Dormice and Conifers in Wyre Forest - 2019 update

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Sleeping Dormouse — Phil Rudlin

2019 marked the 26th year of monitoring Dormice in Ribbesford Wood and the 19th year of research into habitat management in a conifer plantation. For the last 16 years 380 Dormice boxes have been inspected monthly from May to October and their occupants recorded. It is still exciting to carry out the first checks in spring to find out who has survived the winters hibernation! Finding 11 animals in our first inspection of the year was a good start and similar to the previous 4 years. The following monthly inspections were encouraging, peaking in August with 28 which was equal 4th highest in one day (see Fig. 1). Over the season a total of 119 animals were found which was the 2nd highest since starting in 2004.

53 young were found during the season, which was again 2nd highest (see Fig. 2). It is worth noting that these were the total numbers of juveniles found in boxes and not individuals. 29 Juveniles were micro-chipped, but some were too small to chip so may, or may not, have been found again. (23 young were found which were 7g or less and therefore could not be chipped).

33 fresh nests were found in boxes that weren't occupied during the survey season. It is not unusual to find empty nests as they have up to 5 different nests within their home range and we only check them 6 times year. However, it is always interesting to know they are present.

Fig. 1 Number of Dormice found by the month

	2004		2005		2006		2007		2008		2009		2010		2011	
	Dormice	Fresh Nests	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	16	0
June	11	0	14	2	11	8	16	0	9	11	9	1	11	6	4	0
July	19	0	17	5	6	4	8	2	11	1	4	5	9	8	5	9
August	13	1	8	0	4	1	7	4	16	8	8	0	28	7	5	1
September	19	0	8	4	10	3	8	0	8	6	8	3	20	8	8	2
October	28	9	4	16	18	8	2	0	18	2	1	1	30	6	4	7
November	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Totals	96	12	63	29	64	27	64	9	67	30	40	11	105	37	42	19

	2012		2013		2014		2015		2016		2017		2018		2019	
	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests
April																
May	4	2	5	4	5	1	17	1	12	11	9	10	12	4	11	3
June	6	0	7	1	10	5	21	3	13	3	16	2	9	5	18	6
July	5	3	2	3	12	2	17	6	34	0	24	3	12	9	22	8
August	4	3	5	7	14	2	8	0	19	2	35	9	17	1	28	8
September	9	2	*	*	26	2	26	7	14	2	26	5	18	1	21	8
October	4	2	19	3	18	4	26	5	7	3	23	9	6	11	19	0
November	*	*	1	0	*	*	*	*	*	*	*	*	*	*	*	*
Totals	32	12	39	18	85	16	115	22	99	21	133	38	74	31	119	33

* Not Surveyed

Fig. 2 Number of juveniles found

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Juveniles	34	11	22	10	34	6	35	5	7	17	26	32	47	65	31	53

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	No of Dormice chipped in 2010	No of Dormice chipped in 2011
1	4	0	3	1	0	2	8	0
2	7	4	12	5	11	2	2	4
3	13	3	9	4	2	3	4	2
4	8	3	0	0	2	2	4	3
Sausage	3	0	0	1	2	0	1	1
New plantation	Not surveyed	3	1	0	4	1	19	3
Unthinned area	0	0	0	0	3	1	1	0
Total	35	13	25	11	24	11	39	13

Treatment No	No of Dormice chipped in 2012	No of Dormice chipped in 2013	No of Dormice chipped in 2014	No of Dormice chipped in 2015	No of Dormice chipped in 2016	No of Dormice chipped in 2017	No of Dormice chipped in 2018	No of Dormice chipped in 2019
1	1	1	5	0	1	6	1	3
2	0	5	3	6	12	11	7	3
3	2	1	1	0	1	0	1	2
4	7	5	3	9	1	12	2	15
Sausage	2	6	3	5	3	4	0	3
New plantation	4	4	15	4	12	15	13	13
Unthinned area	0	0	0	0	0	0	0	0
Total	16	22	30	24	30	48	24	39

Fig. 4

Treatment No	No of individual Dormice found 2004	No of individual Dormice found 2005	No of individual Dormice found 2006	No of individual Dormice found 2007	No of individual Dormice found 2008	No of individual Dormice found 2009	No of individual Dormice found 2010	No of individual Dormice found 2011
1	4	1	3	4	3	3	9	4
2	9	9	14	11	13	3	5	9
3	16	10	13	9	4	11	5	0
4	9	4	3	1	4	2	6	3
Sausage	3	0	2	1	2	0	2	2
New plantation	Not surveyed	3	1	0	4	1	26	7
Unthinned area	0	0	1	2	3	2	2	1
Total	41	27	37	28	33	22	55	26

Treatment No	No of individual Dormice found 2012	No of individual Dormice found 2013	No of individual Dormice found 2014	No of individual Dormice found 2015	No of individual Dormice found 2016	No of individual Dormice found 2017	No of individual Dormice found 2018	No of individual Dormice found 2019
1	1	1	6	2	1	7	1	4
2	1	7	4	9	15	14	8	6
3	3	1	1	4	2	1	2	3
4	11	11	6	13	3	14	9	22
Sausage	1	6	6	6	8	4	4	4
New plantation	4	6	19	14	19	21	18	17
Unthinned area	1	0	0	0	0	0	0	0
Total	22	32	42	48	48	61	42	56

Fig. 1 also shows that this is the 3rd highest number of empty nests found over 16 years and it may just have been unlucky that we didn't find more, but we will never know!

A further 39 animals were found that were big enough to micro-chip - 10 adults and 29 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 119 animals were found we know from micro-chipping that some of these were found on multiple occasions. By identifying individuals we know there were at least 56 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 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 again 2nd highest since 2004 (see Fig. 4).

15 animals were recaptured from previous years (see Fig. 5). It has been interesting to see the trend over the last

Fig. 5 Number of Dormice found per site

Treatment No	Dormice found 2005	Re captures from previous years	Dormice found 2006	Re captures from previous years	Dormice found 2007	Re captures from previous years	Dormice found 2008	Re captures from previous years	Dormice found 2009	Re captures from previous years
1	4	1	4	1	9	2	1	1	3	0
2	23	4	28	9	20	7	36	6	12	3
3	26	5	28	10	21	12	11	3	17	7
4	6	1	2	2	2	1	4	2	5	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	0	0	1	0	2	0	3	0	2	1
Total	63	11	65	23	66	22	70	13	40	12

Treatment No	Dormice found 2010	Re captures from previous years	Dormice found 2011	Re captures from previous years	Dormice found 2012	Re captures from previous years	Dormice found 2013	Re captures from previous years	Dormice found 2014	Re captures from previous years
1	19	1	7	3	1	0	1	0	15	1
2	13	3	14	2	2	0	8	3	4	1
3	8	1	0	0	3	2	1	0	1	0
4	11	2	3	0	18	3	14	5	19	1
Sausage	2	1	6	2	3	0	7	0	15	4
New Plantation	50	7	10	5	4	0	8	1	31	3
Unthinned area	2	1	2	1	1	1	0	0	0	0
Total	105	16	42	13	32	6	39	9	85	10

Treatment No	Dormice found 2015	Re captures from previous years	Dormice found 2016	Re captures from previous years	Dormice found 2017	Re captures from previous years	Dormice found 2018	Re captures from previous years	Dormice found 2019	Re captures from previous years
1	4	2	1	0	14	1	1	0	14	1
2	26	3	38	3	25	3	12	1	9	3
3	6	4	2	1	2	1	2	1	11	0
4	35	4	14	3	41	2	15	8	32	4
Sausage	1	1	13	4	13	0	5	2	10	2
New Plantation	43	9	31	7	38	6	39	4	43	5
Unthinned area	0	0	0	0	0	0	0	0	0	0
Total	115	23	99	18	133	13	74	16	119	15

* Not surveyed prior to 2005

16 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 but shows 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 18 years (first animal chipped in July 2002) and have therefore followed some individuals for a number of years. Of the 15 recaptures this year, 7 were over a year old, the oldest of which was 4, chipped as an adult in July 2016. This male was therefore likely to have been born in 2015 (see Fig. 6). 1 of these individuals was found on 5 visits, 2 on 4 visits, 1 on 3 visits, 2 on 2 visits and the other just once. These 7 animals were therefore seen on 21 occasions and could have been recorded as individuals were it not for micro-chipping.

It has also shown how finding animals in boxes varies so much. One animal (319269) was chipped as a juvenile in October 2017 and not seen again until July 2019. The assumption was that he set off to find a home of his own as we know they can disperse some distance. However, when he was found again it was in a box just 75m away, so where had he been in almost 2 years?

In contrast another male who was also chipped as a juvenile in July 2017 (319220) was found in 11 of the 15 following inspections using 8 different boxes over an area of approximately 1.25ha. The oldest animal was found 7 times out of the 21 following inspections after his chipping in July 2016, using 8 different boxes over approximately 0.5ha. This shows how difficult it can be to monitor populations with any degree of accuracy without microchipping.

Reminder of research aim, treatment methods and areas

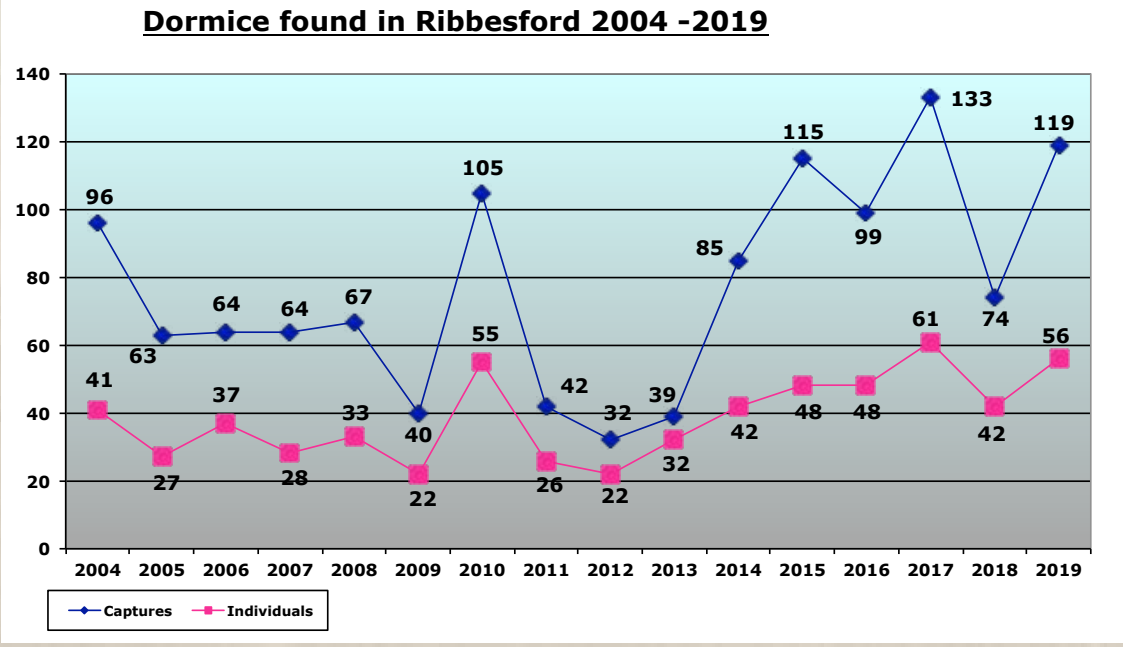
The aim of the research project, which began in 2000 in a 17ha area of Ribbesford, was to find the best method of reverting coniferous plantations back to native broadleaves, while maintaining Dormice populations. Four treatment types were used and compared:

Treatment 1: Hand cut with chainsaws and forwarder extraction in 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. Work was carried out during autumn / winter of 2003/04 (This area was combined

Fig. 6 Micro-chipping history

Micro-Chip number	Date micro-chipped	Age when micro-chipped	Sex	Number of boxes used	Number of recaptures	Approximate age in 2019
16848	Jul-16	Mat	Male	6	7	4
75183	Jun-17	Mat	Female	6	11	3
84673	Jun-17	Mat	Female	3	10	3
319220	Jul-17	Juv	Male	8	11	2
319269	Oct-17	Juv	Male	2	2	2
905623	Jun-18	Mat	Male	4	3	2
905634	Oct-17	Juv	Male	5	4	2

Chart 1



with treatment 2 in 2009/10 as finding chainsaw operators to fell trees proved impossible!) Half this area was clearfelled in 2015/16.

Treatment 2: Harvester operation with forwarder extraction – autumn / winter method as treatment 1. Work was carried out during autumn winter of 2003/04, 2009/10 and half of this area clearfelled in 2015/16.

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

Treatment 4: Harvester operation with forwarder extraction in autumn / winter. Two larger areas of conifers were felled (approx 0.3ha). 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. Work was 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 and 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.

Conclusion

As the above figures show 2019 has been one of the best overall. Fig. 4 shows animals have been recorded in all areas of the site. Interestingly the standard thinning area (Treatment 3) has always had the least number of animals found. Trees are evenly spaced within the area and there are few aerial connections or understorey therefore suggesting that the habitat is poor. This year, 11 animals were found in this area, the most since 2009 when the second thinning took place. Admittedly most of them were found in boxes adjacent to the "sausage" where disturbance has been minimal and there remains good connections to the rest of the woodland. Also one of these boxes contained a female with 6 young which boosted the numbers! However, in June 2 animals were found in a box well away from this section. This box used to be regularly occupied, with the first record in August 2001. However, no signs of Dormice have been found since October 2006. This suggests that the habitat may be becoming suitable for Dormice. The 2 animals, a male and female, were chipped but, unfortunately have not been seen since. It is hoped that they bred successfully and they, or their offspring, will be found again in the future! Treatments 1 and 4 have bounced back with 14 and 32 animals found in comparison to 1 and 15 in 2018 respectively. Treatment 2 is the only area to have less animals found, although, as animals move around the site they can be found in multiple boxes in different treatment areas. Therefore the data recorded is from where they were found most. "New Plantation" remains the most favoured area for Dormice with its equal 2nd highest count, despite starting to thin out naturally. The bramble and ground vegetation is very sparse and the lower connections are reducing significantly, which looks visually marginal habitat for Dormice, but what do we know??

I would like to thank Roger Trout, Andy Bucklitch and Charline Hue again for their continued effort and support in monitoring and micro-chipping, over the last 19, 8 and 5 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.

Wyre Forest records

There are 5 Dormice box schemes in Wyre Forest itself and they have been checked regularly between May and October since 2013 (see Fig. 7). Unfortunately I was unable to carry out the inspections in September so the data is not comparative, but at least evidence of Dormice was found on all sites. (Betts Reserve checked June & October only).

A small plantation of 16 year old Scots Pine on Longdon Orchard is now an established Dormouse site with 30 boxes and records for the 7th year. 3 adults were found in May, 1 in June, July and August with 1 adult and 1 juvenile found in October. It is difficult to tell individuals without micro-chipping, but the 3 animals found in May were an adult male and female in one box and a juvenile, which would have been born in 2018, in a different box. The only definitely different animal was the juvenile found in October which would have been born in the summer. It suggests this 2ha plantation surrounded by mature conifer plantation is supporting a small population which is stable and breeding.

35 Dormice boxes have been in situ around Park House since 1997. Records have been few and far between, but 1 box contained a female with newly born young and 2 others had fresh nests in 2019.

A small scheme of 10 boxes was erected on Wimperhill

Fig. 7

	Button Oak		Longdon Orchard		Wimperhill		Parkhouse		Betts Reserve	
	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests
2013	10	1	3	3	0	0	1	0	0	0
2014	11	4	3	2	0	0	0	1	4	0
2015	10	2	9	3	0	0	1	1	0	1
2016	18	1	2	1	2	2	2	0	1	0
2017	11	2	10	3	1	1	2	1	2	2
2018	27	2	18	2	6	0	3	2	8	3
2019	**17**	**1**	**8**	**5**	**1**	**1**	**4**	**2**	**0**	**3**

in July 2013 in a fenced area adjacent to an historical site. A quarter of an area of Douglas Fir 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. No signs of Dormice were found on this site between May 2003 and October 2016. However, recent signs are encouraging with 1 adult recorded in May and a fresh nest in June. It was disappointing not to find anything later in the year after breeding, but they have at least been found on this site for the last 4 years.

30 boxes were checked in a 20 year old Corsican Pine plantation at Button Oak. 3 adults were found in May, 7 in June, 3 in July, 1 in August, 2 adults and 1 juvenile in October. The 7 animals found in June were rather unusual. One box was occupied by 4 animals, all torpid – an adult male, adult female and 2 youngsters from the previous year (Photo 1). 4 boxes further on there was one with 3 animals in, an adult male and 2 youngsters from the previous year (Photo 2). I don't remember ever seeing these numbers in boxes at this time of year before. Usually I would expect the youngsters to have dispersed by June and animals pairing up rather than in family groups. Is it like the rest of us that youngsters are staying at home longer these days??


Photo 1. Phil Rudlin

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 (June & October). This has been a frustrating site over the years as there seems to be a small population present, but difficult to find. Unfortunately no animals were recorded in 2019 but 3 fresh nests were found so they are still there somewhere!!


Photo 2. Phil Rudlin