

NATIONAL DORMOUSE MONITORING SCHEME



Newsletter for 1995 (July 1996)

Here is a belated report on the National Dormouse Monitoring Scheme for 1995. Once again we apologise for its late arrival. This was partly our fault, having too much else to do before Easter. However, the main delaying factor was that a lot of data sheets did not arrive until after Christmas, so the time set aside for analysing the results slipped by while we chased up missing record forms and by the time we had sufficient to work on, it was too late to get the job done because of other commitments such as exam marking! So, do please send in this year's forms as soon as the season has ended, and anyway before Christmas. That will help a lot to get a report out earlier next year.

The monitoring scheme continues to expand, making the dormouse one of the best monitored mammals in Britain! This is particularly opportune, since the Rio Biodiversity Convention commits nations to monitoring their wildlife resources properly. So, everyone's efforts on the dormouse front are most welcome and we can use the dormouse to highlight the need for progress in keeping tabs on other British mammals. In 1995 over 2400 nestboxes were checked, some of them every month, April- November. Five hundred dormice were found in October alone.

Few or no dormice were reported in May, the coldest for 27 years apparently. It is likely that many animals either extended their hibernation or re-entered hibernation after a brief period of activity. This might have resulted in loss of many small dormice, born too late the previous year to gain sufficient fat reserves to tide them over an extended hibernation period. This emphasises the difficulties of living in an unpredictable climate. Last summer was a pretty unusual one too, being very hot and dry for quite long periods. It's hard to know exactly how the dormice respond, it probably varies from site to site. If the weather is so dry that all the fruits shrivel and fall off the shrubs, then life could be very difficult for dormice, yet wet weather is certainly not to their liking. Rain depresses activity and they are very sensitive to temperature. One degree cooler at midnight shortens their activity period by an average of 13 minutes!

A particular problem is that in warm dry weather the animals seem to use their nestboxes less and camp out somewhere else. It is then hard to know where they are or how many dormice are present. They seem to be very scarce one month, then large numbers reappear in the boxes, following a change in the weather. This seems to have happened in many of the dormouse sites monitored in 1995. Several observers reported low numbers and low body weights in mid to late summer, but a bumper crop of young in the nestboxes later on: there were 30 animals in the boxes at Ashford Hangers (Hampshire) as late as November. The dormice there did particularly well in areas which featured heavily fruiting wild cherry trees. Moreover, some dormice remained active as late as December, at least in some southern sites. A lot of these were late born young. The numbers at Crab Wood were boosted in this way for example. Such animals are unlikely to be fat enough to survive hibernation before being overtaken by winter. Consequently, it was decided to add some of these doomed juveniles to the captive breeding colonies.

In Essex, nestboxes were put up at 16 sites with some success, but low numbers. This is probably due to poor habitat, but dormice are thin on the ground in Essex and Suffolk, perhaps for climatic reasons too. In such areas, nestboxes and good management become all the more important if the climatic disadvantages are to be overcome. The Essex Wildlife Trust tested boxes at different heights and confirmed our earlier studies suggesting that height is not a crucial factor. High boxes may be advisable to reduce vandalism and unwanted human disturbance, but are no more attractive to dormice. In Siccaridge copse the dormice were reported to be using shredded Clematis bark for nesting, having collected dry bluebell leaves the year before. Clearly there is some flexibility about nesting materials, it doesn't always have to be honeysuckle.

As part of this report you will find a graph of the numbers of animals at each site in October, per 50 nestboxes, to compare with previous years. This time the top scorers were Crab Wood (Hampshire) and Kings Wood (Avon), with Spong and Yockletts (Kent) doing well as in previous years. The most northern sites (Ulpha, Staward Gorge and Roudsea) again had low numbers, probably reflecting the difficulty that dormice have surviving in northern England. Nevertheless, dormice at the most northerly site, Staward Gorge (Northumberland), did breed in 1995, but their survival must be precarious so far north. However, some southern sites didn't do that well, so there is not a consistent pattern, probably because habitat quality matters a lot too. Certainly at Wakehurst Place the nestbox area is becoming heavily shaded by big trees which cut down the light falling on the hazels and other shrubs, reducing the quantity and quality of food they produce. This highlights the need to be vigilant about dormouse sites and consider the need for periodic thinning.

It is also true that a single snapshot view in October may not accurately reflect the true picture, so we expect better analyses based on those sites that have been monitored monthly. Some of these have been studied for long enough that there is now sufficient data to undertake such an analysis and we have begun the process of looking at the data to see if there are any clear messages to be noted. For example, the number of animals in October at Black Rock (Somerset) oscillate around 14 adults per 50 boxes over 10 years. An analysis by Jill Birch showed that the ups and downs, reflected breeding success (but also mirrored the timing of births, and body size) and were significantly influenced by the weather, sometime even of the previous year.

Another analysis by Paola Reason, using the monitoring data from 13 widely separated sites, showed that dormice attained much higher population densities in hazel dominated woods than in oak dominated ones and they were fatter in October. However, numbers were also more variable in hazel woodland, which is worrying because fluctuating populations suffer a higher risk of chance extinction than lower but stable ones. Even in good hazel woods, densities were lower in the north and west. Populations in hazel sites showed signs of density-dependent regulation over winter, whereas this was not so at oak sites. In summer there was little difference between the two habitat types. The practical implications of this are complex, but the analysis also showed that honeysuckle was the best single predictor of dormouse density in all habitats, perhaps reflecting its use as food and bedding.

Long term monitoring data also provide important information about breeding in this species. Dormice seem to breed late, long after mice and voles have raised their first litters each year. Late breeding may be one reason why dormice are scarce; they don't have time then to produce more than one or two litters in a summer (and the later born young may well not survive if winter comes

early as it did in 1994). Delayed breeding in turn may be due to torpor, where the animals go cold for several hours each day to save energy at times of food shortage or in bad weather. Torpor is particularly prevalent in early summer, when other species are busy breeding. In 1995 only 2 out of 29 monitored sites reported young in May, 3 others (in Kent and Hampshire) had young in June and 18 others did not report litters until August or later.

The monitoring data now extends geographically and back in time so that analysis of litter sizes and perhaps (later!) body weights can be attempted to unravel the effects of latitude, weather and habitat. A crude comparison of average litter size over the years suggests bigger litters in the south east than elsewhere, and small ones in the north.

The main lessons to be learned so far are that long term data are essential if we are to avoid jumping to conclusions which do not take account of natural ups and downs from year to year. It is also extremely valuable to have some sites that are monitored frequently, to smooth out variations from one month to the next. It would be helpful if more sites could be checked monthly, perhaps by recruiting more helpers. The other major lesson is that we need more sites to provide better coverage of the country. It may be possible to get grant aid from English Nature (eg from the Species Recovery Programme or the Reserves Enhancement Scheme) or their counterparts in Wales, to put up nestboxes at new sites to add to the national monitoring scheme. This would be very valuable.

Other species

Yellow necked mice continued to appear as an impurity in the nestboxes. One near Winchester weighed 47.8g, the size of a small rat. It's possible that this species is an effective competitor for nest holes in some southern counties. In fact, if you have yellow necks present, it would be good to keep records of them too (on separate sheets, not mixed in with dormice please!) because the yellow neck is a rare and patchily distributed species about which we know very little. Even its distribution is a bit of a mystery. It would be helpful to know if they breed in boxes, what is the sex ratio at different times etc; we ought to be trying to understand this species better rather than just treating it as a nuisance.

At Briddlesford on the Isle of Wight, there was a mysterious occurrence of 4 wood mice in a box in mid June. All were males in breeding condition, which is odd anyway. Sexually active males do not usually live together (at least in mice). All were dead, one with a little blood on its face. How they got there and how they all died at once is a mystery. There is no poison used nearby and the nestbox hole was the usual size. A suicide pact seems the best explanation, failing any other, except perhaps importation and caching by a weasel.

Grants

The Forestry Commission have WIG grants. These are not for replacement hair, useful though that might be to some of us, but Woodland Improvement Grants. The grant consists of a single payment to bring a wood back into management to improve biodiversity. Coppicing for dormouse conservation is explicitly stated as an eligible programme of work (so is rhododendron removal, useful in some sites). English Nature also has grants to support its Species Recovery Programme, of which the dormouse is a key part. Management may be appropriate at some sites, see below.

Other dormouse news

We have begun studies of using implanted electronic identification chips in captive dormice. If all's well, we hope to extend their use to a wild population to obtain more information about longevity and long distance movements. Ear tattoos have been successful so far at Briddlesford and the reintroduction sites, and show some animals live to be more than 5 years old (so a few will probably reach 7 or more sometimes), and movements from one copse to another are surprisingly frequent, provided that there is good linkage by hedgerows. However, tattoos are awkward to use and only allow a limited number of individual animals to be identified. Implanted tags (that can be read like a supermarket bar code) can mark millions of individuals!

Reintroductions have continued as part of English Nature's very successful Species Recovery Programme. Those released in Cambridgeshire three years ago are breeding again this year, so that's good, but the status of the new Nottinghamshire colony may not be so good, we'll see. This year we managed to get 29 captive bred dormice to a beautiful copse in Cheshire, all individually tattooed. They were installed in their pre-release cages in June and allowed free after a week, in the middle of a spell of fine weather. Some have been seen since. One potential problem was the tawny owl that lives there already, but we can't do much about that! Previously we have noticed that captive bred dormice often come to the ground and are active in daylight, behaviour that is OK in cages but not in the wild where predators await unwary animals. The project has attracted a lot of interest locally and the Cheshire Wildlife Trust is doing a good job using it to spearhead conservation developments in the valley where the dormice now live, the first to roam free in that county for over half a century.

English Nature has published 'The Dormouse Conservation Handbook', containing information about habitat management, rescuing dormice from road developments and various topics that attract frequent questions. It costs £5 including postage from Telelink Ltd, PO Box 100 Fareham Hants PO14 2SX (01329 331300). As a regular contributor to the National Monitoring Scheme, you might want to try to get a free copy, but that would have to come from English Nature.....

A big survey was completed in 1995, based on systematic searches for dormouse signs in woods across the length and breadth of England. The results provide confirmation that climate is a significant factor limiting the success of dormice. They also show that woods need to be very large to support a secure population, at least 20 hectares and sometimes more than 50ha (120 acres) in areas where woods lie in open country. Conversely, where there are plenty of hedges and woods are closely linked, dormice can survive in quite small patches of woodland. This has important implications which go far beyond mere dormice and impinge on national strategies for countryside management and also highlight the harmful effects of habitat fragmentation on many plants and animals caused by road building and other development.

So, there is plenty going on and dormice lead the way! Please continue to support this effort and we will try to keep you fully informed about progress. Thanks for all your help.

Pat Morris



Paul Bright



PS- and PLEASE do try to send in 1996 data sheets before Christmas, put it in your diary, now!

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National Dormouse Monitoring Scheme 1995

