DORMICE AND CONIFERS IN WYRE FOREST – 2004 UPDATE

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After the potential devastation of experimental thinning in Ribbesford during last autumn and winter it was with some trepidation that I looked forward to the first box check of the year in May. However having organised with Forest Research for the inspections to be carried out on the 17 May, my son Ben made an early, rather "badly timed" appearance on the 14 th. So unfortunately I missed the first glimpse of management success or failure. Luckily Jackie Neal from research branch can now find all the boxes unaided and was able to carry out a full search and report back. The good news was that 6 Dormice were found in the research area, which meant at least some had survived the operations. 4 of these were recaptures from 2003. This was the first great example of the advantages of micro chipping as there could be no doubt that these were the same animals that had survived the disturbance of thinning and were still in the same area. The total numbers found in the boxes compared favourably with previous years as box occupancy in spring and early summer seems to be less than later on in the year.

During the following months a total of 10 Dormice were recaptured from 2003. 39 animals were chipped in 2003 within the research area; therefore at least 26% of animals survived both hibernation and thinning. (Fig 1) This was far better than we expected and although we did not put a figure on possible survival rates we would not have dreamt of finding so many. Of course there may be more of them to find next year as the chances of finding any Dormice on just 6 visits a year to the nest boxes are about 30:1, if you count just one visit a month, and about 150:1 if you include the fact that Dormice have an average of about 5 nests they use throughout the year!

Looking at the effectiveness of each different type of treatment is difficult in the short term as we can only look at survival rates and dispersal. In the longer term we should be able to establish whether the different techniques maintain or improve Dormice populations as they develop. However in this first year there are already some striking differences. (Fig 1) These figures "suggest" that cutting with chainsaws and extracting along every seventh row with a forwarder during the autumn is the most destructive. However, Forest Research carried out a number of experiments using tennis ball size "Oasis balls" to replicate Dormice hibernation nests on the ground. These balls were placed randomly in grids of 24 throughout each treatment area. They were then surveyed after the trees had been felled to see what percentage of Dormice hibernation nests might have been destroyed in each area. These results are a little inconclusive and the raw data has yet to be analysed, but the initial findings appear to suggest that treatment 1 has the second lowest ground disturbance, (Treatment 4 having the least). There may be other factors to be considered that would cause these figures and some reasons may never been known.

Fig 1

Treatment No	No chipped in 2003	No Recaptured in 2004	% Recaptured
1	8	0	0%
2	8	5	62%
3	14	1	7%
4	9	4	44%
Total	39	10	26%

Reminder of Treatment Methods

Treatment 1 Hand cut with chainsaws and forwarder extraction - autumn Small areas of conifers were felled (approx 20m x 20m) to create small glades within the crop. The idea being that these would regenerate naturally in years to come and would provide viable habitat for Dormice by the time of the next operations in 5 years.

Treatment 2 Harvester operation with forwarder extraction – winter. Method as treatment 1.

Treatment 3 Harvester operation with forwarder extraction - Winter Normal thinning operation removing 30-35% according to standard thinning tables.

Treatment 4 Harvester operation with forwarder extraction - autumn. Two Larger areas of conifers were felled (approx 0.3 Ha). This replicates the normal coppice size in the broadleaf scrub habitat, which Dormice favour. Again this should regenerate naturally in years to come and would provide viable habitat for Dormice by the time of the next operations in 5 years.

32 new Dormice were found during 2004, which were big enough to microchip. Fig 2 shows the treatment areas they were found in. Again this seems to show that treatment 1 now has the lowest population within it as well as the lowest survival rates. Treatment 3 has by far the highest "population". This is the standard method of thinning throughout the country and has been considered detrimental to Dormice survival.

On the face of it treatment 1 seems to be the least favourable in terms of Dormice recaptured from 2003 and new animals found. However the area does have two major differences from the other treatment areas:

1. The whole of treatment 1 was worked. Treatments 2 and 3 had areas of the plantation that were difficult to work in and were therefore left unthinned. Treatment 4 had just 0.6Ha cleared which left the remainder of the 3.4 Ha undisturbed.
2. There was no "buffer zone" in treatment 1. Treatments 2, 3 and 4 were all adjacent to an area of conifer planted in 1995. This has now become good Dormice habitat with areas of impenetrable bramble and young scrub.

These two factors may be an important lesson when carrying out any operations where Dormice are present. Most of the recaptures and new animals found in 2004 were in these areas of little disturbance. Although animals have survived the operations and some have remained in the same areas, the recapture rates were greater in these "buffer zones". It is difficult to prove this as a fact in the first year after thinning and we may find more animals either chipped from the last two years or new ones moving into these thinned areas as they become suitable again.

Fig 2

Treatment No	No of Dormice chipped in 2004
1	4
2	7
3	13
4	8
Total	32

So much data has now been collected by Forest Research that it will take some time to analyse all the information. A best practice guide will be published in the future on how to thin conifer plantations to favour Dormice populations while reverting them back to native broadleaves. There does however need to be further work carried out in Ribbesford as we have only scratched the surface on the short term effects of these operations. How the Dormice fair in the coming years we can only wait and see! A further 50 boxes will be erected in an area adjacent to the research site that was replanted with Corsican Pine and Larch in 2000. This plantation has now established and has become quite dense with a good bramble edge. Through radio tracking we know that some Dormice have used the fringes for a few years. We now need to find out whether it has become suitable throughout the area. This will hopefully tell us at what stage a conifer plantation becomes attractive to Dormice. Who knows we may even find some of the Dormice that have been chipped and moved house!

2004 records

A total of 500 Dormice boxes are now in Ribbesford. Each box was checked for occupancy every month from May to November. Overall it has been another reasonably good year for Dormice. A total of 138 animals have been found, although through micro chipping and fur clipping we know that there were at least 106 different individuals – both these figures are better than last year. The original 300 boxes have been monitored since 1996 and showed fairly good numbers.

Chart 1 shows that the October count was about average.

Chart 2 shows total numbers found this year is equal lowest. However many of these boxes are nearly 10 years old and are showing signs of wear! Slugs and other residents have caused the bottoms to rot in many of them and the wood is often damp. Dormice seem to have a preference for dry, clean boxes and this may be one reason for the reduction in box residence. It is impossible to replace all 300 in any one year. However, in areas where Dormice were present but are no longer, new boxes will be erected in the hope of enticing them back!

No signs of Dormice have been found in the two remaining box schemes around Park House and on Wimperhill. The Wimperhill site is due for thinning in 2005 and the idea will be to clearfell a quarter of the area around where Dormice have been found for the last 8 years. The actual site with the boxes on will be left undisturbed. The hope is that the cleared area will regenerate as native broadleaves and will become suitable for Dormice in four to five years. Meanwhile they will hopefully survive on the existing area. Great theory – only time will tell!

Chart 1 - October Occupancy - 1996 to 2004

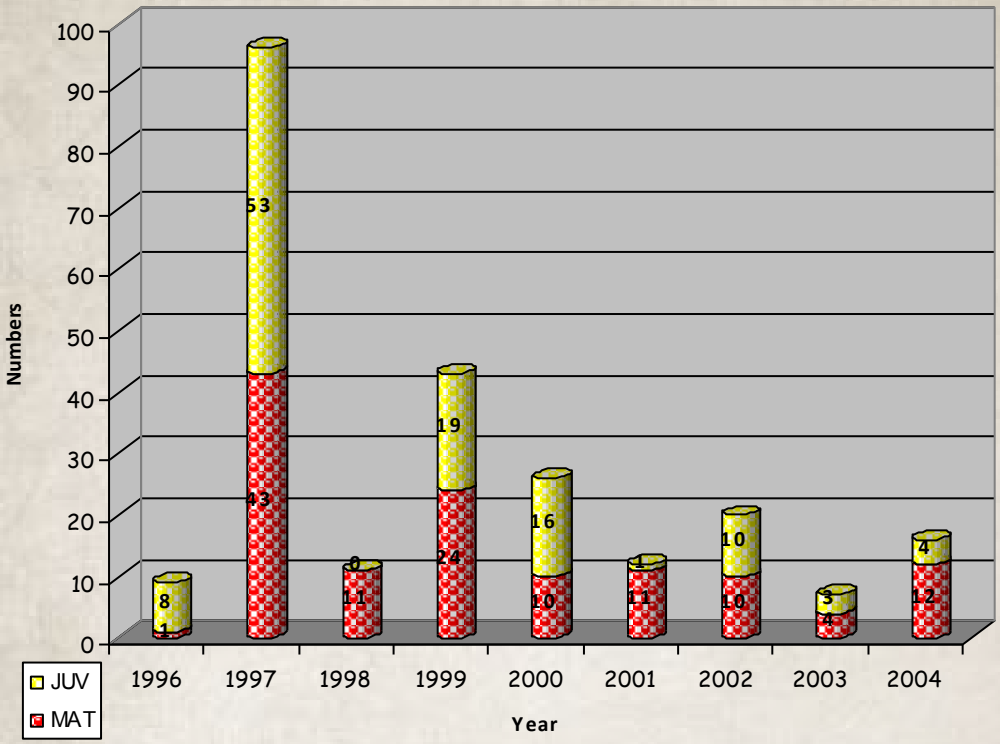

Chart 2 - Total No. of Dormice Found in Boxes - 1996 to 2004