Dormice and Conifers in Wyre Forest ~ 2009 Update

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2009 will not go down as a great year for dormice in Ribbesford! After a good breeding season in 2008 I expected to find good numbers in the woodland. The first inspections of the year, in May, went reasonably well, finding 10 surviving animals. This is about average for the last 6 years (see Fig. 1). Unfortunately this was as good as it got! The figures below show that for the rest of the season few animals were found in the research area of Ribbesford. These figures are slightly misleading, however as during the September inspections we took out all the unoccupied boxes from the research area as we were due to start phase 2 of the felling experiments soon after! This meant that during the October inspections we only checked 84 boxes from the areas where no felling was going to take place, rather than the normal 363 over the whole site. Although this may account for the lack of dormice found in October, the trend for the year was poor anyway, therefore we would not have expected to find good numbers in the October checks.

The main disappointment was the breeding success. After such a good year in 2008, just 6 young dormice were found in 4 boxes in 2009 compared to 34 in 17 boxes in 2008. (See below) This is such a marked difference and, although the weather was wet and cool during their breeding period, there is no logical explanation for this.

The total numbers of dormice found in the research area was also very poor. The total for this year of 38 is well below the 66 average over the last 7 years. Fresh nests were also in short supply with just 11 compared to 30 in 2008. This would suggest that for some reason the numbers are reduced as even if we did not find animals during our inspections, their nests are easily recognisable and would prove their presence in the area.

Number of juveniles : 2003 - 26 2004 - 34 2005 - 11 2006 - 22 2007 - 10 2008 - 34 2009 - 6

Fig. 1

	2003		2004		2005		2006		2007		2008		2009	
	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests
April									3	0				
May	5	1	6	2	12	2	15	3	20	3	5	2	10	1
June	14	0	11	0	14	2	11	8	16	0	9	11	7	1
July	5	0	19	0	17	5	6	4	8	2	11	1	4	5
August	9	1	13	1	8	0	4	1	7	4	16	8	8	0
September	19	4	19	0	8	4	10	3	8	0	8	6	8	3
October	16	0	28	9	4	16	18	8	2	0	18	2	1	1
Totals	68	6	96	12	63	29	64	27	64	9	67	30	38	11

A further 10 animals were found in the research area that were big enough to microchip - 4 adults and 6 juveniles. (See Fig. 2) This is again down on last year.

Although 38 animals were found in the research area in 2009, we know from micro-chipping that some of these were found on multiple occasions. From this information we know there were at least 20 different dormice in the area. This figure is worked out from the individuals chipped during the year or recaptured from previous years. It includes juveniles which were big

Fig. 2

Treatment No	No of Dormice chipped in 2004	No of Dormice chipped in 2005	No of Dormice chipped in 2006	No of Dormice chipped in 2007	No of Dormice chipped in 2008	No of Dormice chipped in 2009
1	4	0	3	1	0	2
2	7	4	12	5	11	2
3	13	3	9	4	2	3
4	8	3	0	0	2	2
Sausage	3	0	0	1	2	0
New plantation	Not surveyed	3	1	0	4	1
Unthinned area	2	0	0	0	3	1
Total	**37**	**13**	**25**	**11**	**24**	**11**

enough to chip, but not those which were too small to chip, as they may have been found again later in the year and chipped, therefore duplicating results. This figure is also the worst for the last 6 years (see fig. 3). However, all small mammal populations fluctuate and hopefully their numbers will increase again in the near future!

11 adult animals were recaptured from previous years, which is similar to 2008! (See Fig. 4) There is little change in the overall pattern of population within the research area. Treatments 2 & 3 continue to be the favoured areas for the dormice. Treatment 3 has been thinned using standard forestry operations, which is encouraging as this type of operation was thought to be detrimental to Dormouse populations. It will be interesting to follow this operation through to clearfell in the future to see how the dormice respond.

Fig. 3

Treatment No	No of Dormice chipped in 2004	No of Dormice chipped in 2005	No of Dormice chipped in 2006	No of Dormice chipped in 2007	No of Dormice chipped in 2008	No of Dormice chipped in 2009
1	4	0	3	1	0	2
2	7	4	12	5	11	2
3	13	3	9	4	2	3
4	8	3	0	0	2	2
Sausage	3	0	0	1	2	0
New plantation	Not surveyed	3	1	0	4	1
Unthinned area	2	0	0	0	3	1
Total	**37**	**13**	**25**	**11**	**24**	**11**

Fig. 4

Treatment No	Dormice found 2005	Recaptures	Dormice found 2006	Recaptures	Dormice found 2007	Recaptures	Dormice found 2008	Recaptures	Dormice found 2009	Recaptures
1	4	1	4	1	9	2	1	1	2	0
2	23	4	28	9	20	7	36	6	5	3
3	26	5	28	10	21	12	11	3	10	7
4	6	1	2	2	2	1	4	2	3	1
Sausage	0	0	0	0	5	0	10	0	0	0
New Plantation	4	*	2	1	7	0	5	1	1	0
Unthinned area	#	#	#	#	#	#	#	#	2	1
Total	**63**	**11**	**64**	**23**	**64**	**22**	**67**	**13**	**23**	**12**

* Not surveyed prior to 2005 # New boxes erected in July 2008 in woodland area adjacent to research area

Fig. 5

Micro-Chip number	Date micro-chipped	Age when micro-chipped	Sex	Number of boxes used	Number of recaptures	Approximate age in 2009
299781	May-06	Mat	Male	8	10	4
448574	Jun-07	Mat	Male	3	4	3
448973	Oct-08	Mat	Female	4	5	2
447963	Jul-08	Mat	Male	3	5	2
441700	Jul-08	Mat	Male	2	3	2
448446	Jun-08	Mat	Male	2	2	2
446781	Oct-08	Mat	Male	2	1	2
448173	Oct-08	Mat	Female	2	1	2
448985	Oct-08	Mat	Male	2	1	2
521043	Oct-08	Mat	Male	1	1	2

We have now been micro-chipping for 8 years and have therefore followed some individuals for a number of years. (See Fig. 5) Last year we had a 4 year old and two 3 year olds in the area. However, this year the oldest animal did not turn up again. This was expected as the average lifespan is 4 – 5 years. One of the other older animals also failed to show up. However, the other was recorded twice during the season – in May and September. (No. 299781). We found one 3 year old, chipped as an adult in June 2007. He has been found in just 3 different boxes but two of the boxes are over 250m apart! Eight further animals were recaptured after being chipped as adults in 2008, making them at least 2 years old.

Phase 2 - Experimental Planted Ancient Woodland Sites (PAWS) restoration

During late September and October the second phase of our experimental work to find the best method of reverting coniferous plantations back to native broadleaves, while maintaining Dormouse populations, began. It began during the September inspections when our Forest Research branch, with the aid of local volunteers, removed 279 boxes from the 17ha site. The only boxes which remained were those in the 16 mini clearfells created during the 2003/04 felling, (Treatments 1 & 2) in the 2 larger 0.3ha clearfells (Treatment 4) in the Sausage (an area of failed Corsican Pine planted in 1995 which has now created what looks like good Dormouse habitat) and in the "New Plantation" (an area of Corsican Pine and larch planted in 2001). The small areas of clearfell in Treatment 1 & 2 have now created some good Dormouse habitat. They vary considerably from thick broadleaf scrub (photo 1) Bramble (photo 2) to just Bracken (photo 3). However all of these habitats are suitable for dormice, although just 3 have had occupied boxes in them. The 2 areas of larger clearfell in Treatment 4 have also created good broadleaf habitat and have both had occupied boxes in them.

The aim of the project was to replicate the Treatments in each area over 3 phases to remove all conifer from the site. However, Treatment 1 was not replicated as finding chainsaw operators to work during the same time as the machine operators proved impossible. Therefore Treatments 1 & 2 were combined and worked with a harvester. (See original treatment prescriptions) The other 3 Treatment methods were repeated. Staff from Forest Research marked out a further 20 mini clearfells in Treatments 1 & 2 and 2 0.3Ha clearfells in Treatment 4. It proved very difficult to mark the mini clearfells while maintaining connections to the existing ones. It was important that these small areas were left undisturbed and that the dormice will still have arboreal access to them when they wake up in the spring. Due to the size of machinery it was very difficult not to cut them off from each other.

Late September saw the machines move in and unfortunately it coincided with the end of a decent dry spell! The work in the research area took less than a week to finish, therefore the disturbance to the dormice was fairly short but extreme! Most of the mini clearfells remained connected, with much of the credit going to the Harvester operator, who weaved his way "carefully" through the woodland! The lesson learned is that this method is far too fiddly when using large machinery. It may be possible using more traditional methods such as horse extraction, but is not practical on a large scale. We will, however, continue with this method until the conifers are all removed and see how the dormice fare! Treatments 3 & 4 were much more straightforward and were carried out leaving as many arboreal connections as possible.

We also carried out further thinning operations in Ribbesford outside the research area. We decided that the most practical method used so far in the research experiment was the creation of 0.3ha clearfells (Treatment 4). This technique is the traditional method of management in broadleaf woodlands for dormice so we decided to replicate this in the other areas. However, nature has a funny way of confusing things! There is a fungal infection called "Red Band Needle Blight" *Dothistroma septosporum* which is affecting many conifer species across the country and beyond. Unfortunately it infects Corsican Pine more than most


Photo 1 Phi Rudlin


Photo 2 Phil Rudlin


Photo 3 Phil Rudlin

and Ribbesford is largely planted with this species! A survey was carried out and showed that many of the Corsican Pine in Ribbesford were infected and in some cases it was felt that the trees would not last much longer! It was therefore decided to clearfell larger areas where it was infected the most. This was not the original plan, and is not ideal management for dormice. However there are large areas of Ribbesford still undisturbed and in Corsican Pine clearfell areas we have left other conifer species and broadleaves. In the future these areas will be viable for dormice again and there should hopefully be a reserve close by to move back in again!

Treatment methods

Treatment 1 (Hand cut with chainsaws and forwarder extraction - autumn). Small areas of conifers were felled (approx 20mx20m) 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. (This will now be carried out using machinery and combined with Treatment 2)

Treatment 2 (Harvester operation with forwarder extraction – Autumn / Winter). Method as Treatment 1.

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

Treatment 4 (Harvester operation with forwarder extraction - Autumn / Winter). Two larger areas of conifers were felled (approx 0.3ha). 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.

Conclusion

It is unfortunate that this has been such a poor year leading up to phase 2 of the research project. It would have been good to have had a successful breeding year to go into this operation, allowing them more chance of survival. However we cannot control such things and I believe that dormice are more resilient to disturbance and habitat change than many people give them credit for. Therefore I still believe that the future for dormice in Ribbesford is bright and I am optimistic for their long term survival.

Other Ribbesford records

The above figures are for the research area of Ribbesford. However this does not tell the whole story. There are now 578 boxes in the whole woodland: 363 in the research area and a further 215 in the surrounding woodland. 300 of these boxes have been in Ribbesford for over 14 years now. If we just look at these old boxes it gives a better idea of the population trends. 2009 has been a very poor year! Charts 1 and 2 show the number of dormice found in October and throughout the year respectively. 2009 has been the worst year on record – finding no animals in October at all. This is interesting in itself as most of these boxes are outside the research area and have been left undisturbed. Only two of these old boxes outside the research area were occupied during the whole season and no breeding nests were found. Ironically one of these occupied boxes was once again adjacent to the downhill mountain bike course, which has the most disturbance in the whole forest! These results seem to show the same trend as the research area and 2009 may be just an exceptionally bad year.

Wyre Forest Records

The 60 boxes on Forestry Commission land in the mainblock of the Wyre Forest have still not had any signs of dormice since 2002!

The only known site in Wyre Forest itself is towards the western end of Dowles Brook, recorded by David and Brenda Rea. 17 Dormouse boxes are now in this area. These are checked just twice a year, June & October. No dormice were found in these boxes. However, 2 nests were found in June and a further 5 in October, at least confirming they were still there. One dead dormouse was found in a bird box on site in May, although cause of death was unknown. Although a small site, this seems to mirror the Ribbesford season. Last year I reported 2 dormice turning up in a garden in Button Oak. They were both brought in by the family dog – well this dormouse hunting dog has done it again! In July 2009 the dog was seen chasing a small animal around the garden, finally cornering it against the downpipe, next to the house. The owner carefully extracted it and let the adult dormouse go in next doors bramble patch! I have put 20 boxes in the conifer adjoining this property, with no success – maybe they like the game of dog and mouse!

Wyre Forest Study Group