

Spring 2006

The Dormouse Monitor

Newsletter of the
National Dormouse Monitoring Programme



Welcome

The 2006 recording forms were sent out earlier in the year. If you didn't receive copies please contact Susan on susan@ptes.org or call 020 7498 4533 for your copies.

As you know we have been successful in returning captive-bred dormice to several counties from which they'd become extinct in the last century. 14 sites have been populated, establishing dormice as far north as Yorkshire.

Once again we need your help. The number of captive animals is low and we would like to add some new youngsters to the captive breeding programme to prevent inbreeding. Ideally we would like 6 pairs of young that are unlikely to survive the winter in the wild. They'll be well looked after at Paignton and London Zoos.

Pat Morris has stated that "dormice young need to weigh at least 12-15g (0.4-0.5oz) to be sure of having sufficient fat to last until the following spring; smaller animals are likely to die over winter. So, juveniles found in October or later, weighing less than about 15g, can be taken into captivity without affecting the wild population of the following year."

If you think that the numbers in your area are generally good and you think you may be able to provide us with a pair (if possible) or at least one animal this autumn, please email nida@ptes.org or call 020 7498 4533. We will arrange a special licence with English Nature and can provide nest boxes and arrange for the animals to be picked up and taken to the zoos.

As ever we remain so grateful for all your hard work. Good luck with your checks this year.

Jill Nelson
Chief Executive, PTES

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The National Dormouse Monitoring Programme is funded by PTES and English Nature. The scientific work is based at Royal Holloway, University of London. The Dormouse Monitor is compiled by Nida Al Fulajj & Susan Sharafi

Cover image kindly provided by Pat Morris. Printed by NPL Printers on environmentally-friendly paper.

Hibernating dormice



We thought you might like to see our photos of this little dormouse sitting on our bird feeder at about 10pm on Monday 23rd January, just before the cold weather arrived. We are about 1100ft above mean sea level on Dartmoor but have some lovely thick and very old paddock hedges. We have seen odd hazelnut shells and thought we may have dormice but were surprised to see this one on top of a hanging birdfeeder in the car park next to our front door.
Wendy & Dennis King, Chagford Devon

Pat Morris replies, *It is normal for hibernators to wake up during the winter, although dormice don't usually leave their nest because there isn't enough food about to make it worthwhile. Obviously bird feeders change that somewhat. Dormouse activity during winter in Devon has been reported before by Gordon Vaughan, whom I think has recorded them in every month of the year.*



...continued

This nest box is in Bunch Lane Woods Haslemere, Surrey. Last year the box was used by a single male in August, but was found empty on both the September and October box checks. We were surprised to find this dormouse hibernating in the box this March. Dave Williams, Surrey Wildlife Trust



Dave Williams

Whilst I was clearing out and repairing my dormouse boxes in early spring I found a number of dormouse nests as usual. However I was very surprised to discover a hibernating dormouse under one of the nests on a layer of damp leaves. There are ventilation holes on the floor of the box and the dormouse looked fat and healthy. Will this dormouse survive in unstable conditions where the temperature is fluctuating and the moisture content will not remain consistent? asked John Perrin, Woolaston Lime Coppice, Gloucester.

Pat Morris replied *The moisture and insulation conditions appear to have been sufficient so far over the majority of the winter and would probably be okay for the remainder of the hibernation period for this dormouse. I'm a believer in leaving things alone, even if the animals might end up dead. A technical point is that nobody has a licence to take adult dormice into captivity from hibernation, only underweight juveniles.*

In February a party of BTCV volunteers came to assist with some coppicing work at Woolaston Lime Coppice. One of the workers heard a 'sawing' sound and, on investigation, found a dormouse in a hibernacula about 18 inches from the stool he was working on. The animal was not visibly injured but was breathing rapidly and giving a short loud squeak after each expiration. It was also not curled up as would be usual for a hibernating dormouse. For safety we moved the dormouse, together with the remains of its hibernaculum, to a damp area under the leaves of a nearby coppice stool that was being retained, and covered it with layers of damp and dry leaves. In early March I revisited the site and found the remains of

the original hibernaculum but no sign of any dormouse. There was no evidence of any disturbance whatsoever. Is it possible that the animal had been disturbed rather than injured, and that its 'panting' had been a way of generating enough heat to rouse itself from hibernation and move away to safety to go back to sleep? asked John Perrin, Woolaston Lime Coppice, Gloucester.

Pat Morris replies, *You are absolutely right. This is characteristic behaviour for a disturbed animal waking from hibernation and*



Coppicing work is carried out at a time of year least likely to disturb dormice.

PTES

Dormice in Planted Ancient Woodland Sites

For some time it has been Forestry Commission policy to remove conifers from Planted Ancient Woodland Sites (PAWS), and to restore these sites to native broadleaved woodland. We know that the 'traditional' habitat of the hazel dormouse is coppice and mixed broadleaved woodland, however previous evidence has alerted us to the fact that they are sometimes found in conifers. This has broader implications as we prepare guidelines to advise foresters on the best practice for restoring PAWS to broadleaved woodland. Consequently, here at Forest Research, we have been looking at how dormice are using conifers so that we can protect them whilst forestry restoration takes place.

We are currently monitoring 21 such sites throughout southern England and Wales. At each site we have put up at least 50 nest boxes, mainly within coniferous blocks. These boxes are monitored monthly and a survey of the surrounding vegetation was carried out too. In 2004, 15 of the 21 sites recorded dormice. Over the previous three years two of the other sites have also recorded dormice, giving a total of 17 out of 21 sites recording animals at some stage within the life of the project.

Results

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

- The amount of shrub layer vegetation nearby has a significant influence on nest box occupancy.

Testing thinning methods

At the same time we also carried out trials into different thinning regimes at one of our sites in Worcestershire to test their effects on dormouse numbers. Four different types of thinning regimes were tested in an intensively monitored 17ha area containing around 350 boxes.

Mechanised thinning with small group fells

This was carried out in the winter using a wheeled harvester to cut down the trees, and forwarder (see right) to extract the logs. Access racks (the removal of an entire row of trees) were cut at every seventh row. One third of the trees in the row next to the rack were also removed. Small groups of around 12 x 6 trees were felled at intervals along the rack to create a "string of beads" effect.

Chainsaw thinning with small group fells

This method is similar to mechanised thinning but we replaced the harvesting machine with a chainsaw operator. The forwarder was used for extraction.

Normal mechanised thinning

A harvester and forwarder were used in the winter. Access racks were cut every seventh row, and around a third of the trees between the racks were removed. There were no small groups of trees felled with this treatment.

Mechanised clear fells

Access racks were cut every seventh row and a harvester and forwarder were used in the autumn to clear fell areas of around 0.3ha. The idea was to carry out operations on a similar scale to hazel coppicing.



Dormice appear to be making use of any materials that they can find - both day and breeding nests have been found woven within the cascades of conifer needles that collect on the lower branches of the trees (right). Hibernation nests are built beneath the conifers, as shown marked by the yellow and green tape to the left.





A forwarder is a 6 or 8 wheel articulated machine used to transport logs, which have been cut to prescribed lengths, from the forest floor to a stacking area alongside the forest road, ready for uplift by timber lorries.

After all the harvesting operations were finished, the forwarder was able to safely lodge trees across each rack in an attempt to retain as much connectivity as possible between the rows of trees. Monitoring is continuing at Ribbesford to look at the effects of these operations on the dormouse population.

Possible implications for forest management

- Large-scale clear felling of conifers in a single operation will adversely affect dormice populations.
- Any clear felling should push animals towards suitable habitat rather than cutting them off from it.
- It is important to carefully plan thinning operations to retain connectivity across the site.

Felling operations, depending on their scale, should be carried out at the least detrimental times for dormice which are as follows:

- Large-scale operations (those that seriously disturb the whole canopy or forest floor) should take place in September and early October when animals are mobile. Compensation measures, such as the lodging of trees across racks, must be pre-planned and immediate.
- Small-scale operations (those involving under 25% of a continuous woodland area containing largely suitable habitat) should take place between September to October or mid-December to the end of March. This includes chainsaw felling and stacking timber along racks. Large machinery may be used for small clear fells, coppice coupe sized clear fells and limited scale thinning.
- Clear felling large areas, e.g. 5ha or over 25% of a wood, should be carried out in autumn. Our suggestion is that narrow strips may be cut in winter, wider strips during autumn.

For more information on managing conifers (and other types of woodland) for dormice, see chapter four of the

new *Dormouse Conservation Handbook*, published by English Nature. If you have any dormice in conifers, or want more advice or information about this project, contact:

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Tel. 01420 22255
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Access racks (the removal of an entire row of trees) were cut every seventh row in each of the different thinning regimes that were being trailed.

Health surveillance of dormice for reintroduction

We continue to carry out health checks of all dormice that are part of the reintroduction programme. By ensuring the dormice have a clean bill of health we are able to prevent the accidental introduction of serious infectious disease into wild populations which could have deleterious effects on their numbers and dynamics. Close monitoring of the health and behaviour of captive-bred dormice is also important to minimise the welfare risks of reintroductions, so that only dormice which are fit enough to survive are released.

This programme has been running since 1999 and we have monitored over 330 dormice since then. We screen the animals for parasites which might affect their fitness, in particular one suspected alien parasite, a cestode or tapeworm. It is found in several animals every year and we are not sure whether it is found in wild animals so if we cannot get rid of the parasite then these animals are held back in the captive populations.

We also carry out a post mortem on any dormice which die before we can release them. Over the past five years, there have been several cases of a liver



Dormice are monitored for at least 6 to 8 weeks before being released into the wild.

disorder in the dormice. Although the exact cause has not been determined, only one case occurred in 2005, following a change in the protocol for administering anti-parasitic treatments. Thank you to the many people who contribute to the health surveillance programme.

Iain McGill, Zoological Society of London

Another dormouse found in unusual habitat

In late April this year Mark Warn, of the Forestry Commission, contacted PTES with a report of a dormouse sighting. Forest craftsmen were carrying out some fence maintenance at Moreton Forest, Dorset. It is a former heathland site that contains a mixture of birch, gorse and pine scrub. To their surprise they found a female dormouse on Throop Heath, a site that has had no previous known dormouse records. On consulting Pat Morris we discovered that there have been sightings of dormice in birch on former heathland near Winchester. Pat stated that, "this sort of record emphasises the need

to be vigilant and not to assume that dormice are absent just because the habitat is 'wrong'. It would be nice to get some monitoring done in a few 'atypical' sites."

At Moreton Forest, as at other sites, there is much heathland restoration work being carried out. The discovery of dormice in sites like these means that this species cannot be ignored when creating and carrying out management programmes for habitats with which dormice are not commonly associated.



Dormice at Hanningfield Reservoir, Essex

Following the discovery of a previously unknown dormouse population in the woodlands surrounding Hanningfield Reservoir last year, Essex & Suffolk Water adopted the dormouse as its biodiversity focus species for 2005.

The project got off to a great start – during an early check we found a whole dormouse family squeezed into one nest tube! A larger-scale monitoring project was then set up at the site with the help of Robin Cottrill of the Essex and Suffolk Dormouse Project and Mark Iley of the Essex Biodiversity Project. Staff were able to get involved with this and other dormouse activities through the company's staff volunteer scheme 'Just an Hour'. They really enjoyed getting out of the office and learning more about an endangered species.

53 boxes were installed in the woodland around Hanningfield in April 2005, the majority in a conifer plantation. During the monthly box checks over the summer and autumn at least one dormouse was found

Monitoring of the Hanningfield Reservoir dormice was carried out monthly last summer and autumn, and at least one dormouse was found each time.



Essex & Suffolk Water

most months and multiple nests recorded every visit. October was the most successful month with four animals recorded and eight nests.

The discovery of this dormouse population also presented a perfect opportunity to train volunteers in monitoring and handling. Essex & Suffolk Water staff, Essex Wildlife

Trust employees and other interested volunteers received expert training from Sue and Bob Ward. Monitoring of the Hanningfield population will continue. Other Essex & Suffolk Water sites will also be surveyed in the hope of discovering further dormouse populations.

Helen Jacobs, Environment Advisor



Essex & Suffolk Water

2005 NDMP results

A big thank you to everyone who monitored dormice last year. 971 visits were made to 178 sites and a total of 3,155 dormice were found. From the table below you can see that this is the highest number of sites being checked for five years. Unfortunately the number of dormice found is lower than in 2004, but higher than the previous three years. The total number of nest boxes at all these sites is 12,787 which means that a massive 64,426 checks on nest boxes were carried out during the year.

Year	2005	2004	2003	2002	2001
Sites	178	167	159	141	139
Visits	971	890	919	875	810
Dormice	3155	4296	3099	2644	2646

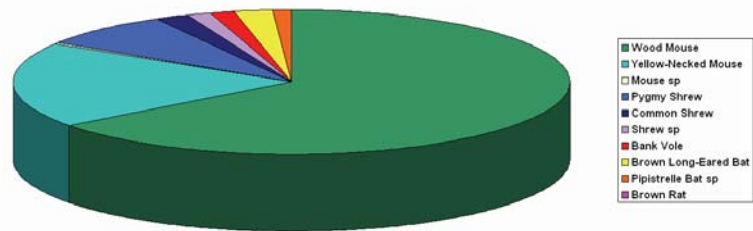
Table showing number of dormice recorded 2001-2005

Unfortunately at 27 sites no dormice or nests were found. The largest number of dormice found in one box was ten. This consisted of a lactating female with nine young weighing 7.5g each. The heaviest animal found in October was a male weighing in at a chubby 39g.

Other mammal species found recorded in 2005

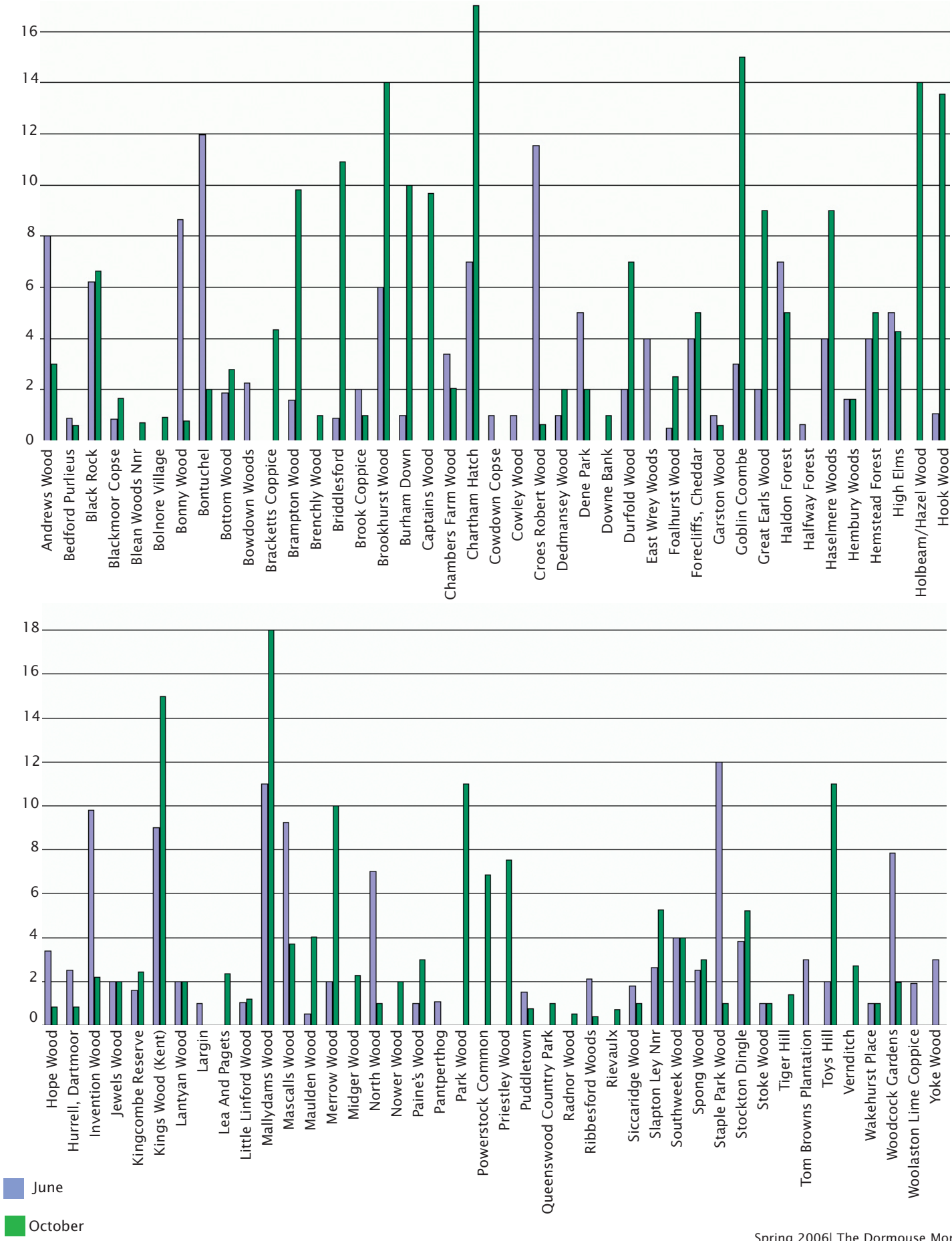
Monitors from 128 sites returned records for other mammals found in dormouse nestboxes. The most numerous species being the wood mouse. The most unusual animal to be encountered was a brown rat.

Brown rat	1
Bat species	1
Mouse species	8
Pipistrelle bat species	18
Bank vole	22
Shrew species	22
Common shrew	32
Brown long-eared bat	33
Pygmy shrew	126
Yellow-necked mouse	310
Wood mouse	1046
Total	1619



Allison Looser

Number of dormice per 50 boxes 2006



Dormouse nest construction, Little Linford Wood

John Prince and Tony Wood, who monitor the nest boxes at one of the 1998 reintroduction sites, Little Linford Wood, in Buckinghamshire, decided to carry out a detailed examination of the nests built by the dormice in their wood. In December last year and January 2006 they collected all the dormouse nests from the boxes. In addition to the boxes hung at the normal height they also examined eight experimental boxes installed at a higher level, between 11 and 15 feet, and found a further five dormouse nests.

Each nest was placed in a sealed plastic bag and the nest box number, woodland compartment and the proximity of any honeysuckle were all noted. A total of 63 nests were examined, using a microscope in some cases to identify any questionable vegetable tissue. Three of the nests, although exhibiting signs of dormouse occupation, were probably used by wood mice at some stage. Also one nest was thought to have been constructed with wild clematis rather than honeysuckle as no honeysuckle was growing nearby.

Whilst some nests were just a woven ball of honeysuckle bark, grass or a mixture of the two, the majority had leaves to create an outer layer, which were separated and identified. Twenty six of the nests each contained over 100 leaves, with one containing more than 500, collected from six different species of tree. In addition to the whole leaves there were remnants of leaves that had either been broken up by the dormice or had disintegrated during their time in the nest.

Construction material	No. of nests	%
Honeysuckle bark	46	73
Grass	14	22.2
Moss (wren's nest)	2	3.2
Honeysuckle or clematis	1	1.6

Species	No. of leaves	% of nest
Hazel	2703	40.43
Sallow	1599	23.91
Hawthorne	681	10.16
Oak	596	8.91
Field maple	524	7.84
Silver birch	422	6.31
Dogwood	100	1.50
Ash	40	0.60
Honeysuckle	23	0.34
Total	6686	100



Honeysuckle bark is the preferred material used by dormice in their nests, along with hazel leaves.



Hazel dormice weave a very neat, well-constructed nest compared with wood mice.

...continued

Other leaves that we found in a few nests included wild rose, black bryony and a couple of bramble.

Other items found in the nests:

Fine strips of silver birch bark	4 nests
Sallow seed head with fluff & seeds	1 nest
Headless body of pygmy shrew	1 nest
Convolvulus stem (high level)	1 nest
Feathers (max of 3)	3 nests
Moth wings	2 nests
Bracken	2 nests

There were several nests partly constructed with the bark of honeysuckle in areas that did not contain any evidence of this plant. Also, in the case of three of the nests, the nearest honeysuckle was between 25 and 35 feet away. The dormice must be willing to travel some distance from the nest to collect this particular material.

In four nests John and Tony were surprised to find thin strips of silver birch that had been peeled from the main trunk and woven into the structure, and in two nests bracken had been taken from the ground below the boxes. In most sections ash is abundant and close to the boxes, however, only 40 ash leaves had been used as construction material, 39 of those in just one nest.

So why is honeysuckle so important in a dormouse nest? Honeysuckle flowers were once used medicinally for headaches, lung diseases and asthma. Maybe there is a herbal association with its presence in the nest. Also horticultural reference books state that it can be grown in sunny spots as it is "heat resistant", so are there any thermal values to the bark that the dormouse takes advantage of? There is much yet to discover and many questions to answer.

This year John and Tony will take a closer look at the surrounding vegetation of the nest boxes to help identify more leaves found during this survey, and also the species of grass used.

Suffolk reintroduction site

While cleaning out their nest boxes at Bonny Wood in Suffolk earlier this year, the Suffolk Wildlife Trust (SWT) monitoring team were surprised to find a hibernating dormouse in one of the boxes. Later that morning, whilst checking the boxes at Priestley Wood, the 2000 reintroduction site, they found another hibernating dormouse in a box.



These were not the first dormice that had been found hibernating above ground in Suffolk this season. Last December, just inside a garden next to an ancient hedge (Parish Boundary) on the outskirts of Needham Market, another hibernating animal was found. This is approximately 1km as the crow flies from Priestley Woods. Unfortunately the owners did not immediately know what they had discovered and cleared the surrounding vegetation. Simone Bullion, of SWT, visited their garden a day later and constructed a log pile in which to re-site the nest. The dormice at Priestley seem to have moved some considerable distance as there is little chance that they were at this location previously. Adjacent to the hedge there is some scrubby habitat, but the other hedgerow connections are not that good.

This is great news as it was always hoped that the dormice would repopulate the countryside and not just stay in one place. Spread means that the habitat continuity is good and therefore evidence of a healed and functional countryside rather than fragmented and isolated, non-viable, habitat patches.

News, courses & information

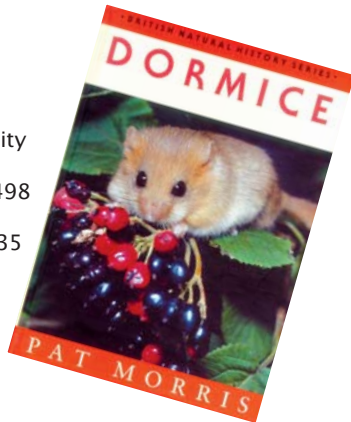
How to manage woods for dormice

This one day training course, taught by Dr Pat Morris, will be held at Mallydams Wood Wildlife Centre, East Sussex on Wednesday 11th October. For further details and a booking form call Susan on 020 7498 4533 or email susan@ptes.org

Dormice, Dr Pat Morris

Britain has two species of dormouse - the hazel dormouse, which is attractive, cute, and rarely bites, and the edible dormouse, which is noisy, bad-tempered and bites like hell! Pat Morris has spent 20 years researching both species of dormouse, and here you can find the results of his work.

Dr Pat Morris was Senior Lecturer in Zoology at Royal Holloway, University of London. Please call 020 7498 4533 to buy your copy for £10+£1.35 (p&p)



Global warming rings alarm for dormice

Barbara McMahon in Rome, The Guardian June 8, 2006

Climate change is bringing animals out of hibernation prematurely, making them lose weight and causing them stress, Italian scientists have reported. Spring-like temperatures too early in the year are waking animals up sooner and putting their feeding and breeding habits out of kilter with the environment. Dormice, whose name comes from the Anglo-Norman word *dormeus* meaning sleepy one, now hibernate for five and a half weeks less on average than they did 20 years ago.

“The ecosystem is a very delicate chain that is being disturbed by these unseasonal temperatures,” Dr Spunzar of the department of animal biology at Rome’s La Sapienza University said. She explained that species are beginning their spring cycle much earlier when insects, berries, flowers and seeds are not as plentiful, so there is competition for nutritional resources.

The research, conducted for Italy’s National Research Council, is included in a report that addresses the issues surrounding the Kyoto agreement, the international treaty under which some industrialised countries have agreed to reduce their emissions of carbon dioxide and other greenhouse gases.

