WINTER 2004

The Dormouse Monitor

Newsletter of the National Dormouse Monitoring Programme

ENGLISH NATURE
Royal Holloway University of London
PEOPLE'S TRUST FOR ENDANGERED SPECIES
ZSL LIVING CONSERVATION
TRACKING Mammals PARTNERSHIP

Welcome To The Dormouse Monitor

If you haven't already done so, please send in your monitoring data as soon as you possibly can, either by post or online. The sooner we get all the records, the sooner the analysis can be carried out.

You may remember that this year, we also asked you to record sightings of mammals other than dormice that you found in your boxes. Don't forget to include these forms if you were able to find the time to do it.

If you wish to enter your data online please see page 8 for more details. We are very keen to find out how many monitors make use of this. If you have any comments, do let us know.

Best wishes

Valerie Keeble.

Valerie Keeble
Chief Executive, PTES

P.S. The Tracking Mammals Partnership would like to know how many volunteers contribute time and effort to the NDMP. Please call us on 020 7498 4533 and let us know how many people, on average, help at your box checks.

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The scientific work is based at Royal Holloway, University of London, Egham, Surrey TW20 0EX and the organisation is carried out by PTES.
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The Chief Nutter Takes The Nut Hunt To Germany

In September, Pat and Mary Morris went to eastern Germany to support a dormouse project there. The idea was to attempt a 'nut hunt' like those we have had in Britain, to map the present distribution of hazel dormice in Saxony.

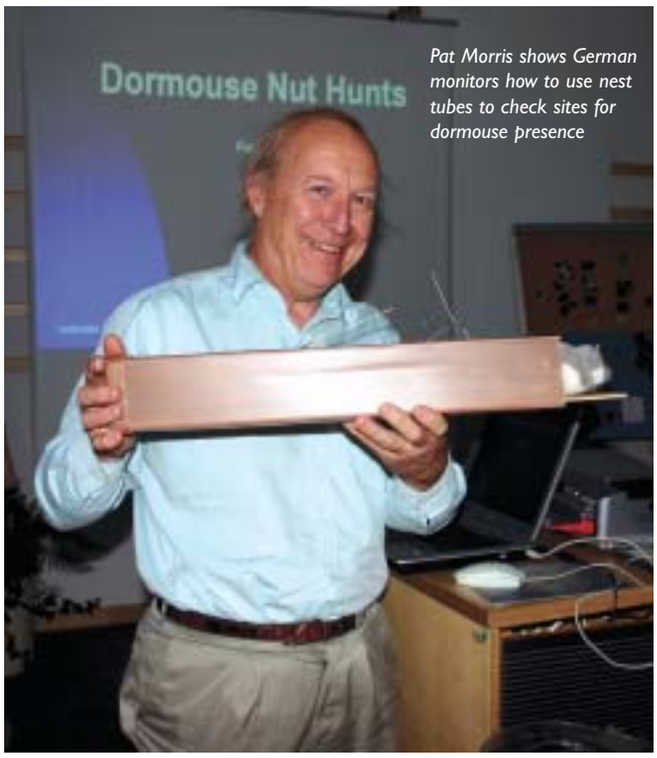
A local biologist, Sven Buchner, had arranged a one-day dormouse mini-symposium, followed by a press day launching the German Nut Hunt. The meeting was held in the Sachsische Schweiz National Park, a spectacular area of gorges and forests on the border with the Czech Republic.

Pat described the research and conservation efforts based in Britain, then outlined the operation and success of our own national nut hunts. The double meaning of the word "nutter" was lost on the Germans, except for those who spoke English, and they had an amusing time trying to explain the joke to their colleagues.

The other contributors to the meeting described local dormouse distribution, from which it was clear that the animals are more abundant there than in Britain, with surprisingly high population densities in places, shown by dormice forming up to 30% of the prey of certain woodland owls. In Britain, fewer than 1% of owl pellets contain dormouse remains. Marked animals have also been recorded making journeys of 250m or more over open fields to reach isolated copses.

Of special interest was a presentation by Heiko Mueller-Steiss who has been monitoring the use of 'green bridges' by wildlife in Germany. Apparently, dormice can and will use bridges that carry a strip of specially planted shrubbery over a road, enabling them to reach areas of habitat that would otherwise be cut off when new roads are built. In Britain, our first dormouse bridge is still being built (in Kent) and it is encouraging to know that such projects do work, at least in Germany.

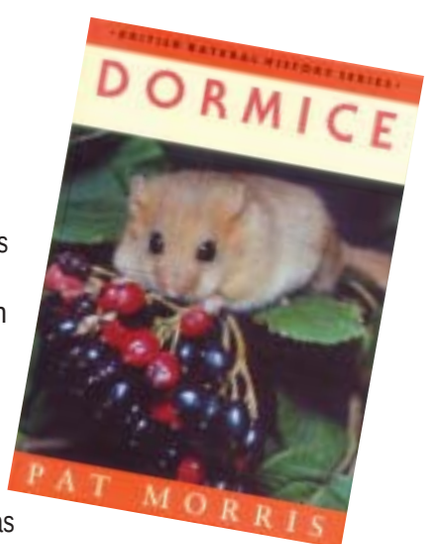
The symposium was followed by the press and publicity day, energetically supported by groups of eager school children. Unfortunately, it rained and the TV people (feeble lot!) didn't show up. Nevertheless,



Pat Morris shows German monitors how to use nest tubes to check sites for dormouse presence

the German Nut Hunt is now underway and it is to be hoped that the weather stays fine for a few weeks to enable lots of nutting to take place before snow blankets the ground for several months as it does every year. Central European winters can be very harsh, but the dormice survive well. It's the changeable and unpredictable weather we have in Britain that causes trouble for them.

British Natural History Series
Dormice
Dr Pat Morris
£9.99+£1.35p (p&p)



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, until 2002.

Please call PTES on 020 7498 4533 to buy your copy.

Building From Reintroductions

The work of restoring dormice populations to counties from which they have been lost is the subject of a partnership programme between English Nature, the People's Trust for Endangered Species, Royal Holloway, University of London, and the Common Dormouse Captive Breeders Group. It's been going on now since 1993 and 13 reintroductions have been carried out in 11 counties.

Fiona Sanderson's recent work, funded by PTES, looked at the outcomes of these reintroductions and has shown that, in most cases, dormouse populations have expanded and spread well beyond the original reintroduction point. However, there are no cases where dormice have yet spread beyond the wood into which they were reintroduced. It is likely that the expansion of these populations is limited by the isolation of the woods. If the original aim of the reintroductions of spreading populations is to be realised, attention must now focus on linking the reintroduction sites to other suitable woods in the area, so the dormice can spread along corridors of appropriate habitat, such as hedges and tree lines. Some preliminary work on linkages has been done at some sites, but more will be needed if we are to deliver real benefits to the species as a result of the reintroduction programme.

So PTES and English Nature are now carrying out a project to identify and prioritise the actions required to improve linkages between woods around the reintroduction sites to assist the spread of introduced dormouse populations.

Jennie Caddick will be based at Cloisters House for three months this winter and her report will be ready by mid-March. The next step will be to act on it!

How To Manage Woods For Dormice

After a decade of work, researchers now have a very good idea of how to manage woodlands for dormice to ensure that they not only survive but also recover here in the UK. Dormice need woodlands that contain a large number of different tree species, with a canopy that doesn't produce too much shade, yet allows the animals to move freely among the tree tops, and a sturdy undergrowth made up mainly of fruiting hazel, bramble and honeysuckle. Domestic stock such as cattle, sheep and pigs, should be kept out as they are likely to damage the understorey and disturb hibernating dormice in winter. And if there are nearby woodlands connected by tall, overgrown hedgerows, so much the better.

Pat Morris at Bramley Frith

Now the important thing is to get the message out to all the people who manage woodlands nationwide. They are the people who can really make a difference on the ground and take practical steps to promote the recovery of this delightful creature. So each year PTES and EN jointly run an intensive one-day course for woodland managers, foresters and conservation officers, which combines both lectures in the classroom on dormouse ecology and opportunities to go into the field, see dormice and learn how woods and trees might best be managed for them.

Learning to identify chewed hazelnuts

Students over the last few years have been very fortunate in having our leading dormouse expert, Dr Pat Morris, formerly of Royal Holloway, University of London, as their tutor, ably assisted by Susan Sharafi. This October, as in previous years, several dozen 'students' made their way to Bramley Frith Environmental Education Centre near Basingstoke in Hampshire for their action-packed day.

The morning was spent learning about dormouse ecology. Dr Morris explained the need to focus on dormice and why they are such good examples of 'flagship' species and excellent 'bioindicators' of woodland quality. Students learnt how to discover if dormice are actually present at a site and discussed other factors critical to dormouse survival such as woodland size and composition, and the need for surrounding hedgerows.

After lunch it was out into the field. Bramley Frith is made up of twenty-seven hectares of ancient woodland surrounding Bramley Substation. Andrew Cleave, the Centre's Warden, has been managing the site and monitoring the dormice for over ten years. He was, as always, very happy to show everyone around the site, talk about all that he's achieved and open a few of the dormouse boxes to see if anyone was at home. A high note on which to leave and, we hope, the motivation to go home to their neck of the woods and begin to incorporate dormouse-friendly measures into their own plans.

Managing Woods for Dormice

If you would be interested in attending our course in 2005 please contact Susan at susan@ptes.org or please call 020 7498 4533.

Dormice In Bat Boxes

Savernake Forest, Wiltshire

A group of PTES supporters were visiting Savernake Forest in Wiltshire when a rather unusual visitor turned up in a bat box– a dormouse! A volunteer from the Wiltshire Bat Group (WBG) was carrying out a routine check of the bat boxes in the forest when he spotted the dormouse. It was nesting in a flat bat box, 5 metres up an oak tree. The group saw its golden tail disappearing up the tree. There are records of nutshells that had been opened by dormice being found in the forest back in 1993 but this is the first ever record of a live dormouse in Savernake Forest, Wiltshire.

Zoe Greenwood, PTES

Shere Woodland, Surrey

The Surrey Bat Group monitors a large number of bat boxes throughout the county. At one site, a National Trust woodland in Shere, members put up 23 bat boxes in 2000, but, until this year, they had not been checked for several years. All the boxes are woodcrete Schwegler 2FNs, 16 cms in diameter and 36 cms long (see photo); much larger than standard dormouse boxes. They are all mounted between three and five metres from the ground. Seven are in beech and one is on field maple.

During a check in October this year, surveyors found dormouse nests in eight of them, and dormice were actually seen in two. Some of the nests completely filled the bat boxes. Amazingly, one dormouse was actually photographed in the box, not easy when you are perched four metres up a ladder!

The surrounding habitat is certainly not what we would normally classify as being suitable for dormice. The woodland itself was badly damaged in the 1997 storm and all the large beech trees were lost. A few field maple and tall pines were left standing and they are now between 30 and 40 cms in girth. There is no ground vegetation.

Next year, in partnership with the Surrey Bat Group and the National Trust, I plan to install dormouse boxes. The plan hasn't been finalised yet, but will probably entail placing boxes in some, but not all, of the trees to see if the dormice continue to use bat boxes in preference to the standard wooden dormouse ones. We may also put some in an adjacent area which looks much more suitable for dormice. All the boxes will be checked in cooperation with the bat group. The Schwegler boxes themselves are not easy to check as the only way to look in is to remove the front panel, which gives the dormice an easy escape route.

It will be interesting to see the results. Will the dormice prefer concrete to wood or will they use the wooden nestboxes and allow the bats back into theirs? (Incidentally, evidence of bats was found in 6 of the boxes).

Dave Williams, Surrey Wildlife Trust

Dormice At The Edge Of Their Range

In Britain, the hazel dormouse reaches the northern limit of its geographical range in the north of England, where there are only three known populations. The distributional range of the dormouse in Britain has undergone a 50% reduction over the last century, leaving these populations in Cumbria and Northumberland isolated from those in the south. Analysis of data from the NDMP by Fiona Sanderson has revealed a 45% decline in abundance over 7 years at dormouse sites situated on marginal upland, and this includes these three northern sites. The NDMP has also shown that population densities are extremely low at these locations; on average 0.47 animals per hectare compared with between 3 and 5 per hectare nationally. The combination of isolation and low population density makes these populations particularly susceptible to extinction.

The aim of my research was to gain an understanding of the foraging ecology of these northern dormice, with a view to informing practical conservation. I employed a comparative approach by radio-tracking dormice at these northern sites and comparing results with those of previous studies carried out on populations in Somerset and Hereford (Fig. 1.).

Fig. 1. This figure shows the location of study sites in the UK where dormice were radio-tracked. The three most northerly dots represent the sites used in this study whilst the remaining two are the southern sites used in the previously published work.

These southern populations were at higher population density, and exhibited a much lower rate of decline. Although all sites were broadly typical of old, species-rich woodland, specific differences in the tree species composition were also explored.

I tested two hypotheses. First, that home range size and dormouse mobility would not differ significantly between the north and south, as previous studies have shown dormice to have consistently small home ranges in British woodland. Second, that tree and shrub diversity would be lower at the northern sites, since this is known to decline with increasing latitude in Britain. A combination of low tree and shrub diversity and low dormouse mobility could reduce the probability of an individual being able to access sufficient food sources. Therefore this could partially explain the declines of northern populations. However, on analysis of the results I was forced to reject both hypotheses and look for other possible causes of decline.

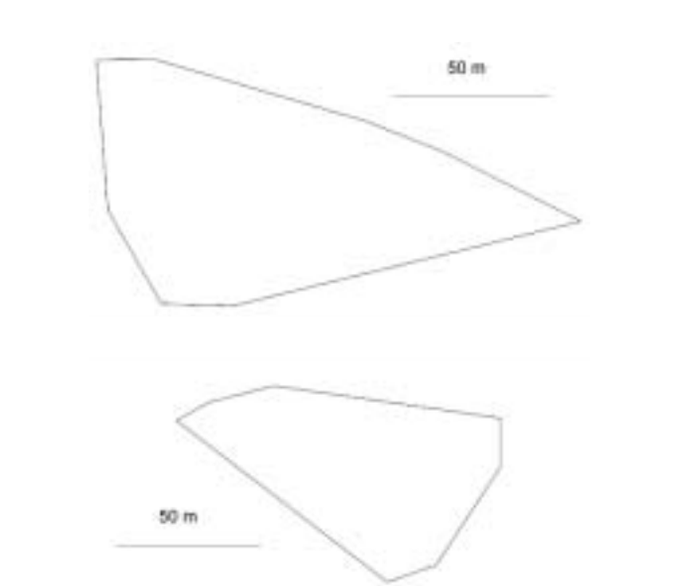


Fig. 2. *This figure shows the home ranges (Minimum Convex Polygons) of two female dormice tracked in June. The larger is of a dormouse from the north of England, the smaller is from a dormouse from the south of England. The scale is the same for both ranges.*

The average home range size of northern dormice was more than twice that of the southern animals (Fig. 2.). From radio-tracking I was also able to calculate the total distance travelled each night and the maximum distance that a dormouse travelled from its nest. The figure for both was significantly greater for the northern dormice (Table. 1.). Importantly this greater mobility of northern dormice represents a higher energetic cost to foraging and is therefore likely to compromise reproductive output and survival.

The greater mobility of northern dormice could be explained by greater isolation of food resources. This phenomenon could also result from lower food quality, if more trees must be visited per night in order to meet nutritional requirements. (My data supports this contention, as the minimum number of trees visited per night was significantly greater in the northern sites.) Lower food quality could be a consequence of the colder climate in the north of England.

	North	South
Home range	0.91ha	0.39ha
Total distance travelled	200m	149m
Max. distance to nest	74m	57m

Table. 1. *This table shows the mean values for different measures of dormouse mobility at the northern and southern sites. All differences were statistically significant.*

Diversity indices (Shannon index) showed that species richness of trees and shrubs was significantly greater in the north, contrary to expectation. These results imply that dormice are only able to persist at the edge of their geographic range at locations where overall tree and shrub diversity is particularly high. A greater overall diversity could increase the probability of a suitable dormouse food species being in flower or fruit at any one time. This may be of particular importance in northern England where such events are likely to be of shorter duration than in the south of the country.

Two implications for practical conservation emerge. It is probable that reintroductions in the north of the country will be more successful in woodland with high diversity, similar to those where populations have persisted naturally. Also, selective planting of suitable dormouse food species could increase the overall tree and shrub diversity and thereby increase the availability of food resources.

Andy Swan, Royal Holloway, University of London

Tracking Mammals Partnership

Jessa Battersby has spent much of the last year meeting representatives from all the 23 organisations participating in the Tracking Mammals Partnership and learning about the monitoring schemes they are running. Between them, the partners have 14 schemes or single-species surveys currently underway and these are collecting useful information on 34 of the 60 mammals that are normally found in the UK. (These figures do not include seals or cetaceans).

The National Dormouse Monitoring Programme, run by PTES and English Nature in collaboration with RHUL since 1991, is, of course, one of them. It was the first annual surveillance programme for a single mammal species to be set up and is now covering more sites than ever before, almost 200 of them.

The first annual report of the Tracking Mammals Partnership will be published in February next year. It will give background information about the partnership itself, details of all the surveillance work that's going on at present and information about each individual species and the progress made to date on monitoring it. Needless to say, preparing such a comprehensive report is a huge challenge and we hope that it will be widely read by everyone with an interest in mammals, including policy makers in government. We hope, too, that dormouse monitors will find it interesting to see how the work they are doing is contributing to the overall picture.

www.jncc.gov.uk/species/trackingmammals

We need more upland sites

Most of the sites within the NDMP are prime dormouse habitat. We would like to include more upland and other sites from non-traditional habitat in the programme. If you know of any dormouse sites that fit the categories below please contact us.

1. Any sites within Wales
2. The edge of their current range in Shropshire and further northwards
3. On high ground on the moors in SW England

Dormouse Monitoring Data Online

You can now enter your dormouse data online, though we are, of course, still accepting paper records from anyone who does not have access to the internet or would prefer PTES to continue entering the data.

To access the NDMP entry page from the PTES website please go to www.ptes.org. Then click on the "Our Work" tab and select the BAP menu item. Only authorised users will be able to enter data, so you will be asked to register in order to be able to login to the data entry part of the site. You will receive a password within two working days and then you will be able to enter your data online.

You can view and edit this year's data and you will also be able to view your site data from previous years. You will not be able to see the details of other people's data but you will be able to view some summary statistics from the NDMP. An online set of instructions will be available to help answer any questions you may have about how to use the data entry system.

We believe online data entry is a useful tool – if you are uncomfortable with it or do not have the facilities to enter data online that's just fine – but we hope some of you will try this new facility and find it useful and interesting.

2004 NDMP Data

Thank you for all your hard work in gathering the data again this year. Please either visit our website and input your data online (as detailed above) or send us your forms as soon as possible.
Thank you.