trees are generally defined as having a diameter breast height (DBH) of at least 1.3 metres, though trees under this girth with dead wood microhabitats such as rotten heart wood, rot holes, sap runs, bracket fungi and old forest lichens are also included. Generally, the most important tree species are oak, ash and beech, but others such as sweet chestnut, sycamore and lime can also be of very high wildlife value.

*Links with other plans in this BAP:*

Upland oak woodland. There is some overlap between the objectives and targets of these two habitat action plans.

Lungwort lichens. Parklands, wood pastures and veteran trees are a key habitat for these species.

Other key species associated with parkland, wood pasture and veteran trees are the stag beetle and sandy stilt puffball.

**2.**

**Current status:**

On Exmoor, we still have a number of very important parklands. Chief amongst these are Nettlecombe Park, Dunster Deer Park and Pixton Park. Additionally, areas of wood-pasture within upland oak woods such as those in Horner Woods and the Barle Valley contain large numbers of important veteran trees and are dealt with in this Plan. Currently, approximately 1000 veteran trees have been recorded from such sites. Veteran trees in the wider countryside have not been assessed, but they certainly constitute a significant part of the total resource in the National Park.

*Key sites:*

Nettlecombe Park.  
 Pixton Park.  
 Dunster Deer Park.  
 Cloutsham Ball.

**3. Current factors affecting the habitat:**

- 3.1 Removal of old trees and dead wood for firewood and for “tidiness” and removal of mature trees as a commercial crop before reaching overmaturity.
- 3.2 Intensive agriculture such as heavy stocking, fertiliser and pesticide use and ploughing, resulting in damage to veteran trees and their associated wildlife.
- 3.3 Planting up of veteran tree sites, resulting in overshadowing of the trees and their associated wildlife.
- 3.4 The absence of younger age-classes of trees to act as replacements for existing veterans.
- 3.5 Atmospheric pollution, which is known to have a deleterious effect on lichen and fungal communities of veteran trees.
- 3.6 Absence of nectar sources from veteran tree sites, which provide essential feeding stations for many dead wood invertebrates.
- 3.7 Public usage of some veteran tree sites, resulting in the removal of dead wood and veteran trees on safety grounds.
- 3.8 Invasion of veteran tree sites by rhododendron and laurel.

**4. Current action:**

- 4.1 Nettlecombe Park is a SSSI part of which is in a management agreement with EN and part is in Countryside Stewardship.
- 4.2 Horner Wood is a NNR which is owned by NT. Management to preserve existing pollards and to encourage replacements is ongoing.
- 4.3 Dunster Deer Park is partly in a management agreement with ENPA and the whole site is owned by the Crown Estate, who are sympathetic to the conservation of the veteran trees and have cleared conifers from around veteran trees to prevent overshadowing.
- 4.4 Wood pasture at Ashway Hat Wood is in the Barle Valley Woodlands SSSI, and is in a management agreement with EN.
- 4.5 Re-pollarding, and the creation of a new generation of pollards has been initiated at Hawkcombe (North Exmoor SSSI) by ENPA.

- 4.6 A veteran tree survey of all the main parkland and wood pasture sites in the National Park has recently been completed by SERC funded by SWT; EN and ENPA.
- 4.7 Detailed surveys of the dead wood invertebrate fauna of Dunster Deer Park, Horner Woods and Nettlecombe Park have been undertaken by EN and NT.
- 4.8 ENPA now offers grants for the protection and positive management of veteran trees.
- 4.9 The 1997 review of the Exmoor ESA scheme has resulted in the provision of payments for woodland which can be used to promote veteran tree and dead wood management.
- 4.10 ENPA has produced a Guide to conservation of trees and woodland on Exmoor, a Woodland Action Plan and a Woodland Research Strategy.
- 4.11 The Greater Exmoor Woodland Initiative is promoting the management of woodland for landscape, wildlife and the local economy.

**5. Objectives and targets:**

- 5.1 Complete inventory of the veteran tree resource.  
TARGET: By 2002.
- 5.2 Ensure protection of all important veteran tree sites.  
TARGET: By 2003.
- 5.3 Initiate positive management on important veteran tree sites.  
TARGET: By 2005.
- 5.4 Ensure protection of veteran trees in the wider countryside.  
TARGET: Half of trees identified by inventory by 2010.
- 5.5 Increase public awareness and appreciation of veteran trees.  
TARGET: Ongoing.
- 5.6 Maintain and enhance populations of key species of conservation concern.  
TARGET: Ongoing.

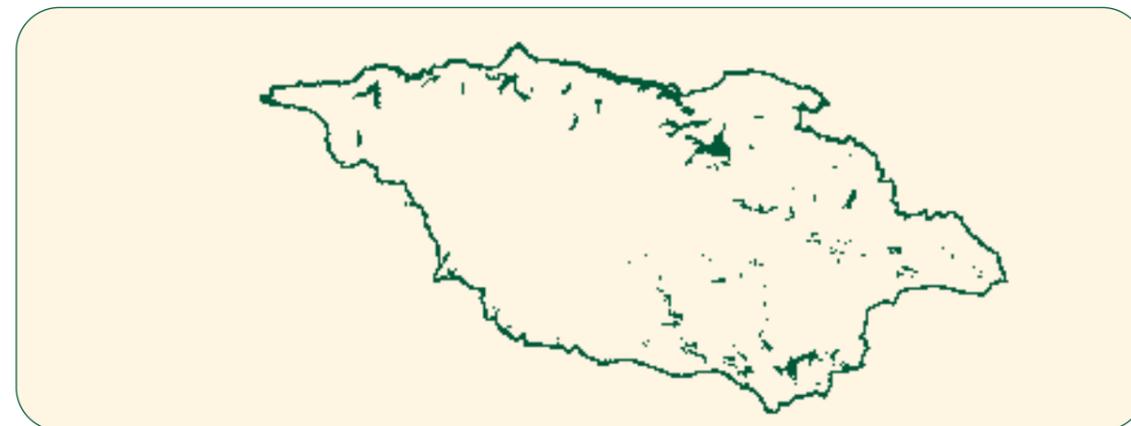
## 6.

**PARKLAND, WOOD PASTURE AND VETERAN TREE ACTION PLAN:****Site safeguard and monitoring**

- 6.1 Notify further veteran tree sites where these meet SSSI criteria (by 2005). Partners: EN.
- 6.2 Ensure all non-SSSI standard veteran tree sites are selected as CWS where they meet the criteria (by 2002). Partners: SERC; DWT/DBRC.
- 6.3 Encourage uptake of Exmoor ESA woodland payments or other ELMS to encourage positive management of veteran trees in the wider countryside (at least 50% by 2010). Partners: MAFF; EN; ENPA.
- 6.4 Ensure all veteran tree sites which meet SSSI or CWS criteria are in positive management (by 2005). Partners: EN; FC; SWT; DWT; NT; CE.
- 6.5 Increase future veteran tree resource on sites meeting SSSI/CWS criteria through retention and management strategy aimed at younger age-classes of trees (by 2010). Partners: EN; NT; ENPA.
- 6.6 Eradicate rhododendron and laurel from all SSSI/CWS veteran tree sites (by 2005). Partners: EN; ENPA; NT.
- 6.7 Explore the use of TPOs to protect veteran trees in the wider countryside if the voluntary approach to landowners failed (by 2005). Partners: ENPA.
- 6.8 Promote low-intensity agricultural management buffer zones (no ploughing, no fertiliser or pesticide drift, moderate stock numbers) around veteran trees in SSSI/CWS (all by 2010). Partners: MAFF; EN; ENPA.
- 6.9 Retain all standing/fallen dead wood associated with existing veteran trees in SSSI/CWS (ongoing). Partners: EN; ENPA; MAFF; NT; CE.

**Future research and survey**

- 6.10 Produce an inventory of all veteran tree sites and veteran trees in the wider countryside using GIS-database, including an assessment of current condition and management status (by 2003). Partners: ENPA; SERC; DWT/DBRC.
- 6.11 Complete surveys of invertebrates, fungi and lichens on all veteran tree sites meeting SSSI criteria (by 2003). Partners: EN; ENPA; MAFF.
- 6.12 Monitor SSSI/CWS veteran tree sites using fixed point photography and other techniques (all by 2005, then every 5 years). Partners: ENPA.
- 6.13 Implement remaining actions relevant to veteran tree sites in ENPA Woodland Action Plan (by 2003). Partners: ENPA.
- 6.14 Implement remaining actions relevant to veteran trees in ENPA Woodland Research Strategy (by 2002). Partners: ENPA; EN; Universities.



## I.

**Introduction**

The steep-sided combs and coastal slopes of Exmoor still support large expanses of ancient woodland. These are largely of the upland oak woodland type, which on Exmoor is easily defined by the predominance in the canopy of sessile oak. Other trees and shrubs are much scarcer, though downy birch is usually present, and holly, rowan and hazel tend to be present in the understorey. In NVC terms, this is defined as the W17 sessile oak – downy birch – *Dicranum majus* moss community. In addition, richer soils on flatter ground and in the valley bottoms and around spring lines support woodland in which pedunculate oak and ash may be locally dominant. Though much smaller in area, these communities form an important part of the upland oak wood complex and are particularly important for the communities of rare lichens they support.

Some of Exmoor's upland oakwoods contain areas of wood pasture with numerous ancient pollards. The management issues in such areas are rather different to those pertaining to the woodlands proper and they are dealt with under the "parklands, wood pastures and veteran trees" HAP.

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*Links to other plans in this BAP.*

Parkland, veteran trees and wood pasture. Areas of wood pasture or isolated veteran trees frequently occur within upland oak woodland and this plan should be referred to for actions specific to this habit.

Endemic whitebeams and lungwort lichens. Both of these groups are largely confined in their Exmoor distribution to upland oak woodland habitats.

Dormouse. Occurs in upland oakwood with an understorey of hazel.

Other key species associated with upland oak woodlands are; the lichen *Schismatomma graphidioides*, the red wood ant, the micromoth *Biselachsta trapeziella*, the scarce blackneck moth, the stag beetle, the micromoth *Schiffermuelleriana grandis* and the red deer.

## 2.

### Current status:

There are 2209 ha of upland oak woodland recorded on Exmoor. This is 30% less than occurred a century ago, with the major reason for loss being felling and subsequent replanting with conifers. Smaller areas of oak woodland have been grubbed out and converted to pasture land.

#### Key sites:

Horner  
Barle Valley  
Watersmeet  
Woody Bay  
Hawkcombe  
Culbone  
Haddeo

## 3.

### Current factors affecting the habitat:

- 3.1 Overgrazing by deer, and more locally sheep, resulting in an impoverished ground flora and no regeneration of trees.
- 3.2 Invasion by the non-native species rhododendron, beech, sycamore and cherry laurel.
- 3.3 Intensive pheasant rearing has a detrimental effect in some upland oak woods.
- 3.4 Neglect of coppiced oak woods, resulting in dense stands of even-aged old coppice which are sub-optimal for wildlife.
- 3.5 There is a chronic shortage of dead wood in many of Exmoor's upland oak woods.
- 3.6 Re-stocking of upland oak woods with trees of inappropriate provenance.
- 3.7 Over management of upland oak woods involving the removal of older trees and of those hosting important lichen communities.
- 3.8 There are very limited marketing opportunities for oak timber in Britain, which means most upland oak woods have not been managed for many years.
- 3.9 Agricultural subsidies are currently much more attractive to landowners than grants for new woodland planting. Existing planting schemes such as the New Native Woodland in National Parks Challenge fund are inadequate to meet BAP targets for creation of new areas of upland oak woodland.

## 4.

### Current action:

- 4.1 1460 ha of upland oak woodland are notified as SSSI.
- 4.2 1400 ha of upland oak woodland proposed as the major part of the Exmoor and Quantocks candidate SAC.
- 4.3 All non-SSSI upland oak woods of over 2 ha in size are identified as CWS.
- 4.4 Horner Wood is a NNR.
- 4.5 625 ha of upland oak woods are owned by NT 443 ha are owned or managed by ENPA, a further 68 ha are owned by the Crown Estate.
- 4.6 SWT have a lease on 59.23 ha of upland oak woodland and EN has management agreements on 2 areas of upland oak woodland at Ashway Hat Wood and Venford Wood.
- 4.7 Most of the most important blocks of upland oak woodland are entered into the WGS.
- 4.8 FC have produced a Forestry Practice Guide for the management of upland oak woods.
- 4.9 The Great Exmoor Woodland Initiative is promoting the management of woodland for landscape, wildlife and the local economy.
- 4.10 ENPA have produced a Guide to conservation of trees and woodland on Exmoor, a Woodland Action Plan and a Woodland Research Strategy.
- 4.11 The 1997 review of the Exmoor ESA scheme has resulted in the provision of payments for woodland which can be used to promote management of upland oak woods.
- 4.12 FC's New Native Woodland Challenge Fund encourages the establishment of new upland oak woodland in the National Park.

## 5.

### Objectives and targets

- 5.1 Improve the condition of sub-optimal upland oak woods by increasing the area under conservation management.  
TARGET: 50% of unmanaged woodland by 2010.
- 5.2 Increase the area of upland oak woodland avoiding other habitats of conservation interest.  
TARGET: 200 ha of new upland oak woodland on open ground by 2010.
- 5.3 Encourage the restoration of ancient woodland sites by the removal of conifers or rhododendron.  
TARGET: 200 ha of former upland oak woodland restored by 2010.
- 5.4 Increase public awareness and appreciation of upland oak woodland.  
TARGET: Ongoing.
- 5.5 Maintain and enhance populations of key species of conservation concern.  
TARGET: Ongoing.

## 6.

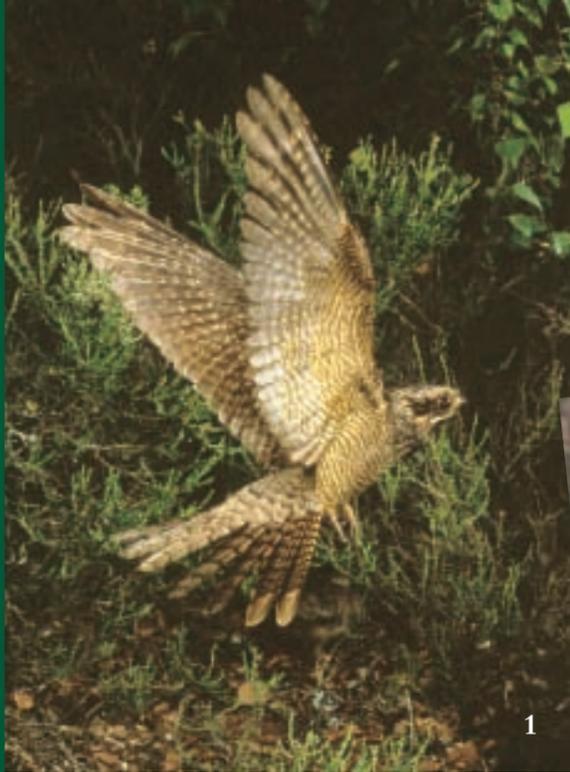
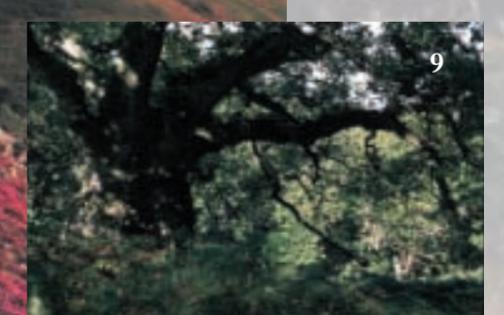
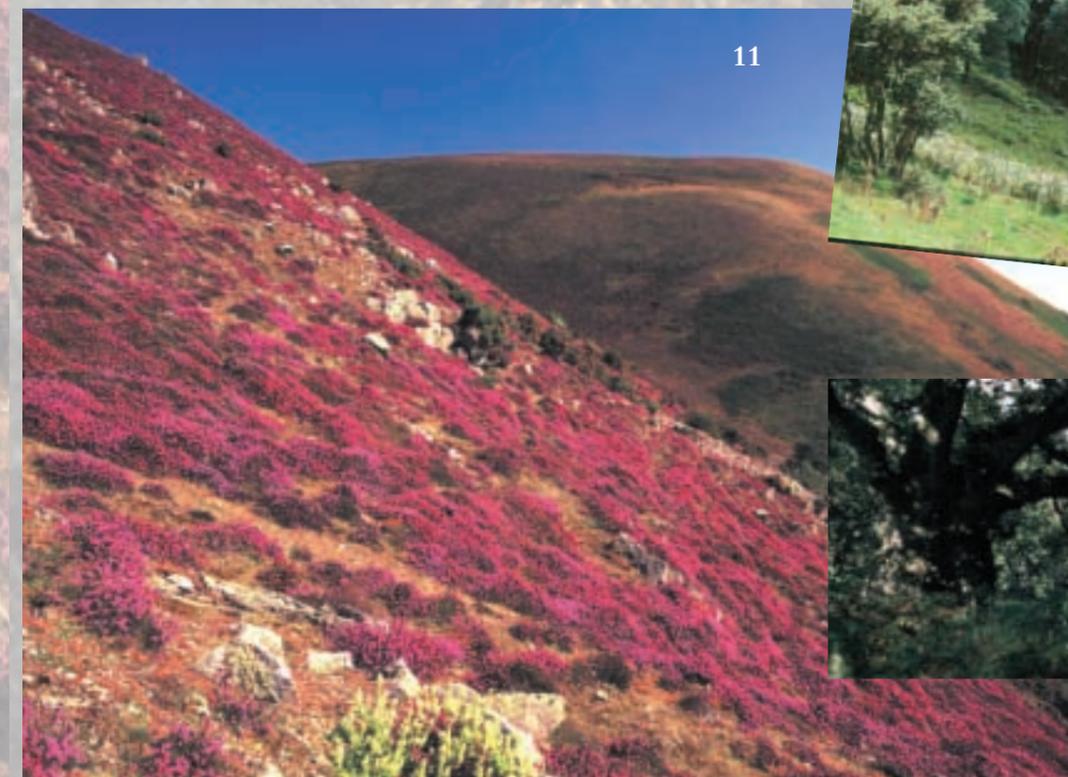
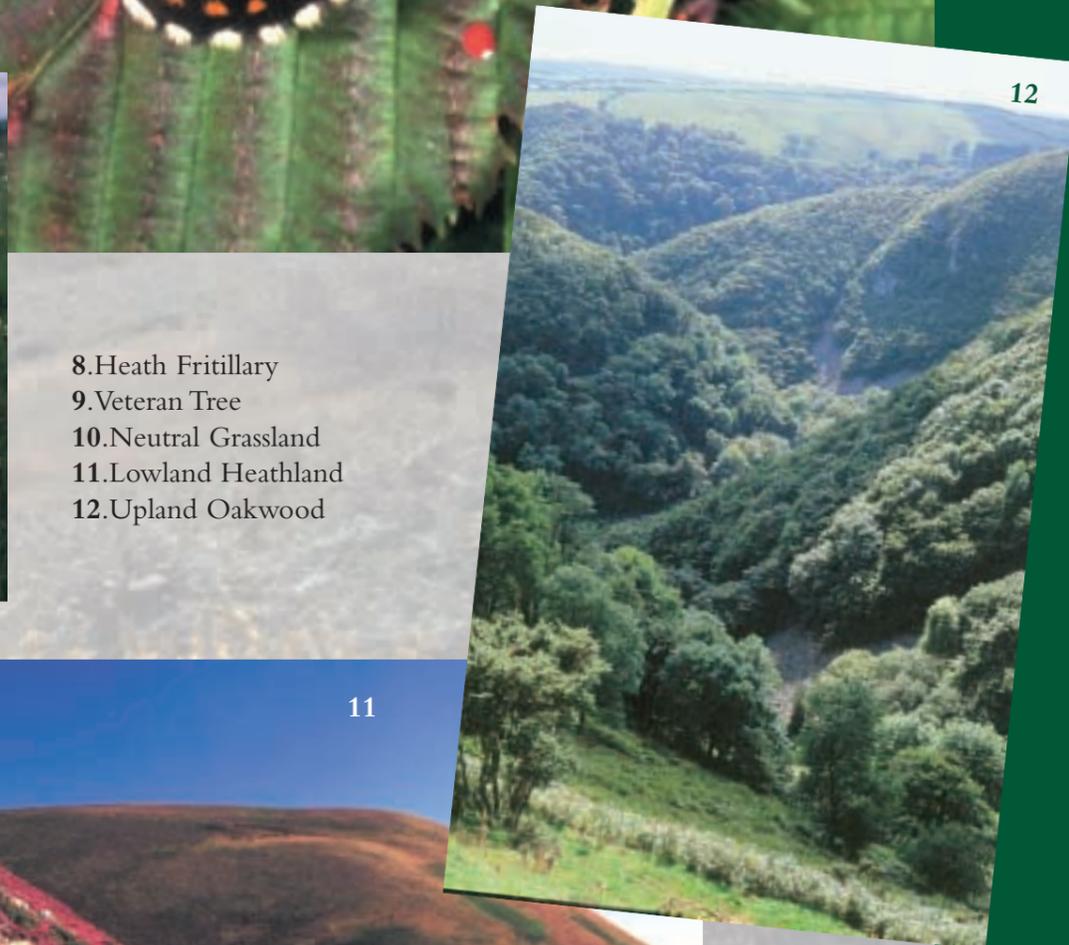
### UPLAND OAK WOODLAND ACTION PLAN:

#### Site safeguard and management

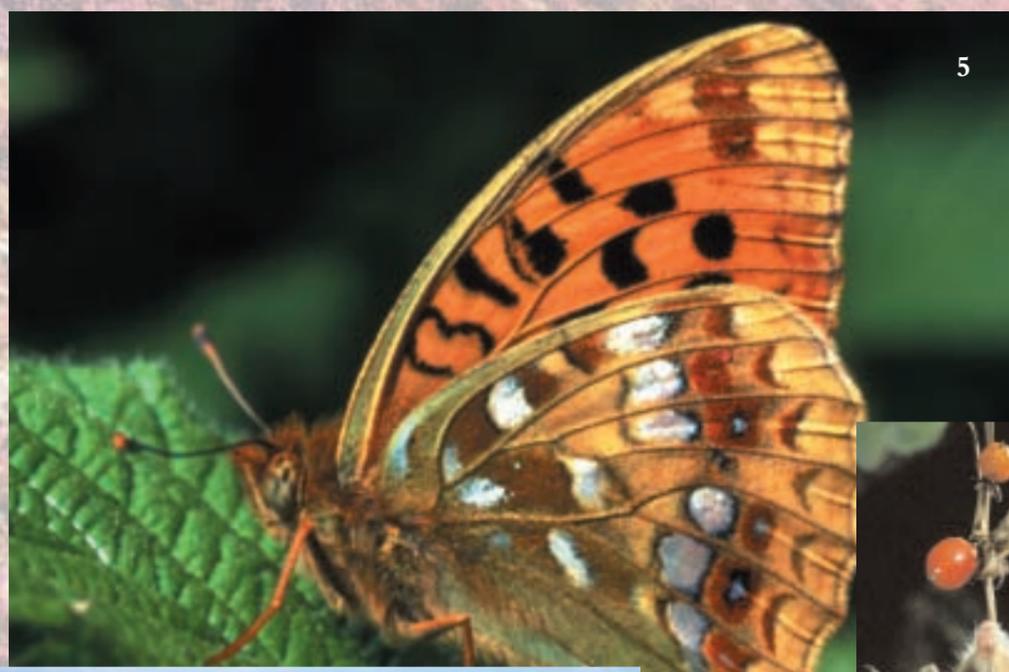
- 6.1 Encourage uptake of Exmoor ESA Woodland Tier to encourage positive management of small woodlands (at least 50 sites by 2010).  
Partners: MAFF; GREWI/ENPA.
- 6.2 Notify further upland oak woods where these meet SSSI criteria (by 2005).  
Partners: EN.
- 6.3 Ensure all non-SSSI upland oak woods are designated as CWS where they meet selection criteria, priority should be given to sites with important BAP species (by 2003). Partners: SERC; DWT/DBRC.
- 6.4 Encourage landowners to switch from Dedication into WGS (by 2005).  
Partners: FC; GREWI.
- 6.5 Ensure entry of 50% of remaining unmanaged upland oak woods into WGS (by 2010). Partners: FC; GREWI/ENPA.
- 6.6 Establish new areas of upland oak woodland, with priority given to new native woodlands planted adjacent to existing areas of ancient woodland (400 ha by 2010). Partners: FC; ENPA/GREWI.
- 6.7 Restore upland oak wood, by clearing plantations from ancient woodland sites (200 ha by 2010). Partners: FC; ENPA/GREWI; FE.
- 6.8 Identify bryophyte- or lichen-rich upland oak woodland stands and prioritise these for rhododendron and beech removal (all key bryophyte sites identified by 2002, positive management initiated by 2005).  
Partners: ENPA; EN; FC; SERC; DWT/DBRC; NT; ENHS; CE.
- 6.9 Eradicate rhododendron and laurel from all upland oak woodland SSSI (by 2010). Partners: EN; FC; ENPA/GREWI; NT.
- 6.10 Monitor beech encroachment into upland oak woodland SSSI and initiate control where percentage of beech in canopy exceeds 10% (all sites monitored by 2001, control initiated where necessary by 2005).  
Partners: ENPA/GREWI; EN; FC; SERC; NT.
- 6.11 Use Woodland Guide to identify potential new planting areas and establish consensus for new native woodland with MAFF (by 2000).  
Partners: MAFF; ENPA; FC.
- 6.12 Implement remaining actions relevant to upland oak woodland in ENPA Woodland Action Plan (by 2003). Partners: EN; FC; ENPA/GREWI.
- 6.13 Aim to retain all existing dead wood in SSSI/CWS upland oak woods and aim to leave at least 50 cubic metres in these sites during future management operations (ongoing). Partners: EN; FC; FE; ENPA/GREWI; SWT.
- 6.14 Create new markets for oak timber in order to stimulate management of upland oak woods (by 2005). Partners: FC; FE; GREWI.

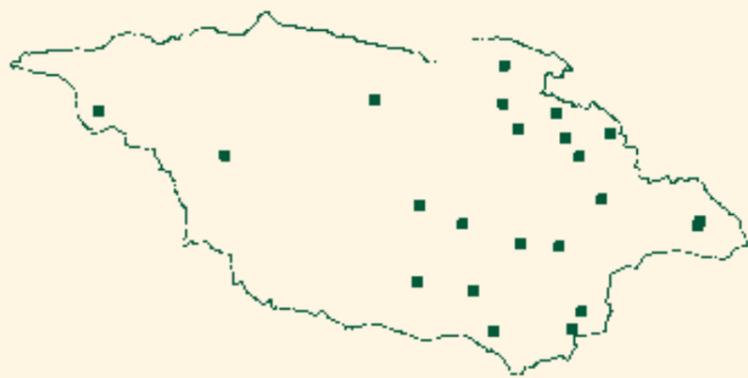
#### Future Research and Survey

- 6.15 Produce an inventory of all upland oak woods using GIS-database, including an assessment of current condition and management status (by 2002).  
Partners: ENPA; EN; FC; SERC; DWT/DBRC; NT.
- 6.16 Implement remaining actions relevant to upland oak woodland in ENPA Woodland Research Strategy (by 2002).  
Partners: ENPA/GREWI; FC; EN; SWT; DWT; Universities.



1.Nightjar 2.Blanket Bog 3.Ballerina Waxcap 4.Lungwort Lichen  
5.High Brown Fritillary 6.Dormouse 7.Upland Heathland





## 1. Introduction:

This fungus, with a pink cap and white stalk grows in grasslands. It is an easily recognised member of a large group of colourful species which are very well represented on Exmoor, and include a number of species that are of conservation importance.

Unimproved grasslands on Exmoor have been considered to have only moderate conservation importance, being relatively nutrient poor, and consequently having only a low diversity of flowering plants. However, a recent survey of grassland fungi in Somerset showed that Exmoor supports the highest diversity of species in the county, with three sites being rated as nationally important.

*Links with other plans in this BAP:*

Unimproved grassland. Most sites for this species on Exmoor are on unimproved acid or neutral grasslands.

## 2. Current status:

The ballerina wax-cap is listed in the provisional British Red Data Book as a Vulnerable species and is included on the national BAP priority species list. Plantlife are identified as the lead agency for implementation of the national BAP. Despite an unfavourable conservation status in Britain as a whole, it is currently known from a number of sites on Exmoor, where it invariably occurs in well grazed unimproved or semi-improved permanent grassland.

*Key sites:*

Dunster Deer Park.  
Pinkery Farm.  
Weather Station Field, Nettlecombe.

## 3. Current factors causing loss or decline:

- 3.1 Ploughing and excessive fertilisation of unimproved grasslands.
- 3.2 Cessation or reduction in grazing, resulting in scrub and bracken encroachment and a dense grassy sward unsuitable for the species.

## 4.

### Current action:

- 4.1 The majority of the sites for this species are entered into the Exmoor ESA scheme.
- 4.2 One site is within the South Exmoor SSSI and another within the Dunster Deer Park and Heathlands SSSI.
- 4.3 A major survey of grassland fungi is being undertaken by SWT/SERC in Somerset with funding from English Nature and the Ernest Cook Trust. This has identified a number of new sites for the ballerina wax-cap on Exmoor.
- 4.4 The Weather Station Field, which has a nationally important assemblage of waxcap species, has been fenced in order to re-instate grazing with grant aid from English Nature and ENPA and has had bracken eradicated, with the specific aim of protecting its nationally important assemblage of grassland fungi.

## 5.

### Action Plan objectives and targets:

- 5.1 To establish the distribution of the ballerina wax-cap on Exmoor.  
TARGET: By 2002.
- 5.2 To understand the ecology of the species in order to ensure favourable management.  
TARGET: 2005
- 5.3 To maintain all existing colonies of the ballerina wax-cap.  
TARGET: Ongoing.
- 5.4 To use the ballerina wax-cap as a “flagship” species to highlight the conservation of the many other important grassland fungi that occur on Exmoor.  
TARGET: Ongoing.
- 5.5 To use the ESA and other ELMS to encourage the spread of the species.  
TARGET: At least 10 new sites in suitable management by 2010.

## 6.

**BALLERINA WAX-CAP ACTION PLAN:****Site Safeguard and Management**

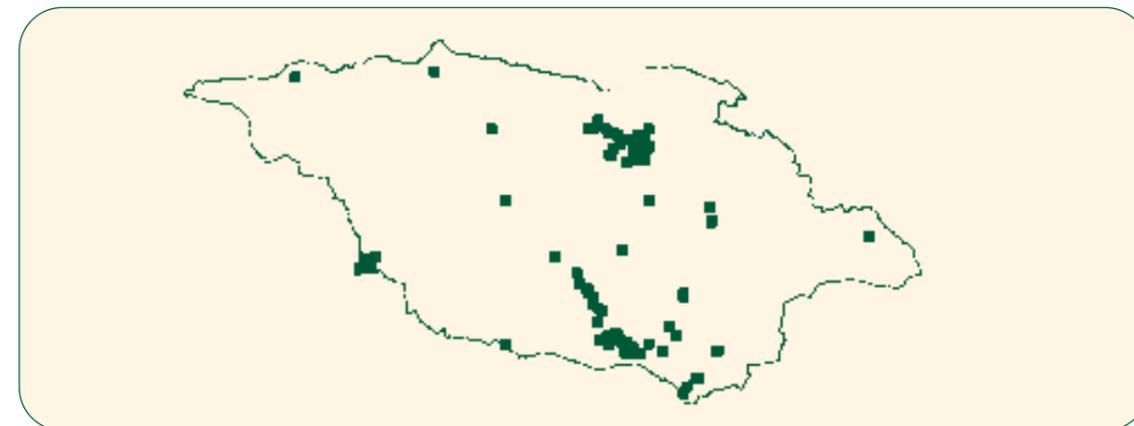
- 6.1 To encourage entry of existing sites for the species into the ESA or other ELMS and where possible incorporate its requirements into management prescriptions (all by 2005). Partners: MAFF / FRCA; SWT; EN; ENPA.
- 6.2 To ensure ballerina wax-cap sites in ESA agreements are in the appropriate Tier (all by 2002). Partners: MAFF; SWT; ENPA.
- 6.3 To encourage the uptake of ESA Unimproved Grassland Management Plan and/or ESA Conservation Plan BAP payments for positive and specific management for the ballerina wax-cap (5 sites in ESA agreements by 2005, remainder by 2010). Partners: MAFF; SWT; ENPA.
- 6.4 To encourage the spread of the ballerina wax-cap by ceasing fertiliser application of semi-improved grassland sites adjacent or near to existing colonies of the species (10 sites by 2005, monitor and report by 2010). Partners: ENPA.

**Future research and monitoring**

- 6.5 To continue the grassland fungi survey of Exmoor by completing survey work in Somerset and by undertaking a similar survey of Devon grasslands (by 2003). Partners: DWT/DBRC; SERC/SWT; EN; ENPA; ENHS
- 6.6 Establish a GIS-database of the distribution of the ballerina wax-cap on Exmoor (by 2001, then updated annually). Partners: ENPA; DWT/DBRC; SERC.
- 6.7 Ensure that all grassland sites supporting important wax-cap assemblages are designated as CWS where they meet selection criteria (by 2005). Partners: SERC; DWT /DBRC.
- 6.8 To encourage further research nationally which aims to improve our understanding of the conservation ecology of this and other grassland fungi species (by 2005). Partners: EN; CCW; SNH; Universities.
- 6.9 Investigate grassland fungus communities on all suitable areas in management agreements with ENPA which have not yet been surveyed (by 2005). Partners: ENPA; SERC; DWT/DBRC; ENHS.

**Communications and publicity**

- 6.10 Publicise the importance of conserving this and other grassland fungi to landowners and ESA staff (ongoing). Partners: EN; ENPA; MAFF; SWT; DWT.
- 6.11 Pass records of this species, including ecological information, to a national database (by 2002). Partners: ENPA; EN; SERC; DWT/DBRC.



## 1.

**Introduction:**

Four species of lungwort lichen occur on Exmoor, *Lobaria pulmonaria*, *L. scrobiculata*, *L. amplissima* and *L. laetevirens*. They are some of our largest and most easily recognised lichen species, with their green or grey lobed growths being obvious to even the non specialist. They grow on the bark of native trees and are some of the most sensitive lichens to air pollution.

*Links to other plans in this BAP:*

Upland oak woodland and parkland, wood pasture and veteran trees. These are the key habitats for lungwort species on Exmoor.

## 2.

**Current status:**

Before the advent of heavy industry and the motor car, lungwort lichens were a familiar sight throughout the British Isles. Subsequently they have almost vanished from much of this area due to increased levels of air pollution and are now largely restricted to western Britain where air quality is still relatively high. On Exmoor, they are exclusively epiphytic in habit (growing on the trunk and branches of native trees, particularly ash, oak, hazel and sallow) and occur in sheltered, moist river valleys. *L. pulmonaria* is still relatively widespread, being known from most of Exmoor's main valley systems, but the remaining three species are now extremely scarce. With all species there appears to be limited colonisation of new trees and a better understanding of dispersal mechanisms is a key to their long-term conservation. Due to the slow rate of colonisation, lungwort lichens generally grow on mature trees. This is particularly true of oak, which also has very acidic tannin-rich bark when young, and thus only becomes suitable for colonisation by lungworts when it is relatively mature and the bark pH is higher.

*Key sites:*

Horner/Hawkcombe.  
Barle Valley.  
Bray Valley.  
Haddeo Valley.  
Nettlecombe Park.  
Pixton Park.

**3. Current factors causing loss or decline:**

- 3.1 Removal of trees supporting colonies of lungwort lichens.
- 3.2 Lack of management in many woodlands is resulting in excessive shading of lichen trees and may inhibit colonisation of new trees.
- 3.3 Shading of the trunks of lichen trees by conifers, rhododendron and beech.
- 3.4 Periodic unfavourably high levels of air pollution.
- 3.5 Pollution of lungwort trees through drift of agricultural fertilisers, pesticides and entrophication and direct damage to lichens by stock rubbing.
- 3.6 The scarcity of mature trees in many woodlands and parklands and the lack of replacements for existing veterans.

**4. Current action:**

- 4.1 The valley woodlands of the Barle and Horner/Hawkcombe and Nettlecombe Park are notified as SSSI. Homer/Hawkcombe and Barle Valley woods have been recommended as a candidate SAC by English Nature.
- 4.2 Horner Wood is a National Nature Reserve.
- 4.3 Important lichen trees have been surveyed and/or tagged on a number of sites to ensure their retention during woodland management operations.
- 4.4 Positive management to favour lungworts and other epiphytic lichens has taken place in a few woodlands.
- 4.5 Detailed surveys of epiphytic lichens have been undertaken throughout Somerset and Devon, in 1987-88 and 1992 respectively.

**5. Objectives and targets:**

- 5.1 Maintain and enhance all main populations of lungwort species through favourable management.  
TARGET: Ongoing.
- 5.2 Increase populations of all lungwort species through favourable management in areas currently supporting small populations.  
TARGET: In five small populations by 2010.
- 5.3 Increase understanding of the ecology of the species, with particular reference to dispersal mechanisms.  
TARGET: By 2003.
- 5.4 Use lungworts as “flagship” species to promote the conservation of the many other important epiphytic lichens present on Exmoor. TARGET: Ongoing.

**6. LUNGWORT LICHENS ACTION PLAN:****Policy and legislation**

- 6.1 Lobby for improvements in air quality that will benefit these species (ongoing). Partners: EN; EA; ENPA; CPRE; FOE.

**Site safeguard and management**

- 6.2 Incorporate the needs of lungwort lichens in all WGS applications affecting main populations of these species (ongoing). Partners: FC; EN; ENPA; NT.
- 6.3 Initiate positive river corridor management for lungwort lichens through WGS and Leader Initiative in all main, and in at least five small populations (by 2005). Partners: FC; EN; ENPA; NT.
- 6.4 Consider reintroduction of *L. amplissima*, *L. laetevirens* and *L. scrobiculata* within existing distributions if natural recolonisation is not occurring (three sites by 2010). Partners: ENPA; EN; NT.
- 6.5 Tag important lichen trees for retention under WGS and ESA woodland payments (by 2005). Partners: ENPA; EN; MAFF; FC; NT.
- 6.6 Consider notification of further lichen rich woodlands and parklands where these meet SSSI criteria (by 2005). Partners: EN.
- 6.7 Ensure all important lungwort sites are notified as CWS where they meet selection criteria (by 2002). Partners: SERC; DWT/DBRC.
- 6.8 Liaise with landowners and ESA staff to ensure important lichen trees are protected from spray drift and rubbing by stock (by 2002). Partners: ENPA; EN; MAFF; FC.
- 6.9 Eradicate rhododendron from areas within main lungwort populations (by 2010). Partners: FC; EN; ENPA.
- 6.10 Encourage retention of some “replacement” native trees in areas with lungwort populations through ESA scheme (ongoing). Partners: MAFF; EN; ENPA.
- 6.11 Encourage the establishment of new areas of wet woodland in suitable river valley habitats (20 ha by 2010). Partners: FC; ENPA; EN.

**Future research and survey**

- 6.12 Monitor lungworts in all main populations and in selected small populations to assess the success of the actions contained in this plan (by 2000 and then every ten years). Partners: ENPA; EN; NT.
- 6.13 Undertake further research into the recolonisation of trees by lungwort lichens (by 2003). Partners: ENPA; NT; EN; Universities.
- 6.14 Establish a GIS-database of lungwort distribution on Exmoor (by 2003 and updated annually thereafter). Partners: ENPA; SERC; DWT/DBRC.



## 1. Introduction

The genus *Sorbus* includes a number of closely related whitebeam species which can be recognised by subtle differences in the size of petals, form of the leaves and the colour, size and shape of the fruits. Many of these “microspecies” are endemic to small areas of Britain. That is to say, they are unknown anywhere else in the world. Exmoor is rich in whitebeams, with *Sorbus subcuneata*, *S. vexans* and the cryptically named *S. “taxon D”* being confined to the Exmoor area. Also currently awaiting naming by taxonomists is the “no parking tree”, which is represented by just one specimen, which may represent another new species. Four other somewhat more widespread species, *S. anglica*, *S. devoniensis*, *S. porrigentiformis* and *S. rupicola* also occur in the Exmoor area. The exceptionally localised world distribution of these trees makes their conservation on Exmoor of the utmost importance.

*Links to other Plans in this BAP:*

Upland oak woodland. The majority of endemic whitebeam populations occur in this habitat on Exmoor.

## 2. Current status:

*S. anglica*, *S. subcuneata* and *S. vexans* are all classified as Rare species in the British Red Data Book. *S. devoniensis*, *S. porrigentiformis* and *S. rupicola* are somewhat commoner but are still classified as nationally scarce. These whitebeams are generally confined to steep rocky coastal slopes, frequently in association with coastal sessile oak woodland. *S. devoniensis* is the exception, being an inland species, which is found on wood edges and in hedgerbanks. The coastal woodlands of Exmoor are an outstanding natural feature of the area, stretching from near Porlock in Somerset to the Heddon Valley in Devon. Their scale and species composition makes them unique in a British context. Endemic whitebeams are scattered all the way along the Exmoor coast from North Hill in the east to Wild Pear Beach in the west, but it is the woodland areas that hold the greatest concentrations.

*Key sites:*

Watersmeet.  
Culbone.  
Woody Bay.  
Heddon Valley.

## 3.

### Current factors causing loss or decline:

- 3.1 Lack of woodland management resulting in shading of existing trees and absence of germination sites for seedlings.
- 3.2 Encroachment of rhododendron resulting in dense shading and changes in soil chemistry.
- 3.3 Past management may have resulted in the removal of uneconomic whitebeam species. .

## 4.

### Current action:

- 4.1 Most of the Exmoor coast is notified within the Exmoor Coastal Heaths and West Exmoor Coast and Woods SSSI. Watersmeet is also a SSSI.
- 4.2 Approximately half of the 34 miles of the Exmoor coast is owned by NT, including important whitebeam sites at Watersmeet and Woody Bay. A further five miles of the coast, including important whitebeam populations at Culbone Woods and North Hill, are owned by the ENPA, who also have a management agreement over the Glenthorne woodlands.
- 4.3 Detailed surveys have been carried out on the distribution of whitebeams on the NT's Watersmeet and Woody Bay properties. Preliminary surveys have been carried out by the ENPA mapping the distribution of rare whitebeams in Culbone Woods.
- 4.4 ENHS have set up a collection of all native *Sorbus* species at Luckbarrow, West Luccombe.

## 5.

### Action Plan Objectives and targets:

- 5.1 To maintain the existing populations of endemic whitebeams on Exmoor.  
TARGET: Ongoing.
- 5.2 To undertake a detailed survey of the Exmoor whitebeam populations in order to assess the resource.  
TARGET: By 2001.
- 5.3 To increase the populations of all species at existing sites.  
TARGET: 20% increase by 2010.

## 6.

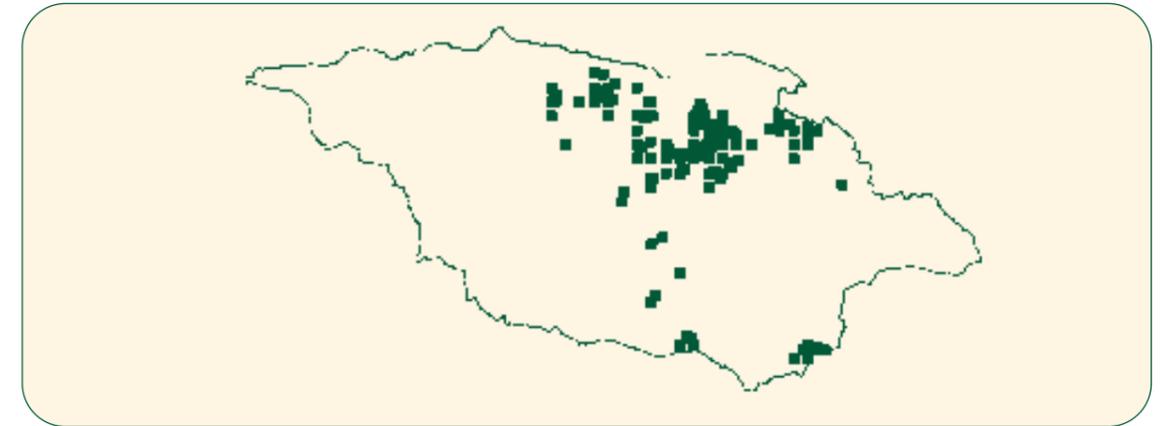
## ENDEMIC WHITEBEAMS ACTION PLAN:

## Site safeguard and management

- 6.1 Collect fruits of all endemic whitebeam species (it is particularly important to obtain adequate material of *S. subcuneata*, *S. vexans* and *S.* “taxon D”), for inclusion in the national Millenium Seed Bank (by 2001). Partners: EN; ENPA; NT.
- 6.2 Establish a nursery population of endemic whitebeams locally, for re-introduction in appropriate localities (by 2002). Partners: ENPA.
- 6.3 Ensure all non-SSSI upland oak woods with populations of endemic whitebeams are selected as CWS where they meet the criteria (by 2003). Partners: SERC; DWT/DBRC.
- 6.4 Prioritise rhododendron and laurel eradication to areas with important populations of endemic whitebeams (by 2004). Partners: ENPA; NT; EN; FC.
- 6.5 Carefully thin shading trees in areas with endemic whitebeams to maintain existing trees and encourage regeneration while avoiding windblow. (by 2004). Partners: ENPA; NT; FC; ENHS.
- 6.6 Enter all important whitebeam populations in larger woodlands into FC’s WGS (all sites by 2002), incorporating appropriate management to maintain and enhance their populations. Partners: ENPA; NT; FC; ENHS.
- 6.7 Control deer and stock grazing in all sites with important populations of endemic whitebeams to ensure regeneration (ongoing). Partners: ENPA; E&DDMS.
- 6.8 Consider use of TPO’s to protect endemic whitebeams outside of statutory sites (by 2002). Partners: ENPA
- 6.9 Use ESA prescriptions to ensure sympathetic cutting regimes for hedgerow sites with *S. devoniensis* (by 2003). Partners: MAFF; ENHS; ENPA.
- 6.10 Use Woodland Tier in ESA to encourage positive management of all endemic whitebeam populations in small farm woodlands (at least 5 sites by 2005, a further 5 by 2010). Partners: MAFF; ENHS; SWT; ENPA.

## Future research and survey

- 6.11 Clarify the taxonomy of *Sorbus* “taxon D” and the “no parking tree”(by 2005). Partners: EN; SWT; ENPA.
- 6.12 Prepare a GIS database showing the location of all endemic whitebeam populations (by 2001, annually updated). Partners: ENPA; ENHS; SERC; DWT/DBRC.



## 1.

## Introduction:

The heath fritillary is one of Britain’s most threatened butterflies, and the Exmoor populations represent the stronghold for the butterfly in Britain. Elsewhere it occurs in the chestnut coppices of Blean Woods in Kent, in a handful of meadows in south Devon and east Cornwall and it has also been reintroduced to coppiced woodlands in Essex. Its habitat requirements in woodland areas are well understood, and yet on Exmoor, despite the importance of the populations, we still understand its ecology very poorly.

*Links to other plans in this BAP:*

Lowland heathland, upland oak woodland. Heath fritillary colonies usually occur in the transition zones between these two habitat types.

## 2.

## Current status:

In the last ten years, the heath fritillary has occurred at between 20 and 25 sites on Exmoor (depending on how you define a site). A feature of these “sites” is that they are not constant, but move around as the butterfly follows its foodplant, cow-wheat. Because of this nomadic life style, a more useful concept is to think in terms of meta-populations – larger contiguous areas of suitable habitat through which the butterfly is able to move and throughout which areas of suitable habitat will occur, though not always in the same place. On Exmoor, there are six main meta-populations; Haddon, Alcombe, Dunkery, Hawkcombe, Metcombe and Badgworthy Water. Much the largest of these is Dunkery, which comprises 13 colonies occurring in sheltered heathland combs around the fringes of Dunkery Beacon. This meta-population, which is entirely on land owned by the National Trust, accounts for over half of the total Exmoor population. Of the remainder, Alcombe and Haddon both support medium-sized or large populations of the butterfly, while Hawkcombe, Badgworthy Water and Metcombe have only small populations.

Survey work by Butterfly Conservation during 1999 suggests that the number of colonies on Exmoor may have declined to only 13. Whilst one very small additional meta-population has been discovered at Rodhuish Common, no butterflies were seen at Hawkcombe, Badgworthy Water and Metcombe. The first two are now at best very vulnerable, and the butterfly has possibly disappeared from the latter. Though poor weather can be implicated in this decline, lack of management is thought to be the most important factor. This has resulted in scrub and bracken shading out breeding habitat at some sites or in mature heathland developing that inhibits germination of the larval foodplant, cow-wheat.

**3.****Current factors causing loss or decline:**

- 3.1 Lack of management on heathland, resulting in shading out by scrub and bracken.
- 3.2 Lack of understanding of the ecology of the butterfly on Exmoor.
- 3.3 Shading out of former heathland sites by planted conifers.

**4.****Current action:**

- 4.1 Butterfly Conservation are leading on the national species Action Plan funded by English Nature via the Species Recovery Programme.
- 4.2 Most of the Dunkery metapopulation is in the ownership of NT. Part of the Haddon metapopulation is owned by ENPA.
- 4.3 ELMS cover four of the meta-populations where the butterfly currently occurs (Dunkery: ESA and Badgworthy: EN MA, Hopcott/Alcombe and Rodhuish Common: CS).
- 4.4 All of the Dunkery, Badgworthy, Hawkcombe, Haddon, Alcombe / Hopcott and Rodhuish meta-populations lie within SSSIs. Most of the Metcombe metapopulation is similarly protected.
- 4.5 Most of the Dunkery colonies are within the Exmoor Heaths cSAC. Hawkcombe, Haddon and Badgworthy Water meta-populations lie entirely within the cSAC.
- 4.6 Nine of the thirteen colonies comprising the Dunkery metapopulation lie within the Dunkery and Horner Wood NNR.
- 4.7 Habitat management aimed at increasing the area of suitable habitat for the butterfly has taken place at Alcombe and Badgworthy Water.
- 4.8 NT has been carrying out a study of the butterfly which aims to increase our understanding of its ecology.
- 4.9 Most medium-sized and large colonies are monitored annually by the Exmoor Natural History Society, the National Trust and a network of other organisations, coordinated by Butterfly Conservation.

**5.****Objectives and targets:**

- 5.1 Maintain all existing meta-populations of the butterfly on Exmoor. TARGET: Ongoing.
- 5.2 Increase the size of all meta-populations, with special emphasis on those meta-populations which currently only have small colonies. TARGET: All with medium or large colonies by 2010.
- 5.3 Establish new meta-population(s) by natural recolonisation or reintroduction. TARGET: At least one new meta-population by 2010.
- 5.4 Increase public awareness and appreciation of the heath fritillary and its conservation. TARGET: Ongoing.

**6.****HEATH FRITILLARY ACTION PLAN:****Site safeguard and management**

- 6.1 Create five new areas of suitable habitat within existing metapopulation areas (by 2010). Partners: ENPA; NT; BLC; EN; CE.
- 6.2 Provide suitable conditions for establishment of a strong meta-population of heath fritillary on the Rodhuish/Black Hill moorland block (by 2010). Partners: EN; ENPA; CE.
- 6.3 Look to establish coppice plots in oak coppice woodland near or adjacent to existing heath fritillary colonies ( 3 areas of at least 0.5 ha by 2010). Partners: NT; ENPA.
- 6.4 Seek entry of Hawkcombe and Metcombe meta-populations into ELMS (by 2005). Partners: ENPA; EN; MAFF.
- 6.5 Incorporate the needs of the butterfly into the ESA Moorland Management Plan at Haddon Hill (by 2001). Partners: ENPA; EN; MAFF.
- 6.6 Incorporate the needs of the heath fritillary into ELMS reviews (by 2005). Partners: MAFF; EN; ENPA; NT
- 6.7 Ensure that all Heath Fritillary populations are in areas designated as SSSIs or selected as CWS where they meet the criteria (by 2002). Partners: EN; SERC; DWT/DBRC.
- 6.8 Encourage positive management for the butterfly through the uptake of ESA Conservation Plan BAP payments where appropriate (by 2002). Partners: MAFF; EN; ENPA.

**Future research and survey**

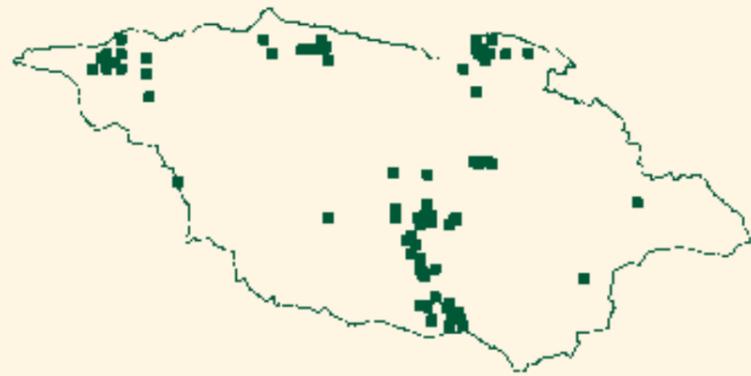
- 6.9 Prepare a confidential GIS database showing the location of all colonies and meta-populations of the butterfly (by 2001, then updated annually). Partners: ENPA; SERC; DWT/DBRC; BC.
- 6.10 Monitor all colonies of the butterfly and pass on results to Butterfly Conservation (2001 and annually thereafter). Partners: BC; NT; ENHS; EN; ENPA;
- 6.11 Carry out further research that aims to elucidate the ecology of the butterfly (by 2002). Partners: EN; BC; NT; ENPA.

**Advisory**

- 6.12 Organise a heath and high brown fritillary training day for ESA and CS staff (by 2001). Partners: MAFF; BC; NT; EN.

**Communications and publicity**

- 6.13 Publicise the actions proposed in this plan, particularly restoration, recolonisation and restoration proposals (Ongoing). Partners: EN; ENPA; BC; NT.



## 1. Introduction:

The high brown fritillary has declined by 94% in Britain this century. Originally it was a butterfly of coppiced woodland which was widely distributed through much of England and Wales. Cessation of coppicing as a management practice has been the main cause of this catastrophic decline, and the butterfly is now largely confined to three strongholds, the Morecambe Bay area in south Cumbria, Dartmoor and Exmoor.

*Links to other plans in this BAP:*

Bracken and scrub. The high brown fritillary is confined to bracken habitats on Exmoor.

## 2. Current status:

Of the fifty one definite colonies of high brown fritillary known in England and Wales, eleven are currently known on Exmoor. On Exmoor the butterfly is closely associated with bracken habitats on south-facing slopes where there is an abundance of the larval foodplant, violets. However, as defined by Butterfly Conservation, only one of these colonies is large and three of medium size. The remaining 7 colonies are all small and therefore vulnerable to extinction. In addition, there are a number of other sites where the butterfly has been observed in the past, or where suitable habitat appears to exist. Further information is required before we can categorically state whether any of these sites support colonies of the butterfly.

Details of important sites have not been included in this Plan to prevent possible disturbance of this rare and protected species.

## 3. Current factors causing loss or decline:

- 3.1 Management neglect, particularly loss of cattle grazing, resulting in scrub encroachment into breeding habitats.
- 3.2 Control of bracken habitats by cutting or spraying.
- 3.3 Burning of bracken habitats to control ticks.

## 4. Current action:

- 4.1 9 of the 11 Exmoor colonies are notified as SSSI.
- 4.2 5 sites are wholly and one partially in the ownership of the National Trust.
- 4.3 10 sites are in ELMS (7 in ESA agreements (1 with an EN top-up agreement specifically aiming to conserve high brown fritillary), 2 in ENPA management agreements, 1 managed by SWT).
- 4.4 NT and SWT have carried out “runnel cutting” to provide suitable egg-laying habitat for the butterfly.
- 4.5 Detailed monitoring of the large Devon populations is undertaken annually by the National Trust.
- 4.6 Some monitoring of the butterfly is carried out at most remaining sites by Butterfly Conservation.

## 5. Objectives and targets:

- 5.1 Establish the current status of the butterfly on Exmoor.  
TARGET: By 2001.
- 5.2 Maintain all existing colonies of the butterfly on Exmoor.  
TARGET: Ongoing.
- 5.3 Increase the size of all small colonies of the butterfly through positive management.  
TARGET: All colonies by 2010.
- 5.4 Establish new colonies of the butterfly.  
TARGET: One by 2010.
- 5.5 Publicise the butterfly and its conservation.  
TARGET: Ongoing.

## 6.

**HIGH BROWN FRITILLARY ACTION PLAN:****Site safeguard and management**

- 6.1 Consider notification of further high brown fritillary sites if these meet SSSI criteria (by 2005). Partners: EN.
- 6.2 Ensure that all high brown fritillary populations are in areas designated as SSSIs or selected as CWS where they meet the criteria (by 2002). Partners: EN; SERC; DWT / DBRC.
- 6.3 Implement positive management on all sites (by 2005). Partners: MAFF; NT; ENPA; EN.
- 6.4 Incorporate the needs of the high brown fritillary into the next Exmoor ESA Review (by 2002). Partners: MAFF; EN.
- 6.5 Incorporate the needs of the butterfly into the management agreement at Glenthorne and the ESA moorland management plan at Lyncombe (by 2001). Partners: ENPA; MAFF.
- 6.6 Identify potentially suitable bracken habitats near to existing colonies and manage to encourage recolonisation by the butterfly (5 areas by 2010). Partners: ENPA; NT; BC; EN.

**Advisory**

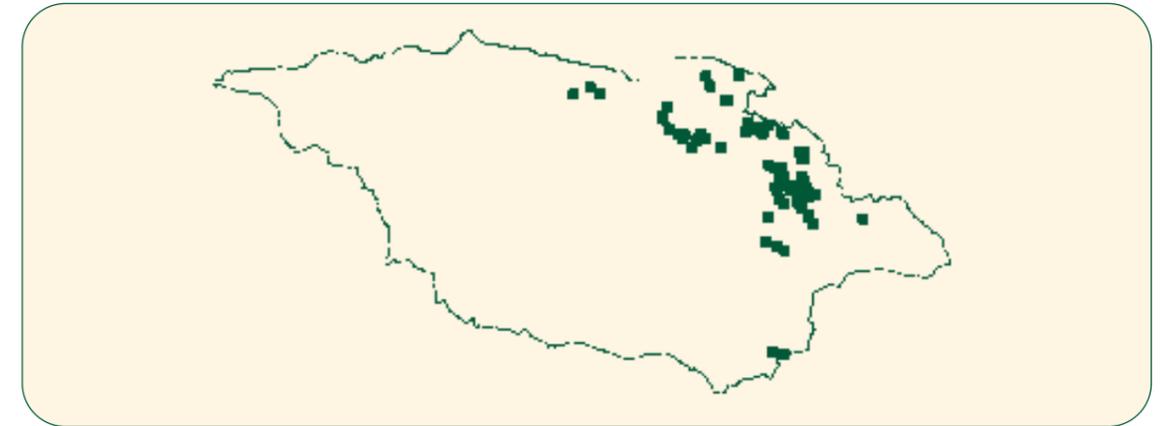
- 6.7 Organise a heath and high brown fritillary training day for ESA staff (by 2001). Partners: MAFF; NT; EN; BC.

**Future research and survey**

- 6.8 Continue to survey other possible sites for the butterfly (by 2005). Partners: BC; EN; ENPA; ENHS; NT.
- 6.9 Prepare a confidential GIS database showing the location of all colonies of the butterfly (by 2001, annually updated). Partners: ENPA; BC; SERC; DWT/DBRC.
- 6.10 Monitor all colonies of the butterfly and pass on results to Butterfly Conservation (2001 and annually thereafter). Partners: BC; ENPA; EN; NT; ENHS; SWT.
- 6.11 Carry out further research which aims to elucidate the ecology of the butterfly (by 2002). Partners: BC; EN; ENPA; NT.
- 6.12 Identify means of controlling tick-borne diseases that are not reliant upon the control or eradication of bracken stands (by 2007). Partners: ENPA.

**Communications and publicity**

- 6.13 Distribute information on the butterfly and bracken habitats to all owners/managers of definite and possible sites (by 2003). Partners: ENPA; EN.
- 6.14 Publicise the actions proposed in this plan (ongoing). Partners: ENPA; NT; BC; SWT; DWT.



## 1.

**Introduction:**

The nightjar is a nocturnal summer visitor to Exmoor from sub-Saharan Africa, most often detected by the churring call of the male on summer nights. It occurs on rough heathland fringes where there is a mosaic of heathland, bracken and scrub. It also inhabits large clear-fells on areas of former heathland, though the habitat here will only remain suitable for approximately 5 years before the trees become too dense. The nest is no more than a scrape on a bare piece of ground.

*Links to other plans in this BAP:*

Lowland heathland and bracken and scrub. The great majority of breeding nightjars are on lowland heathland sites, though many are now afforested with conifers. Generally, the most favoured sites are those where heathland occurs in a mosaic with bracken and scrub.

## 2.

**Current status:**

The nightjar declined by 52% in its UK range between major surveys of the species in 1968-72 and 1992. The British population was estimated at 3400 males in the latter year. Over 50% of these birds were recorded from recently clear-felled conifer plantations, and in these habitats there have been localised increases in numbers recently. The British decline is mirrored throughout north-west and northern Europe.

Numbers of nightjars on Exmoor were estimated at 33 churring males in a partial survey of Exmoor by ENHS in 1995, and given the known presence of further birds in other areas and the large areas of the National Park that still await survey, Exmoor must hold a nationally important population. As much as two thirds of these pairs occur in clear-felled conifer plantations on the site of former heathland.

Details of important sites have not been included in this Plan to prevent possible disturbance of this rare and protected species.

## 3.

**Current factors causing loss or decline:**

- 3.1 Lack of survey data on the distribution and abundance of breeding nightjars on Exmoor makes it difficult to assess conservation priorities for this species.

- 3.2 Cessation of management leading to scrub encroachment. Though some scrub is beneficial to this species, excessive encroachment results in its loss.
- 3.3 Frequent, uncontrolled fires resulting in under-representation of mature stands of dwarf-shrubs which are important for breeding nightjars.
- 3.4 Rhododendron invasion of lowland heathland.
- 3.5 Past agricultural reclamation for agriculture and forestry, has resulted in loss and fragmentation of lowland heath. Fragmentation is thought to be a particularly important factor for this species, given the large areas of contiguous feeding habitat that nightjars require.
- 3.6 Re-planted trees on recent clear-fells in conifer woodland are rapidly shading out the heathland breeding habitat of Exmoor's most important nightjar population.

#### 4. Current action:

- 4.1 The Crown Estate and Forest Enterprise, who own the conifer plantations and lowland heath containing the 2 largest Exmoor populations, are both in the process of preparing Forest Design Plans which should take into account the needs of this species.
- 4.2 3 smaller nightjar populations occur on lowland heaths lying in the Exmoor Coastal Heaths, North Exmoor and South Exmoor SSSI, and most of these areas are in the ESA scheme.
- 4.3 There are CS management agreements on 3 heathland breeding sites.
- 4.4 ENPA and NT both own heathland breeding sites and manage them with this species in mind.

#### 5. Action plan objectives and targets:

- 5.1 Maintain the current population level of nightjars on Exmoor.  
TARGET: Ongoing.
- 5.2 Increase nightjar population on at least three sites by appropriate management.  
TARGET: At 3 sites by 2010.
- 5.3 Improve our knowledge of the distribution and abundance of the nightjar on Exmoor.  
TARGET: By 2001.

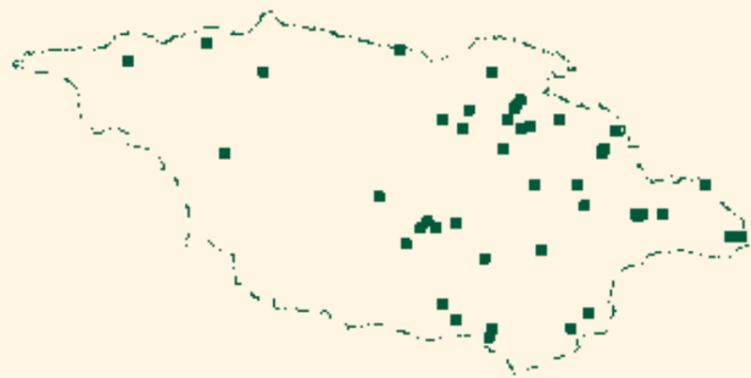
## 6. NIGHTJAR ACTION PLAN:

### Site safeguard and management

- 6.1 Include targets and management recommendations for nightjar in FDP's, WGS etc on all coniferous woodlands with populations (ongoing).  
Partners: FE; FC; NT; CE.
- 6.2 Diversify age-structure in conifer plantations with nightjars to ensure FDP's provide a continuity of open clear-fells/re-stocks for this species (ongoing). Partners: FE; CE.
- 6.3 Ensure all sites with nightjar populations which are not SSSIs are selected as CWS where they meet the criteria (by 2002).  
Partners: EN; SERC; DWT/DBRC.
- 6.4 Advise landowners and other relevant bodies of the presence, legal status and management requirements of nightjar (by 2001). Partners: ENPA; EN; MAFF.
- 6.5 Seek to incorporate management for nightjars into management plans for all lowland heathland sites (by 2005). Partners: MAFF; EN; ENPA; NT.
- 6.6 Seek to defer forest management operations in areas with churring nightjars to a period outside of the breeding season. Partners: FC; FE; NT; CE.
- 6.7 Restore sub-optimal lowland heath to favourable condition by;
  - a. removal of scrub and rhododendron,
  - b. re-introduction or reduction of grazing and burning (all areas of lowland heath with nightjars by 2005). Partners: ENPA; NT; MAFF; CE.
- 6.8 Re-create lowland heathland by removal of coniferous woodland from former heathland sites, prioritising areas with existing nightjar populations (100 ha by 2010). Partners: FE; ENPA; FC; CE.

### Future research and survey

- 6.9 Contribute to national nightjar survey to ensure comprehensive coverage of Exmoor (by 2002). Partners: SOS; DBPS; ENHS; ENPA; RSPB; BTO.
- 6.10 Monitor main populations of churring males (from 2000 then annually till 2010). Partners: SOS; DBPS; ENPA; RSPB; BTO.
- 6.11 Produce an inventory of all nightjar populations using GIS-database. (by 2003). Partners: ENPA; SERC; DWT/DBRC.



## 1. Introduction:

The dormouse is a small orange-brown mammal that requires woodland, scrub and hedgerows that are rich in nuts and berries. It is unusual amongst rodents in spending much of its time in the shrub canopy, and this habit together with its colour and hairy tail make it readily recognisable. It is however strictly nocturnal and so is only very rarely seen. The neat, round holes it makes in hazel nuts, its most important food source, are the easiest way to ascertain its presence in an area.

*Links with other Plans in this BAP:*

Upland oak woodland. A number of dormouse colonies occur in this habitat on Exmoor, though it is perhaps more characteristic of ash-maple woodland in which hazel is more abundant.

Bracken and Scrub. Dormice occur in areas of scrub dominated by hazel and bramble, especially if associated with species - rich hedgebanks.

## 2. Current status:

Nationally, the dormouse has suffered a contraction in its British range of 50% in the last century and is now largely confined to the southern counties of England and Wales. The primary cause of this decline is thought to be loss of the ancient broadleaved woodlands and hedgerows on which it depends.

On Exmoor, the pace of agricultural change has been slower, and consequently there are still more areas of suitable dormouse habitat remaining. The status of the species is hard to define, as recording effort has only taken place in certain areas. However, current evidence suggests that dormice may be found in most of the larger wooded valleys in the National Park. There is very little data on its distribution in hedgerows, and this should be a particular priority for future surveys.

*Key sites:*

Luxborough ash -maple woodlands.  
Avill valley woodlands.

## 3.

### Current factors causing loss or decline:

- 3.1 Lack of information on dormouse distribution on Exmoor prevents appropriate management being targeted at the key sites for the species.
- 3.2 The absence of detailed information on the status of the dormouse in the National Park makes it difficult to assess population trends, but the regular flailing of species-rich hedges must be having a detrimental impact.

## 4.

### Current action:

- 4.1 An ENHS-led group has been set up to promote recording and conservation of the dormouse on Exmoor.
- 4.2 ENHS have put out dormouse boxes in two important colonies.
- 4.3 ENPA are running nest box recording schemes in 3 areas known to support dormice.
- 4.4 ENHS are continuing to carry out surveys of dormouse distribution in the National Park.
- 4.5 ENPA have recently produced publicity materials on dormouse conservation, including a dormouse nut survey scheme.

## 5.

### Action Plan objectives and targets:

- 5.1 Improve our knowledge of the distribution and abundance of the dormouse in the National Park.  
TARGET: By 2005.
- 5.2 Maintain all existing large colonies at current size and abundance.  
TARGET: Ongoing.  
[Large colonies are defined as those in which evidence of dormice has been found over at least 1 hectare of woodland, scrub or rich hedgerow networks in which there is a more or less continuous shrub layer in which hazel is abundant.]
- 5.3 Increase/enhance areas of sub-optimal habitat where populations are currently small and/or declining.  
TARGET: 10 sub-optimal sites by 2010.
- 5.4 Use the dormouse as a “flagship” species to raise awareness and understanding of biodiversity issues.  
TARGET: Ongoing.

## 6.

**DORMOUSE ACTION PLAN:****Site safeguard and management**

- 6.1 Use ESA Conservation Plan to introduce dormouse-friendly hedge cutting regimes (at least 5 sites by 2005, a further 5 by 2010). Partners: MAFF
- 6.2 Use Woodland Tier in ESA to encourage positive management of known dormouse populations in small farm woodlands (at least 5 sites by 2005, a further 5 by 2010). Partners: MAFF; SWT; DWT; ENPA.
- 6.3 Incorporate the needs of dormice into all ENPA MA's (by 2002). Partners: ENPA
- 6.4 Ensure all dormouse populations are in areas designated as SSSI or selected as CWS where they meet criteria (by 2002). Partners: EN; SERC; DWT/ DBRC.
- 6.5 Enter all large dormouse populations in woodland into FC's WGS (all sites by 2005), incorporating appropriate management to maintain and enhance dormouse populations. Partners: FC; SWT; ENPA; EN.

**Future research and monitoring**

- 6.6 Carry out a systematic dormouse survey of main woodland systems and selected suitable hedgerows (by 2005). Partners: ENPA; EN; SWT; DWT /DBRC; NT; MS; ENHS.
- 6.7 Enter Exmoor into English Nature's national nestbox recording scheme (one large colony by 2001). Partners: ENHS; EN; ENPA.
- 6.8 Initiate annual nest box monitoring of all large dormouse colonies discovered by baseline survey at 6.6 (by 2005). Partners: ENPA; ENHS; DWT/DBRC; SWT; NT.
- 6.9 Prepare a GIS database showing the location of all dormouse colonies (by 2001, then updated annually). Partners: ENPA; SERC; DWT/DBRC.

**Communications and publicity**

- 6.10 Distribute existing leaflets to landowners with dormouse populations on their land to explain their habitat and management requirements (by 2002). Partners: ENPA; SWT.
- 6.11 Produce customised versions of this Plan that aim to interest and involve school groups (by 2001). Partners: ENPA; SWT.

The following list assesses the relative importance of the various main habitat types that occur within the National Park and is taken from Ulf-Hansen and Boyce (1998). Habitats in bold are recognised as key habitats in the UK Biodiversity Action Plan.

International Importance

**Blanket Bog**  
**Upland Heathland**  
**Lowland Heathland**  
**Upland Oak Woodland**  
**Parkland, Wood Pastures** and Veteran Trees  
**Marshy Grassland** (some types)

National Importance

Valley mire and springline communities.  
**Marshy grassland** (some types)  
 Upland rivers and streams  
**Sea cliffs** and inland rock exposures  
 Bracken and scrub

Regional Importance

**Unimproved grassland**  
**Hedgebanks** and verges  
**Coastal Shingle** and **Grazing Marsh**

Local Importance

Reservoirs and ponds  
 Plantation forests

APPENDIX 2 - IMPORTANT SPECIES OCCURRING IN EXMOOR NATIONAL PARK

Species		Common Name	Status	Habitat	Distribution on Exmoor
Latin Name					
<b>FUNGI</b>					
<b>Ascomycetes</b>					
<i>Thuemenidium atropurpurea</i>			RDB3	Acid grassland.	Nettlecombe.
<b>Basidiomycetes</b>					
<i>Battarrea phalloides</i>	Sandy Stilt Puffball		EN, BAP, NAP	Sandy soil in hedgebanks.	Nettlecombe.
<i>Cantharellus ferruginascens</i>			RDB2	Mixed woodland.	Allerford Wood & Porlock Toll Road.
<i>Cortinarius infractus</i>			RDB2	Woodland.	Nettlecombe.
<i>Creolophus cirrhatus</i>			VU	Dead trunks and limbs of deciduous	Nettlecombe & the Barle Valley. trees, usually on beech.
<i>Geastrum formicatum</i>	Large Earth Star		VU	Deciduous woodland.	Selworthy.
<i>Geastrum quadrifidum</i>	Earth Star		VU	Woodland.	Nettlecombe.
<i>Hygrocybe calyptraeformis</i>	Ballerina Waxcap		BAP, LBAP	Unimproved grassland.	Eight sites on Exmoor including Weather Station Field at Nettlecombe, Dunster Deer Park, Northcombe, Pinkery, Wimbleball and South Hill.
<i>Lepiota ignivolvata</i>			RDB3	Woodlands.	Allerford Wood, Horner Wood & Birds Hill.
<i>Naucoria scolecina</i>			RDB2	Associated with alder.	Horner Wood, Eastem Wood & Birds Hill.
<b>LICHENS</b>					
<i>Biatorium delitescens</i>			VU	Sheltered situations in old woodlands on hazel.	Barle valley. New to England.
<i>Chiodecton myrticola</i>			LR (Nt)	Dry oak bark & under-hangs on rocks.	Hangman & Valley of the Rocks.
<i>Collema dichotomum</i>	River Jelly Lichen		RDB2 BAP Sch. 8	Submerged rocks in fast flowing streams.	River Barle.

APPENDIX 2 - IMPORTANT SPECIES OCCURRING IN EXMOOR NATIONAL PARK

Species		Common Name	Status	Habitat	Distribution on Exmoor
Latin Name					
<i>Lecanactis amylacea</i>			RDB2, VU	Dry bark of old oak trees.	
<i>Lecania chlorotiza</i>			LR (Nt)	On elm bark.	Barle valley.
<i>Lobaria amplissima</i>	Lungworts		LBAP NAP	On bark of old trees in upland oak woodland, parkland & wood pasture.	Horner / Hawkcombe, Barle valley, Bray valley, Haddeo valley, Nettlecombe Park & Pixton Park.
<i>Lobaria laetevirens</i>			VU	Well-lit branches on deciduous trees.	
<i>Lobaria pulmonaria</i>			DD	Exposed, gently sloping rock faces on sea cliffs.	East of High Veer Point.
<i>Lobaria scrobiculata</i>			LR (Nt)	On stones on shingle beach.	Porlock Shingle Ridge.
<i>Parmelia quercina</i>			RDB3,	On ash bark in upland oak woodland.	Horner Wood. BAP, NAP
<i>Rhizocarpon similimum</i>			VU	On tree bark and rocks in upland oak woodland.	Watersmeet.
<i>Rinodina aspersa</i>			VU, BAP, Sch. 8	Sea cliffs, on rocks & dead woody heather stems.	Possibly extinct on Exmoor. Last seen mid-1980's at Hurlstone Point.
<i>Schimatomma graphidioides</i>					
<i>Sticta canariensis</i>	Golden-hair Lichen				
<i>Teloschistes flavicans</i>					
<b>MOSESSES &amp; LIVERWORTS</b>					
<i>Bryum gemmiparum</i>			RDB1, NAP	Rock crevices in fast-flowing rivers.	River Lyn.
<i>Dumortiera hirsuta</i>			RDB3	Upland oak woodland.	Watersmeet.
<i>Habrodon perpusillus</i>			RDB1	Tree trunks.	Holnicote Estate.
<i>Leptodontium gemmascens</i>	Thatch Moss		RDB2 BAP	On old thatched roofs.	Holnicote Estate.
<i>Tortula cuneifolia</i>			RDB2	Bare soil, rock crevices, and coastal cliffs.	

APPENDIX 2 - IMPORTANT SPECIES OCCURRING IN EXMOOR NATIONAL PARK

Species		Common Name	Status	Habitat	Distribution on Exmoor
Latin Name					
<b>VASCULAR PLANTS</b>					
<i>Euphorbia hybema</i>	Irish Spurge	LR (Nt)	Upland oak woodland.	Watersmeet.	
<i>Orobancha rapum-genistae</i>	Greater Broomrape	NAP	Gorse & broom.	Luckwell Bridge & Wheddon Cross.	
<i>Sanguisorba officinalis</i>	Greater Burnet	NAP	Unimproved floodplain grassland.	Barle and Exe valleys.	
<i>Silene gallica</i>	Small-flowered Catchfly	BAP	Old garden.	Bossington, not seen recently.	
<i>Sorbus 'Taxon D'</i>	a Whitebeam	LBAP	Rock outcrops in upland oak woodland on the coast.	Glenthorne Woods & Neck Wood.	
<i>Sorbus anglica</i>	a Whitebeam	LR (Nt), LBAP	Rock outcrops.	Hollow Brook, West Exmoor.	
<i>Sorbus devoniensis</i>	a Whitebeam	LBAP, NAP	Upland oak woodlands & hedges on well drained soils.	Watersmeet, Silillery Sands, Neck Wood, West Woodybay Wood, Hollow Brook, Timberscombe Wood & Bury.	
<i>Sorbus</i>	a Whitebeam	LBAP	Rock outcrops in upland oak woodland.	Woody Bay & Wester Wood.	
<i>Sorbus porrigentiformis</i>					
<i>Sorbus rupicola</i>	Rock Whitebeam	LBAP	Rock outcrops in upland oak woodland, & sea cliffs.	Neck Wood.	
<i>Sorbus subcuneata</i>	a Whitebeam	VU, LBAP	Rock outcrops in upland oak woodlands.	Culbone, Watersmeet, Neck Wood & West Woodybay Wood.	
<i>Sorbus vexans</i>	a Whitebeam	VU, LBAP, NAP	Rock outcrops in upland oak woodland & sea cliffs.	Culbone, Watersmeet, Neck Wood.	
<i>Vaccinium oxycoccos</i>	Cranberry	NAP	Blanket bog.	Exmoor Forest & Exford Common.	
<b>CRUSTACEANS</b>					
<i>Austropotamobius pallipes</i>	White-clawed Crayfish	BAP, ECII, Sch.5	Lowland rivers & water bodies.	Nettlecombe.	

APPENDIX 2 - IMPORTANT SPECIES OCCURRING IN EXMOOR NATIONAL PARK

Species		Common Name	Status	Habitat	Distribution on Exmoor
Latin Name					
<b>INSECTS</b>					
<b>Ants</b>					
<i>Formica rufa</i>	Red Wood Ant	BAP, NAP	Upland oak woodland and coniferous woodland.	Horner Wood, Dunster area, Hawkcombe and Culbone.	
<b>Flies</b>					
<i>Asilus craboniformis</i>	Hornet Robber-fly	BAP, NAP	Unimproved grassland, associated with cattle dung.	Northcombe, Dunster Deer Park, Winsford & Lyncombe.	
<i>Callicera aenea</i>	a Hoverfly	RDB3	Larva in dead wood on lowland heathland/ woodland interface.	Hurlstone Point	
<i>Chrysopilus erythrophthalmus</i>	a Snipe Fly	RDB2	Larva aquatic in woodland streams.	Very rare, third British specimen from Horner Wood.	
<i>Ctenophora flaveolata</i>	a Tiger Cranefly	RDB2	Larva in dead wood in upland oak woodland.	Watersmeet & Dulverton Woods.	
<i>Lipsothrix nervosa</i>	a Cranefly	BAP	Deadwood in wet seepages in upland oak woodland.	Eastwater & Aller valleys & Horner Wood.	
<i>Ormosia bicornis</i>	a Cranefly	RDB2	Upland oak woodland.	Neck Wood.	
<i>Paraclusia tigrina</i>	a Clusiid fly	RDB2	Larva in dead wood.	Porlock.	
<i>Scleroprocta pentagonalis</i>	a Cranefly	RDB3	Larva occurs in fungi & dead wood near streams in upland oak woodland.	Wilmerham Valley & Horner Wood.	
<b>Beetles</b>					
<i>Agriotes sordidus</i>	a Click Beetle	RDB3	Saltmarsh.	Porlock Weir.	
<i>Aleochara maculata</i>	a Rove beetle	RDB2	Upland oak woodland.	Watersmeet, old record.	
<i>Cantharis fusca</i>	Dark Sailor	RDB3	Coastal grazing marsh.	Porlock Marsh.	
<i>Hydraena pygmaea</i>	a Water Beetle	RDB3	In gravel of fast flowing streams.	A single old record from the Porlock area.	

APPENDIX 2 - IMPORTANT SPECIES OCCURRING IN EXMOOR NATIONAL PARK

Species		Common Name	Status	Habitat	Distribution on Exmoor
Latin Name					
<i>Leptura sexguttata</i>	a Longhorn Beetle	RDB3	Larva in dead wood in upland oak woodland.	Watersmeet.	
<i>Lucanus cervus</i>	Stag Beetle	BAP, ECII	Larva in dead wood in upland oak woodland & parkland.	Recent records from two sites, at Horner Wood & Wootton Courtenay.	
<i>Medon piceus</i>	a Rove Beetle	RDB1	Woodland litter & red wood ant nests.	Old record from Porlock area.	
<i>Montoma angusticollis</i>	a Ryzophagid Beetle	RDB3	In red wood ant nests.	Old record from Porlock area.	
<i>Ochrosis ventralis</i>	a Flea Beetle	RDB3	On mayweed.	Old record from Allerford.	
<i>Pelenomus olssoni</i>	a Weevil	RDB3	On water purslane in draw-down zone of reservoir.	Wimbleball.	
<i>Psylliodes attenuata</i>	Hop Flea Beetle	RDB1	On hops in hedgerows.	Old record from Knowle, Dunster.	
<i>Quedius riparius</i>	a Rove Beetle	RDBK	In moss on stream banks.	Known only from a few sites in the Porlock area.	
<i>Rugilus geniculatus</i>	A Rove Beetle	RDB1	Dry unimproved grassland.	Northcombe.	
<i>Trichonyx sulciollis</i>	a Pselaphid Beetle	RDB2	In dead wood in old trees.	Old record from Nettlecombe.	
<b>Butterflies &amp; Moths</b>					
<i>Aphelia unitana</i>	a Tortrix Moth	RDB2, NAP	On bramble, hogweed, etc.	Heddon's Mouth.	
<i>Argynnis adippe</i>	High Brown Fritillary	RDB2, BAP, LBAP, NAP, Sch.5	Warm bracken slopes with abundant violets.	Heddon valley, Watersmeet, Bossington, Mansley Combe, Ashton Cleeve, Lyncombe, Barle valley.	
<i>Bisulachista trapeziella</i>	a Micro Moth	RDB3	Larva on wood-rush in upland oak woodland.	Woody Bay.	
<i>Boloria euphrosyne</i>	Pearl-bordered Fritillary	Sch.5, BAP	Bracken slopes with abundant violets.	Heddon valley & Barle valley.	
<i>Cosmia diffinis</i>	White-spotted Pinion	BAP	Woodlands, hedgerows, riversides, commons, etc. Larva on elm.	Old record from Minehead area.	
<i>Eurodryas aurinia</i>	Marsh Fritillary	BAP, NAP, ECII, Sch.5	Larva on devil's-bit scabious in marshy grassland.	Codsend Moors.	

APPENDIX 2 - IMPORTANT SPECIES OCCURRING IN EXMOOR NATIONAL PARK

Species		Common Name	Status	Habitat	Distribution on Exmoor
Latin Name					
<i>Hemaris tityus</i>	Narrow-bordered Bee-hawk	BAP	Woodland, marshland & the wetter parts of moorland. Larva on devil's-bit scabious.	Porlock area.	
<i>Hydrelia sylvata</i>	Waved Carpet	BAP	Larva on a variety of deciduous trees and shrubs, upland oak woodland.	Parracombe, Treborough Wood, Mounsey Reserve, Horner Wood, Withycombe Scruffets & Watersmeet.	
<i>Hypena rostralis</i>	Buttoned Snout	BAP	Hedgerows & scrub. Larva on hops.	Porlock Weir, Halse Combe, Porlock area & Bossington.	
<i>Jodia croceago</i>	Orange Upperwing	RDB2, BAP	Larva on recently coppiced oak in upland oak woodland.	Old record from Heddon valley.	
<i>Lygephila cracca</i>	Scarce Blackneck	RDB3, BAP, NAP	Coastal upland oak woodland and sea cliffs. Larva on wood vetch.	Culbone Woods, Woody Bay, Porlock Weir & Heddon valley.	
<i>Mellicta athalia</i>	Heath Fritillary	RDB2, BAP, LBAP, NAP, Sch.5	Lowland heathland / woodland edge.	Dunkery, Dunster heaths, Haddon Hill, Hawkcombe, Metcombe and Badgworthy Water.	
<i>Mythimna turca</i>	Double Line	BAP	Larva on various grasses in upland oak woodland.	Heddon valley, Porlock Weir, Chibbet Ford, Porlock area, Barle valley, Halse Combe, Horner Wood, Ashcombe & Watersmeet.	
<i>Phylodesma ilicifolia</i>	Small Lappet	RDB, BAP	Upland oak woodland & moorland. Larva on whortleberry.	Old records of larvae from Lynton & Porlock area. Recent doubtful record from Hawkcombe.	
<i>Rheumaptera hastata</i>	Argent & Sable	BAP	Scrub and woodland edge, larva on birch.	Barle valley.	
<i>Schiffermuelleria grandis</i>	a Micro Moth	RDB1	Larva in dead wood.	Abundant near Porlock.	
<i>Schrankia taenialis</i>	White-line Snout	BAP	Damp woodland, open heathland & shady hedgebanks.	Selworthy.	

APPENDIX 2 - IMPORTANT SPECIES OCCURRING IN EXMOOR NATIONAL PARK

Species		Common Name	Status	Habitat	Distribution on Exmoor
Latin Name					
<i>Xestia rhomboidea</i>		Square-spotted Clay	BAP	Deciduous woodlands, larva on birch bramble.	Selworthy & East Water Valley.
<i>Xylena exoleta</i>		Sword-grass	BAP	Sea cliffs. Larva on various low growing plants.	Foreland Point.
<b>SPIDERS</b>					
<i>Aulonia albimana</i>		a Wolf Spider	RDB1	Disused heathy quarries.	1970's records from quarries near Dunster. Possibly now extinct.
<i>Tuberta macrophthalmma</i>		a Spider	RDB3	Associated with ants around old trees & dead wood.	Old records from Porlock area.
<b>FISH</b>					
<i>Cottus gobio</i>		Bullhead	ECII	Rivers & streams.	Common.
<i>Lampetra planeri</i>		Brook Lamprey	ECII	Rivers and streams.	Aller / Homer junction.
<i>Salmo salmar</i>		Atlantic Salmon	ECII, NAP	Fast flowing rivers.	Breeding in most rivers.
<b>REPTILES</b>					
<i>Lacerta vivipara</i>		Common Lizard	Sch.5	Open habitats.	Common.
<i>Vipera berus</i>		Adder	Sch.5	Heathland & rough grassland.	Common.
<b>BIRDS</b>					
<i>Accipiter gentilis</i>		Goshawk	RDB, Sch.1	Conifer woodland.	Recorded in two locations.
<i>Acrocephalus schoenobaenus</i>		Sedge Warbler	RDB	Reed-beds & dense scrub.	Porlock Marsh.
<i>Alauda arvensis</i>		Skylark	BAP,NAP	Moorland & farmland.	Very common on grass moorland.

APPENDIX 2 - IMPORTANT SPECIES OCCURRING IN EXMOOR NATIONAL PARK

Species		Common Name	Status	Habitat	Distribution on Exmoor
Latin Name					
<i>Alca torda</i>		Razorbill	RDB	Sea cliffs.	About 450 pairs near Heddon's Mouth.
<i>Aleedo atthis</i>		Kingfisher	ECl, Sch.1	Rivers.	Scarce breeder, particularly on the Barle.
<i>Caprimulgus europaeus</i>		Nighthjar	ECl, RDB, BAP, LBAP,NAP	Lowland heathland / woodland edge & recent clear-fells in coniferous woodland.	About 30 pairs in the Dunster and Minehead area.
<i>Carduelis cannabina</i>		Linnets	BAP	Lowland heathland, scrub & hedges.	Widespread.
<i>Cettia cetti</i>		Cetti's Warbler	RDB	Dense scrub.	Dunster, Minehead, Nutscale Reservoir & Porlock Marsh.
<i>Coturnix coturnix</i>		Quail	RDB	Moorland & farmland.	Sporadic breeder.
<i>Emberiza cirius</i>		Chil Bunting	RDB, BAP, NAP, Sch.1	Hedges & farmland.	Very rare breeder, Alcombe, Dunster and Porlock.
<i>Emberiza schoeniclus</i>		Reed Bunting	BAP	Dense waterside vegetation or Bracken / Gorse.	Widespread on moorland and in marshy grasslands.
<i>Falco columbarius</i>		Merlin	RDB, NAP, ECl, Sch.1	Upland heathland.	
<i>Falco peregrinus</i>		Peregrine	RDB, NAP, ECl, Sch.1		
<i>Falco subbuteo</i>		Hobby	Sch.1	Lowland heathland/woodland edge.	
<i>Lagopus lagopus</i>		Red Grouse	RDB	Upland heathland.	Dunkery.
<i>Muscicapa striata</i>		Spotted Flycatcher	BAP	Wooded areas and gardens.	Widespread.
<i>Numenius arquata</i>		Curlew	RDB	Blanket bog, upland heathland & marshy grassland.	Dunkery & Codsend Moors.
<i>Pedix pedix</i>		Grey Partridge	RDB, BAP	Farmland.	Allerford, Brendon Hills, Porlock Marsh, Bossington, Wootton Courtenay, Timberscombe, Luxborough.
<i>Pyrrhula pyrrhula</i>		Bullfinch	BAP	Farmland & orchards.	Widespread.

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Species		Common Name	Status	Habitat	Distribution on Exmoor
Latin Name					
<i>Streptopelia turtur</i>	Turtle Dove	BAP	Scrub & woodland.	Hunscott, Croydon Hill, Minchhead, Luccombe, Periton, Monkham Hill, Dunster, Exford, Allerford, Bossington, Kennisham Hill & Withycombe.	
<i>Sylvia undata</i>	Dartford Warbler	RDB, ECI	Dense gorse on lowland heathland.	First bred in 1995, now widespread across low land heathland on Exmoor.	
<i>Tringa totanus</i>	Redshank	RDB	Saltmarsh.	Porlock Marsh.	
<i>Turdus philomelos</i>	Song Thrush	BAP	Gardens & farmland.	Common & widespread.	
<i>Tyto alba</i>	Barn Owl	RDB	Farmland with rough grassland.	Simonsbath, Dunster & Trentishoe.	
<i>Uria aalge</i>	Guillemot	RDB	Sea cliffs.	About 500 pairs near Heddens Mouth.	
<i>Vanellus vanellus</i>	Lapwing	RDB	Coastal grazing marsh and farmland.	Porlock Marsh.	
<b>MAMMALS</b>					
<i>Arvicola terrestris</i>	Water Vole	RDB, BAP	Dense vegetation, slower flowing rivers & streams.	River Avill.	
<i>Barbastella barbastellus</i>	Barbastelle Bat	RDB, BAP	Wooded river valleys.	Horner Wood.	
<i>Cervus elaphus</i>	Red Deer	NAP	Woodland, farmland and moorland.	Widespread.	
<i>Eptesicus serotinus</i>	Serotine Bat	RDB, ECIV, Sch.5	In buildings in mixed farming landscapes	Present in 1990 & 1993.	
<i>Lepus europaeus</i>	Brown Hare	RDB, BAP	Open habitats.	Exmoor Forest. Scattered and declining.	
<i>Lutra lutra</i>	Otter	Sch.5, ECII & IV, RDB, BAP, NAP	Undisturbed rivers and streams.	Widespread and increasing.	
<i>Muscardinus avellanarius</i>	Dormouse	ECIV, Sch.5, RDB, BAP, LBAP, NAP	Ash-hazel woodland and species-rich hedges.	Widespread.	

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Species		Common Name	Status	Habitat	Distribution on Exmoor
Latin Name					
<i>Myotis bechsteini</i>	Bechsteins Bat	ECIV, Sch.5 BAP	Upland oak woodland.	Horner Wood.	
<i>Myotis daubentoni</i>	Daubentons Bat	RDB, ECIV, Sch.5	By rivers and streams in well wooded areas.	All main river valleys.	
<i>Myotis mystacinus</i>	Whiskered Bat	RDB, ECIV, Sch.5,	Trees or buildings, often near water.		
<i>Myotis nattereri</i>	Natterer's Bat	RDB, ECIV, Sch.5	Trees or buildings in open woodland or parkland.		
<i>Nyctalus noctula</i>	Noctule Bat	RDB, ECIV, Sch.5	Tree holes in mixed farmland and parkland.	Widespread.	
<i>Pipistrellus pipistrellus</i>	Pipistrelle Bat	RDB, BAP, ECIV, Sch.5	In buildings.	Common and widespread.	
<i>Plecotus auritus</i>	Brown Long-eared Bat	RDB, ECIV, Sch.5	Buildings & trees in lightly wooded areas.	Widespread.	
<i>Rhinolophus ferrumequinum</i>	Greater Horseshoe Bat	RDB, BAP, ECII & IV, Sch.5, NAP	Old buildings with pasture, hedges & woodland.	Rare.	
<i>Rhinolophus hipposideros</i>	Lesser Horseshoe Bat	RDB, BAP, ECII & IV, Sch.5, NAP	Buildings near sheltered valleys with deciduous trees.	Widespread but scarce.	

**IMPORTANT SPECIES OCCURRING IN EXMOOR NATIONAL PARK**

The categories below have qualified species for inclusion in the above list.

- Red List Species: EX = extinct.  
 CR = critically endangered.  
 EN = endangered.  
 VU = vulnerable.  
 DD = data deficient.  
 LR (Nt) = near threatened.  
 (revised IUCN system.)
- Pre 1995 system are given as:  
 RDB1 = endangered.  
 RDB2 = vulnerable.  
 RDB3 = rare.  
 RDBK = insufficiently known.  
 RDBI = indeterminate.
- Legal Status: Sch.1, Sch.5, Sch.8 = Schedules of the Wildlife & Countryside Act 1981.
- EC Directives: ECI = Annex 1 of the EC Birds Directive.  
 ECII & ECIV = Annex II & IV of the EC Habitats & Species Directive.
- UK Action Plan: BAP = listed in UK Steering Group response to Biodiversity, the UK Action Plan, as priority species.
- Local Action Plan: LBAP = Action Plan in the Exmoor Biodiversity Action Plan.
- Natural Area Profile: NAP = listed as key species of conservation concern in Exmoor and the Quantocks Natural Area Profile.

- BAP – Biodiversity Action Plan  
 BC – Butterfly Conservation  
 BLC – Badgworthy Land Company  
 CE – Crown Estate  
 CPRE – Council for the Protection of Rural England  
 CS – Countryside Stewardship  
 CWS – County Wildlife Site  
 DBC – Devon Birdwatching and Preservation Society  
 DBRC – Devon Biodiversity Record Centre  
 DWT – Devon Wildlife Trust  
 EA – Environment Agency  
 ELMS – Environmental Land Management Scheme  
 EN – English Nature  
 E&DDMS – Exmoor and District Deer Management Society  
 ENHS – Exmoor Natural History Society  
 ENPA – Exmoor National Park Authority  
 ES – Exmoor Society  
 ESA – Environmentally Sensitive Area  
 FC – Forestry Commission  
 FCS – Farm Conservation Scheme  
 FDP – Forest Design Plan  
 FE – Forest Enterprise  
 FOE – Friends of Earth  
 GREWI – Greater Exmoor Woodland Initiative  
 HAP – Habitat Action Plan  
 LEAP – Local Environment Agency Plan  
 MA – Management Agreement  
 MAFF – Ministry of Agriculture, Fisheries and Food  
 MS – Mammal Society  
 NAP – Natural Area Profile  
 NNR – National Nature Reserve  
 NT – National Trust  
 NVC – National Vegetation Classification  
 RDB – Red Data Book  
 SAC – Special Area of Conservation  
 SOS – Somerset Ornithological Society  
 SAP – Species Action Plan  
 SSSI – Site of Special Scientific Interest  
 SWT – Somerset Wildlife Trust  
 WGS – Woodland Grant Scheme  
 WT – Woodland Trust