

Biotype

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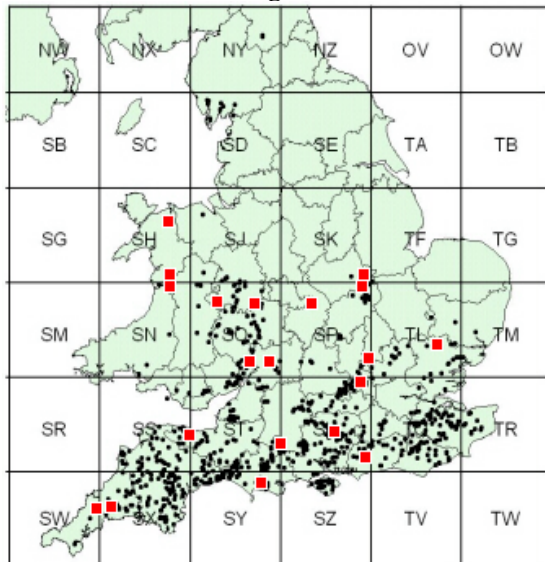
RESEARCH UPDATE

Dormice in Planted Ancient Woodlands

Andrew Brunt & Lorna Bousfield

The 'traditional' habitat of the common dormouse (*Muscardinus avellanarius*) is coppice and mixed broad-leaved woodland, but it is also known to make use of conifers. This has implications for the restoration of planted ancient woodland sites to their semi-natural character. There is anecdotal evidence that the local dormouse population has 'crashed' on some sites following complete conifer removal. Woodland Ecology Branch are studying the way in which dormice use conifers so that such losses of a protected species can be minimised during restoration operations.

Dormouse Monitoring



Elements of the current project include:

- 21 Planted Ancient Woodland sites in southern England and Wales.
- 50 nestboxes in a grid pattern at each site, mainly within coniferous blocks.



- Monthly monitoring by local staff of box occupancy.
- Vegetation survey around each nestbox.
- Radio tracking at one site, Ribbesford Wood (Wyre forest), in 2001 and 2002.

Initial Results

Dormouse numbers in the new boxes were very low in 2001. This seems to have been the situation nationally, not just in the study woods, and may be related to the previous wet autumn's torrential rain, which may have had a serious effect on dormice. It can also take several years before new nestboxes are fully utilised.

Nevertheless, vegetation surveying and radio-tracking work have yielded some interesting initial results, although these can only be regarded as pointers rather than anything more conclusive:



- Dormice found to be making active use of the conifers.
- Day and breeding nests woven from conifer needles located within the cascades of needles that form on the lower branches of the trees.
- Conifer day nests preferred in August, while nestboxes preferred in October. Both preferred over broadleaf edge of study area for nesting.
- Hibernation nests were found beneath the conifers and on ride-sides.
- Amount of shrub layer vegetation may have significant influence on nest box occupancy.



Possible Implications for Forest Management

- Complete removal of conifers in a single operation may adversely affect dormice populations, especially if canopy

- connectivity is destroyed.
- Timing of forest operations must be carefully considered. Should work take place during hibernation, before breeding or after breeding?
 - Felling in breeding season when young animals can't escape may cause problems.
 - Felling within stands and stacking timber on ridge edges between mid October to April may damage hibernacula.

The future

- Further monitoring to confirm and refine results.
- Thinning trials at Ribbesford using nest boxes and radio-tracking to test the effect of alternative operational methods.
- Faecal analyses to determine diet of dormice within conifer stands.
- Identification of the optimal time of year for thinning operations: spring, autumn or winter?

Acknowledgements

Many thanks to Phil Rudlin and other local FE staff who have enthusiastically carried out location and monitoring of boxes, and to Darren Smith for carrying out the radio-tracking.

Thanks to Chris Pierce (Sussex Wildlife Trust) for the Dormouse photograph.

If you have any dormice in conifers, or want more information about this project, contact:

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Pembrokeshire Coast National Park

Heathland Restoration

Russell Anderson

Forest Research, in partnership with the Pembrokeshire Coast National Park Authority, are testing a range of techniques for deforesting and restoring lowland heathland in the National Park.

Loss of heathland in the National Park due to afforestation and land improvement for agriculture has led to fragmentation of the habitat. The National Park Authority has provided an opportunity to re-create heathland and expand adjacent semi-natural woodland by buying and removing a large conifer plantation at Penlan that is

visually intrusive in the landscape. The Authority has invited Forest Research to collaborate in running the experiment on the Penlan site with a long-term view to further deforestation and heathland restoration.

The experiment compares the effects of various post-harvesting brush management treatments, including burning, on heath regeneration. It also tests whether heather can regenerate from the seedbank or needs to be re-introduced.

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Blanket bog restoration in Ireland

Russell Anderson

Forest Research is sharing its experience of blanket bog restoration with Ireland's forestry company, Coillte. As an initial action in the company's first EU LIFE project 'Restoring Active Blanket Bog in Ireland' Russell Anderson was contracted to visit the project sites and advise on restoration, monitoring and research needs.

The fourteen sites cover all the main blanket bog areas in the west of Ireland, from Donegal down to Kerry and the Slieve Bloom Mountains in the centre of the country. All are in, or adjacent to Special Areas of Conservation. The project is managed from Coillte's Castlebar office, near the largest concentration of sites in Mayo.

Some of the sites were afforested during the 1970s and 1980s when the then Forestry and Wildlife Service had to 'push further up the hill' to achieve planting targets and maintain rural employment. Other sites have not been planted but have been damaged by overgrazing. One site has been ploughed but not planted. All have the potential for restoring very good quality blanket bog with a few having the added cultural dimension of old turf banks.

Blanket bog in western Ireland is species rich by comparison with less maritime areas. While *Molinia* is usually dominant, *Trichophorum*, *Schoenus nigricans*, and *Rhynchospora alba* are often abundant and can dominate locally. *Calluna* and *Eriophorum vaginatum* are universal but seldom dominant. *Utricularia minor* is common in bog pools and the rare *Eriocaulon aquaticum* (pipewort) is sometimes also found there. *Pinguicula lusitanica* can be found in minor flushes.

At many of the sites the planned restoration work is



likely to produce dense *Molinia* swards because this species responds strongly to the increased site nutrient capital resulting from afforestation. The problem has been anticipated and Coillte have assumed that the sites will lose nutrients over time, with the vegetation becoming more diverse in the long term. Some research on vegetation management to reduce *Molinia* dominance could be worthwhile. Other major challenges for the project are the reduction of grazing on overgrazed sites, the inaccessibility of some sites where mechanised felling is planned and the planning of cost-effective rewetting measures for the afforested sites.

The project team are hoping to gain further experience by attending the Border Mires blanket bog rehabilitation conference at Hexham in October and by visiting the LIFE peatlands project in Caithness this autumn.

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SEMINARS

Forest Research, in conjunction with the Institute of Chartered Foresters and the Forestry and Timber Association are arranging a series of three seminars in England and Wales for landowners and managers: For further information contact Gilly Anderson (see end of seminars section for address).

Working Woodlands in the West Midlands

21st November

The Technology Centre
Wolverhampton Science Park

This seminar aims to give landowners and managers in the West Midlands the chance to hear the latest research information on a selection of topical issues important to the region. Topics will include:

- The role of forestry in flood management: a look at the results of the TADPOLE study.
- Mammals: friends and foes.
- What's new in conservation and control?
- What is the Heartwoods Initiative?
- Taking forward regional woodfuel initiatives – the role of Technical Development Branch.
- Wood fuel production – which small-scale systems and equipment are suitable?

Bill Heslegrave, Forestry Commission Conservator for the West Midlands, will chair this event, with speakers from Forest Research, the Heartwoods Initiative and the Forestry Commission.

A New Focus on Ancient Woodlands

14th November

The Wessex Centre
Sparsholt College, Winchester

This interactive seminar aims to update landowners and managers in Southern England about key work by Forest Research and colleagues on the management of ancient woodlands. Topics will include:

- The place and importance of ancient woodlands in lowland Britain.
- The approach to the restoration of ancient woodlands on the public estate, illustrated by case studies.
- Managing natural regeneration.
- Actively managing forest deadwood.
- Assessing threats to the health of ancient woodlands, including Sudden Oak Death.

Alan Betts, FC SE England Conservancy, will chair this event, with speakers from Forest Research and Forest Enterprise.

Establishing Quality & Native Woodlands

15th October

International Pavilion
Royal Welsh Showground
Builth Wells

This seminar aims to give landowners and managers in Wales the chance to:

- Discover the key requirements for growing quality timber in Wales.
- Find out what Ecological Site Classification can offer those planning to establish new woodlands.
- Re-examine best practice for native woodland expansion.
- Hear how the new Welsh National Inventory of Woodland and Trees can inform those who are considering new woodland expansion.

Professor John Good, Chairman of the Forestry Commission Advisory Committee for Wales, will chair the event. Speakers from both Forest Research and FC Wales will summarise key points on the above topics for those thinking of applying for the new Forestry Commission Welsh Challenge Grants.



For more information on any of the above seminars, contact:

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CONFERENCES

Can't See the Trees for the Bogs!
Options for the Removal of Conifer Crops
from Peatlands.
2-3rd October, Hexham, Northumberland

This conference, organised by Northumberland Wildlife Trust, will be dealing with the following subjects:

Day 1.

A field trip to look at:

- Dealing with smaller trees. Visit to Grain Heads Moss – felling and chipping, ditch blocking on cleared mires, killing standing trees with chemicals and ring-barking.
- Dealing with mature trees. Visit to long moss to see the results of conventional harvesting, cable craning and felling to waste.

Day 2.

- Border mires: history and ecology. Angus Lunn.
- Peatland projects in the EU. Michael O'Briain.
- Forest design plans and bogs. Graham Gill.
- Project putputs: tree removal, regeneration removal, ditch blocking and wader pools. Bill Burlton, Simon Webb and Duncan Hutt.
- Monitoring results including testate amoebae research. Roger Smith and Dan Charman.

Day 3.

An optional fieldtrip to Kielderhead National Nature reserve. This trip will only run if there is sufficient interest.

For more information, contact:

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Symposium: Managing Woodlands & Their Mammals

22-23 November, London Zoo

Subject matters will include:

Background

- Historical aspects of woodlands. Keith Kirby
- Use of woodlands by mammals—past and present. Derek Yalden
- Overview of contemporary woodland management. Bob McIntosh

Management of woodlands to benefit mammals

- The importance of woodland for bats. Henry Schofield & Patrick Fitzsimons.
- Woodlands for dormice. Fiona Sanderson, Paul Bright & Roger Trout
- Managing woodlands for red squirrels. Peter Lurz, Steve Rushton and John Gurnell.
- Managing woodlands for others. Rob Strachan, Geoff Liles and Tom Fairfield.

Conflicts between mammals and woodland managers

- Grey squirrel management in woodlands. Brenda Mayle
- Deer management in the uplands. Andrew Raven
- Lowland deer: why and how they need managing. Robin Gill

Introduced species

- *Glis*; a case study of an introduced local pest. Pat Morris
- Reintroducing pine martens - habitat constraints and enhancement opportunities. Johnny Birks, Peter Lurz, John Messenger and Steve Rushton
- Muntjac and conservation woodland. Arnie Cooke

Woodlands and the small mammals

- Seed predation and damage by small mammals to farm woodlands. Roger Trout, Niall Moore & Richard Jinks
- Clear cutting, field vole abundance and the breeding performance of tawny owls in spruce forests. Steve Petty & Xavier Lambin

Conflicts in woodland use

- Impacts of domestic stock on woodlands. Helen Armstrong & David Bullock
- Managing mammals in the Forest of Dean. Rob Guest
- Diseases of woodland mammals. Paul Duff

Woodlands and their mammals in the future

- Can we monitor woodland mammals - successes and gaps. David Nobel & Stephen Harris
- How will our woodlands be managed in the future and the implications for mammals. Ruth Jenkins & Simon Pryor.

Jointly organised by the FC and Mammal Society.
For booking information contact:

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