

The Dormouse Monitor

Newsletter of the National Dormouse Monitoring Programme

Welcome to this Spring 2002 edition of *The Dormouse Monitor*. We hope you like the new look! Thank you to everyone who has contributed towards it. If you have any news you would like to share with others in future editions, or would like to write a short article, please get in touch. Our contact details are on the back page.

We always have a few extra copies available, so do call us if you know of anyone who would like one.



Understanding Dormouse Population Change

Many of you will be familiar with the indices of population change produced by organisations such as the British Trust for Ornithology for most common birds and the Centre of Ecology and Hydrology for many British butterfly species. It is vital to produce accurate measures of population change in order to inform conservation policy, and this is something that we have long hoped to achieve through the National Dormouse Monitoring Programme (NDMP), to which you all contribute.

However, this requires many years of monitoring data from a large number of sites in order to produce an estimate of change that can be representative of population change both across the whole country and in different regions. The map overleaf shows where the dormouse monitoring sites are. The results of our work are only possible because of the many years of hard work you have all carried out.

Estimating dormouse population change isn't that easy. We could just take an average of the number of dormice in each site each year. The results would be



affected, however, by which sites were monitored in each year – if a site that is particularly good for dormice joins the NDMP, it would push the average for that year up when there may really have been no change overall – it's just that no-one counted those dormice during the previous year. New sites join the NDMP all the time and old sites are occasionally not monitored in certain years for very good reasons – like the Foot and Mouth outbreak last year. I therefore needed to use a computer

programme that could estimate, from the available data, what the numbers of dormice were likely to be in sites that weren't monitored in any particular year. Fortunately such techniques have already been developed by scientists working on monitoring data such as for bird censuses.

The same computing techniques can be used to remove annual variation from the line showing long-term trends. As you all know, dormouse populations vary considerably from year to year. For some purposes, such as looking at the effects of weather on abundance, these variations are very interesting. However, if we want to see if there is any long-term change in dormouse populations they can be confusing. I used a statistical technique known as smoothing where the computer calculates the years where sudden changes in the trend occur

and produces a trend line with fluctuations in abundance between years removed – so that we can see the wood for the trees.

We thought that the population changes might be different in sites that are a long way north or west, as this is the edge of the dormouse range in Britain. So as well as including these sites in the estimate of change across the whole of Britain, we looked at them separately. Graph 1

At present there are over 150 sites in the National Dormouse Monitoring Programme. In order to produce accurate measures of population changes, it is important to have many years of monitoring data from a large number of sites. This is being achieved with your help.



The map shows the dormouse monitoring sites in the NDMP.

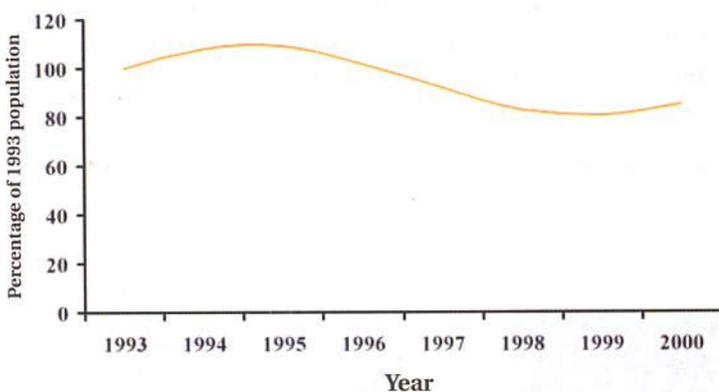
below shows the population changes since 1993 for all sites that could be included in the index, and Graph 2 shows the changes in abundance in northern and western Britain. I used the May and June counts to calculate the indices, as these are more reliable than counts at other times of year, as dormice don't use the boxes as much in midsummer, and autumn counts, which are very useful for other research, include juveniles which may not survive the winter and may therefore give a falsely optimistic picture of the population.

The abundance of dormice in the northern and western region has decreased by almost 50% in the last eight years, whereas nationally it has changed very little. The reasons for this population change are likely to be complex. We already know dormice

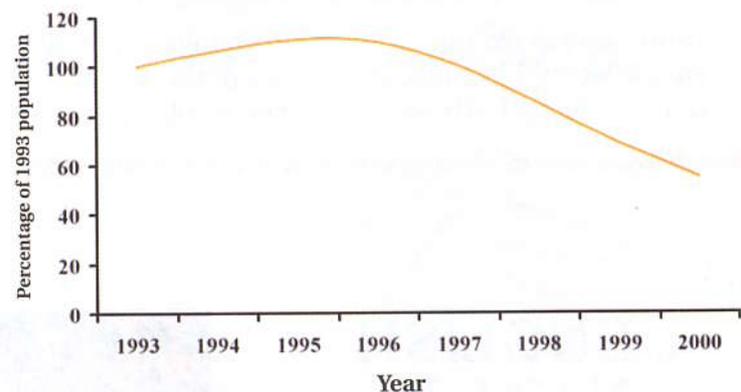
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Graph 1: Changes in dormouse abundance in Britain, 1993–2000



Graph 2: Changes in dormouse abundance in northern and western Britain, 1993–2000





and 1995, but more so in north-western areas, and that spring is also becoming more rainy, which may affect dormouse survival.

Although collecting data on declining dormouse populations can be a discouraging task, we need these data in order to measure population change at all. We are therefore particularly grateful to those observers at sites where dormice have declined and who have persisted in their nestbox checks nonetheless. We need counts from as many sites as possible – good and bad – so that we can be confident that our estimates of population change are accurate.

Fiona Sanderson, Royal Holloway, University of London

have disappeared from many north-western areas. It is possible that the reasons for this historical change are still affecting dormice today. There are fewer sites suitable for dormice in these areas and they live at lower densities here than in southern Britain. This means that they are likely to be more affected than southern dormice by decreases both in woodland size and in connections between woods in the form of hedgerows. If an area of wildlife habitat becomes smaller and is no longer large enough to support a viable population, there is often a time lag between the decrease in habitat size and the decline of the population. This may be what is happening to dormice in the north and the west of the country. Dormice may also be affected by climate change more in these regions of the country. Researchers at the University of East Anglia in Norwich have shown that winter precipitation in Britain increased across the country between 1961



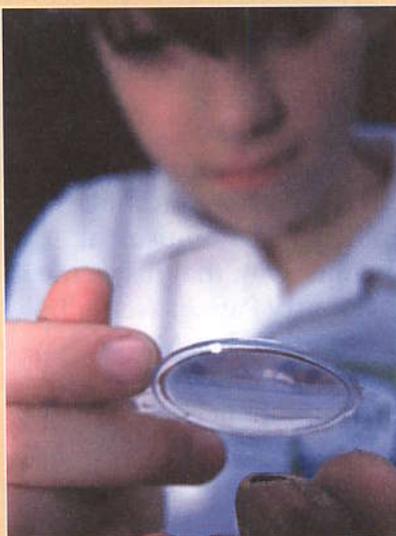
2001 Records

Thank you all for your help last year with the Monitoring Programme. It was a particularly difficult year on account of Foot and Mouth Disease. Many box checks could not be made because of access restrictions. It was also not a good year for breeding and many sites recorded fewer dormice than in previous years.

Altogether, there were 744 visits to 148 sites and a total of 2646 dormice were recorded. In 2000 there were 822 visits to 140 sites and 3879 dormice were found. Two dormice weighed in at the hefty weight of 38g in October. One was found at Larkey Valley Wood, Kent, and the other at Armstrong Wood, Cornwall.

The graphs on page 7 show the number of dormice (weighing 7g or more) per 50 boxes at all sites with more than 50 boxes monitored in October. As

GREAT NUT HUNT UPDATE



Despite the bad weather this winter, enthusiastic nutters have continued to search for gnawed hazel nuts in woodlands all over the country. The Great Nut Hunt aims to repeat the success of the previous survey in 1993, to establish the distribution of dormice and to see whether changes have taken place in the last decade.

Nuts have continued to arrive at Royal Holloway, where the Chief Nutter (alias Dr Pat Morris) has checked them all for correct identification, based on the characteristic tooth marks on the nutshell. A weird assortment of packets, including film canisters, matchboxes, pill pots and bank moneybags, has yielded up their nutty contents for scrutiny.

By mid March, 26,573 nuts had been checked for dormice. Alas, many of them turned out not to have been eaten by dormice, but by grey squirrels, wood mice and bank voles. But in spite of this, we have still received evidence of dormice at no fewer than 45 sites.

There were some surprises. Many counties that we know to have been strongholds for the dormouse in the past, such as Wiltshire and Dorset, have recorded very few sites this time around. Only three sites have so far been identified from these two counties. We hope that, as more forms come in, more sites will be highlighted.

The Chief Nutter, Royal Holloway, University of London