Dormice and Conifers in Wyre Forest 2016 update

PHIL RUDLIN

Photo 1. A Dormouse in a box, Wyre Forest, 23 June 2016 Phil Rudlin

Phase 3 of the experimental felling of conifers in Ribbesford Wood was carried out in the winter of 2015/16. This involved clearfelling small sections of conifers from 4 areas and thinning of another. With such 'invasive' operations, in an area with precious hibernating Dormice, the first inspection of the 380 boxes was undertaken with some trepidation. It was a relief therefore that we found 12 animals fit and well after their long sleep. Interestingly one of these was in a box on a post, as there weren't any trees left to put it on and no connection to others. I guess she'd woken up in a very different landscape than when she'd gone into hibernation and the box was the only safe haven above the ground. She was found again in a different box close by in July with 6 young, so she'd adapted well!

This was a good start to the season, especially considering 20% of the woodland had been clearfelled and a further 20% thinned. The following monthly inspections were even more encouraging, which peaked in July with 34 animals. This is the highest single count since comparable data began in 2004. Unfortunately numbers recorded from boxes reduced after this with only 7 animals found in October. This may seem a little strange as one would normally expect most animals to be found at this time of year. However, this is not the first time it has happened as Fig 1 shows. We know there are likely to be plenty of active animals about, but they just weren't in the boxes on the day we looked in them. We know, from radio tracking, that Dormice use multiple nest sites, so it can be just a matter of luck if they are using our boxes on the one day a month we take a peek. It is also possible that some of them had already gone into hibernation, although this is unlikely as the weather had not turned cold enough and the animals we found were very active and not ready to sleep.

These autumn figures were particularly frustrating as 2016 was the best breeding year recorded so far, with 47 young found (see Fig 2). It is worth noting that these were the total numbers of juveniles found in boxes and may not all be different individuals. 24 juveniles were micro chipped, but some were too small to chip so may, or may not, have been found again. (22 young were found which were 7g or less and therefore could not be chipped. 1 was recorded again after chipping).

21 fresh nests were found in boxes that weren't occupied during the survey season. It is not unusual to find empty nests as Dormice have up to 5 different nests within their home range and they can't be in them all at once! However, it is always interesting to know they are in the area. Photo 2 shows an empty Dormouse nest predominantly woven with bracken.

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Wyre Forest Study Group

Fig. 1. Number of Dormice found by the month

Fig. 1	2004		2005		2006		2007		2008		2009		2010	
	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	6	2	12	2	15	3	20	3	5	2	10	1	7	2
June	11	0	14	2	11	8	16	0	9	11	9	1	11	6
July	19	0	17	5	6	4	8	2	11	1	4	5	9	8
August	13	1	8	0	4	1	7	4	16	8	8	0	28	7
September	19	0	8	4	10	3	8	0	8	6	8	3	20	8
October	28	9	4	16	18	8	2	0	18	2	1	1	30	6
November	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Totals	96	12	63	29	64	27	64	9	67	30	40	11	105	37

	2011		2012		2013		2014		2015		2016	
	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests
April												
May	16	0	4	2	5	4	5	1	17	1	12	11
June	4	0	6	0	7	1	10	5	21	3	13	3
July	5	9	5	3	2	3	12	2	17	6	34	0
August	5	1	4	3	5	7	14	2	8	0	19	2
September	8	2	9	2	*	*	26	2	26	7	14	2
October	4	7	4	2	19	3	18	4	26	5	7	3
November	*	*	*	*	1	0	*	*	*	*	*	*
Totals	42	19	32	12	39	18	85	16	115	22	99	21

* Not Surveyed

Fig. 2. Number of juveniles found

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
34	11	22	10	34	6	35	5	7	17	26	32	47

Fig. 3. Numbers of animals chipped

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
35	13	25	11	24	11	39	13	16	22	30	24	30

Photo 2. Dormouse nest made with bracken Phil Rudlin

The total of 99 Dormice found in the 17ha research area was the third highest since 2004 and well above the average of 70 over the last 13 years. A further 30 animals were found that were big enough to microchip - 6 adults and 24 juveniles (see Fig. 3). The adults were either yearlings born the year before, or possibly older. However, it is impossible to age without permanent marking such as micro-chipping.

Although 99 animals were found in 2016, we know from micro-chipping that some of these were found on multiple occasions.

From chipping we know there were at least 48 different Dormice in the area. (This is the same as in 2015). This figure is worked out from the individuals chipped during the year or recaptured from previous years. It includes juveniles which were big 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 is an encouraging sign as it is well above the average of 36 over the last 13 years. 18 animals were recaptured from previous years. It has been interesting to see the trend over the last 13 years. If you look at chart 1 the number of captures each year shows some significant variations, where as the actual individuals confirmed is more constant. This is far more accurate and therefore useful information. It demonstrates the importance of micro-chipping which is the only way of following animals with any degree of certainty over a long period of time.

We have now been micro-chipping for 14 years and have therefore followed some individuals for a number of years. Of the 18 recaptures this year, 11 were over a year old. The oldest of these was 4, chipped as an adult in October 2013. This male was therefore likely to have been born in 2012 (see Fig. 4). Dormice can live up to 5 years old, although this is only the second animal we have found which has reached the age of 4. This, therefore, is considered a very good age for a small mammal. 4 of these individuals were found on 4 visits in 2016, 5 on 3 visits and a further 7 on 2 visits. These 16 animals were therefore seen on 45 occasions and could not have been recorded as individuals were it not for micro-chipping.

Chart 1.

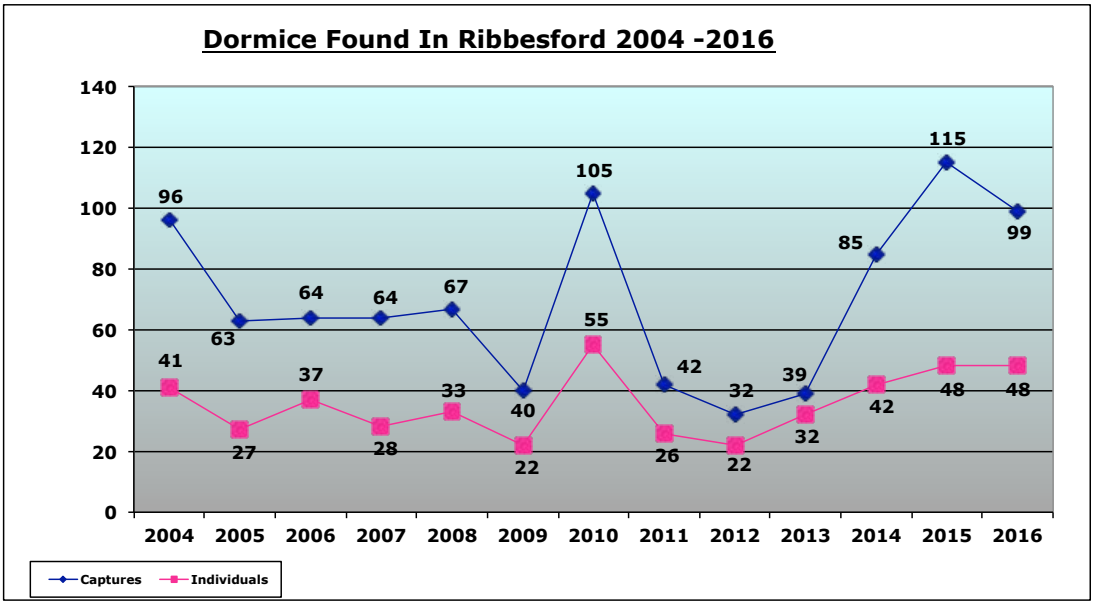

Fig. 4. Microchipping history

Micro-Chip number	Date micro-chipped	Age when micro-chipped	Sex	Number of boxes used	Number of recaptures	Approximate age in 2016
75150	Oct-13	Adult	Male	6	6	4
58405	Oct-14	Adult	Male	5	6	3
75466	Jul-14	Adult	Male	5	11	3
77863	Oct-13	Juv	Female	5	5	3
86427	Aug-13	Juv	Male	6	11	3
89719	Jun-14	Adult	Male	4	6	3
16126	Sep-14	Juv	Female	4	10	2
16315	Oct-14	Juv	Female	4	3	2
74399	Sep-14	Juv	Female	6	9	2
75186	Aug-14	Juv	Female	7	6	2
86640	Sep-14	Juv	Male	5	9	2

Conclusion

It has been a very encouraging year for Dormice in Ribbesford Wood. After three sessions of forestry operations since 2003, they are still thriving! The aim of the research project was to find the best method of removing conifer and reverting the area back to native broadleaves. We have succeeded in maintaining the population across the site. However, the data has showed some variations. Although Dormice are still found in the standard thinning area (Treatment 3) the numbers have shown a downward trend. Also all of the animals found have been on the edge of the area, close to Treatment 2 or the 'sausage'. The reason for this is the area is thinned evenly and the canopy is opened up to allow the trees more space to grow into, but the arboreal connections are lost for the Dormice to utilise. This would eventually close back in, but this operation is repeated in 5 years, thus not allowing enough time for recovery. The understory is improving, with bramble and some birch scrub developing, but much of this is destroyed again by the harvester and forwarder during subsequent operations. By using different extraction routes this can be improved, allowing this habitat more time to recover, but the operation leaves too much 'uniform structure' which is not suitable for Dormice. On the other hand, all the other treatments are far less uniform and leave at least half the areas undisturbed. Treatment 2 was certainly the most successful of the areas worked during the winter. This is possibly due to the fact it is in the centre of the research area and some of the animals may have sought refuge in the undisturbed half of it in the spring. It also has to be said that some of the animals were found in more than one treatment area over the years as they don't know the boundaries. The Sausage Area and New Plantation were not worked during the winter operations and were therefore left completely undisturbed. This is also good practice for any work involving Dormice as leaving such areas allows them refuge and a place to recolonise from if something goes wrong! Both these areas had good records of Dormice again which would be expected after the work during the winter of 2015/16.

I would like to thank Roger Trout and Andy Bucklitch again for their continued effort and support in monitoring and microchipping, over the last 16 and 6 years respectively.

I would also like to thank all other volunteers who have helped check the 380 boxes, for their sterling efforts in assisting with such a valuable project – without them it would be extremely difficult to maintain this level of monitoring, which will hopefully continue for the foreseeable future.

Reminder of research aim, treatment methods and areas

The aim of the research project, which began in 2000 in a 17ha area of Ribbesford, was to find the best method of reverting coniferous plantations back to native broadleaves, while maintaining Dormice populations. Four treatment types were used and compared:

Treatment 1 - (Hand cut with chainsaws and forwarder extraction – autumn / winter) 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 time. This operation was carried out during autumn / winter of 2003/04. (This area was combined with Treatment 2 in 2009/10 as finding chainsaw operators to fell trees proved impossible!)

Treatment 2 - (Harvester operation with forwarder extraction – autumn / winter) method as Treatment 1. Carried out during autumn / winter of 2003/04, 2009/10 and 2015/16.

Treatment 3 - (Harvester operation with forwarder extraction - autumn / winter) Normal thinning operation removing 30-35% according to standard thinning tables. Carried out during autumn / winter of 2003/04, 2009/10 and 2015/16.

Treatment 4 - (Harvester operation with forwarder extraction - autumn / winter). Two larger areas of conifers were felled (approx 0.3 ha). This replicates the normal coppice size in the broadleaf 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 time. Carried out during autumn / winter of 2003/04, 2009/10 and 2015/16.

Sausage: Area of failed Corsican Pine which has good structure, with oak, birch, bramble. So named as it resembles a sausage shape on the map!

New Plantation: Area planted with Corsican Pine and European Larch in 2000.

Unthinned area: Area adjacent to research site, on other side of forest track. 15 boxes erected in 1993 and a further 20 in 2005.

Wyre Forest Records

It was not only Ribbesford where numbers of Dormice were good, and there were some exciting results elsewhere in Wyre Forest too.

A small plantation of 14 year old Scots Pine on Longdon Orchard is now an established Dormouse site with records for the fourth year. 2 well grown juveniles were found in different boxes in October and a fresh nest in another box in May. This is fewer than last year but evidence of breeding is always a good sign!

35 Dormice boxes have been in the Park House area since 1997. Records have been few and far between, but the same adult male was found in a box twice (May and June) and a further 2 juveniles were found in a different box in October.

An extra 10 boxes were erected on Wimperhill in July 2013 in a fenced area adjacent to a historical site. A quarter of an area of conifer plantation was clear felled in 2006 and the site fenced to allow natural regeneration to establish. It is now a tangled web of birch, oak, Douglas Fir, bramble, heather, honeysuckle, etc. This looked perfect for Dormice and finally we have found them! Until this year there had been no signs of Dormice confirmed on this site since May 2003, well before the conifer was felled. It was exciting to find an adult male and female in different boxes, plus 2 other empty nests. It is particularly encouraging as we were using the information gained from the Ribbesford experiment to manage the area for Dormice. Rather than the usual heavy thinning that we would usually carry out to revert the area back to native broadleaves the Forester, Richard Boles allowed the area to be divided into 4 and a quarter of the site clearfelled every 5 years. We have now clearfelled and fenced half the area and the next quarter is due for felling this winter. It's great, if somewhat unusual, when such plans work! Photo 3 shows my son Ben with the first Dormouse found here and photo 4 shows the box it was found in.

30 boxes were checked in an 18 year old Corsican Pine plantation at Button Oak. This has also become an established site in young conifer. 4 adults were found in June, 1 adult and 3 juveniles in July and 3 adults and 7 juveniles in October. One of these boxes had 5 animals in which were of 3 different generations!

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Photo 3. Ben Rudlin with Dormouse Phil Rudlin

Photo 4 Dormouse box, Wimperhill Phil Rudlin

This has been the best year so far for records on this site and again provides good signs of breeding in a conifer plantation!

On another positive note I was talking to a member of the public in the autumn and we somehow got onto the subject of Dormice. He told me he had seen one during the summer of 2015 in Longdon Orchard running through the long grass one afternoon. As they are supposed to be nocturnal and mostly arboreal I questioned if it could be a Dormouse. His description was perfect and he said he had a photo to prove it! Later that same day he sent photos 5 and 6 which proved him right! Now this animal may have been unwell, or not very bright, to be moving around in this habitat during the day and it isn't close to any known population, but I will be searching for its friends and family next year!

The only other established site in Wyre Forest itself is towards the western end of Dowles Brook, recorded by David and Brenda Rea. 20 Dormice boxes are checked twice a year in June and October. 2 juveniles were found in October, but there were no other signs. This site continues to frustrate us as we have only had occasional records for many years. However, small populations of Dormice are notoriously difficult to monitor with any accuracy, but at least we know they are still managing to breed successfully.

Most of the populations of Dormice in Wyre Forest and Ribbesford have been found by accident over the years and this continues today. It suggests that they are probably not as rare as we used to think they were in the area and they have survived, despite our lack of knowledge of their habitat requirements and management for them over the last century. We are slowly learning how to cater for their needs and finding their secret hiding places. This is particularly important at the moment as we are in the process of reverting much of Wyre from conifers back to native broadleaves. This is likely to benefit Dormice in the long term, although they have adapted well to the structure created by conifer plantations. We will need to manage areas where we know they live carefully and ensure that suitable habitat remains while work is carried out. Valuable lessons learned in 16 years of research in Ribbesford can be applied in all areas of Wyre Forest to ensure their continued survival. In the meantime I am sure other populations will be found if we keep looking for them, or just by pure luck!!

Photo 5, Dormouse Longdon Orchard Nigel Woodall

Photo 6. Dormouse Longdon Orchard Nigel Woodall