Dormice and Conifers in the Wyre Forest: 2024 update

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Figure 1, Dormouse Phil Rudlin

It has now been 30 years since Dormice (Figure 1) were confirmed to be present in Woods Reserch Area (RWRA), 25 years of researching the best method of reverting conifer plantations back to native broadleaves and 21 years of comparable data, monitoring 380 boxes between May and October since 2004.

After a dip in Dormice numbers recorded in 2021 (Figure 2), when the operations to clear-fell the remaining conifers were completed, numbers seemed to rise, as hoped, in 2022. However, 2023 was slightly disappointing with fewer found but not a dramatic dip in numbers. We were therefore hoping that 2024 would show a significant improvement as the habitat developed. During the first inspection of boxes in May 2024, 11 animals were found, which was encouraging. Two of these, unchipped and weighing 14g were likely to be youngsters from 2023. The others were all previously micro-chipped between 16g and 20g which were all good weights after a long wet warm winter of hibernation.

Unfortunately, the following months proved extremely frustrating with only 14 more animals recorded (Table 1). Usually, numbers peak in late Summer and Autumn when young Dormice are active and dispersing. However, this year only one litter of three was found in August and a single juvenile in October. This suggests that it was an extremely poor breeding year as this is the smallest number of youngsters found in the woodland since our records began, and well below the average of 27.4 (Table 2).

Over the six inspections, 25 animals were found which is lowest over the past 21 years and a long way below the average of 77.3.

Twenty-two fresh nests were found in boxes that were not occupied during the survey season. It is not unusual to find empty nests as they have up to five different nests within their home range and we only check them six times a year. However, it is always interesting to know they are present. Interestingly Table 1 shows equal tenth highest number of unoccupied nests found over the last 21 years, which is a little odd considering it was such a poor year but suggests there may be more animals using the boxes than we found; they just weren't there on the day of the surveys.

Eight animals were big enough to micro-chip: four adults and four juveniles (Table 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 25 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 17 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 might be found again later in the year and chipped, therefore duplicating results. This is also the lowest number since 2004 and well below the average of 37.6 (Table 4).

Nine animals were recaptured from previous years (Table 5). It has been interesting to see the trend over the last 21 years. If you look at Table 1 the number of captures each year shows some significant variations, whereas the actual individuals confirmed is more constant. This is far more accurate and therefore useful information. It 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 23 years (Starting in July 2002) and have therefore followed some individuals for a number of years. Of the nine recaptures this year, all were over a year old (Table 6), One individual was found on five visits, two on two visits and six on just one visit. These nine recaptured animals were therefore seen on 15 occasions and could have been recorded as individuals were it not for micro-chipping.

Table 1. Numbers of Dormice and Fresh Nests recorded in Ribbesford Woods Research Area, 2004 - 2024.

	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		2017	
	Dormice	Fresh Nests	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	9	10
June	4	0	6	0	7	1	10	5	21	3	13	3	16	2
July	5	9	5	3	2	3	12	2	17	6	34	0	24	3
August	5	1	4	3	5	7	14	2	8	0	19	2	35	9
September	8	2	9	2	*	*	26	2	26	7	14	2	26	5
October	4	7	4	2	19	3	18	4	26	5	7	3	23	9
November	*	*	*	*	1	0	*	*	*	*	*	*	*	*
Totals	42	19	32	12	39	18	85	16	115	22	99	21	133	38

	2018		2019		2020		2021		2022		2023		2024	
	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests	Dormice	Fresh Nests
April														
May	12	4	11	3	19	10	2	1	14	3	14	8	11	8
June	9	5	18	6	14	8	9	0	14	2	13	9	5	5
July	12	9	22	8	16	7	8	6	15	4	17	4	1	5
August	17	1	28	8	35	3	19	3	14	0	10	6	5	0
September	18	1	21	8	25	4	13	4	18	1	20	8	1	2
October	6	11	19	0	16	5	2	0	24	0	10	2	2	2
November	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Totals	74	31	119	33	125	37	53	14	99	10	84	37	25	22

Table 2. Number of juvenile Dormice recorded in Ribbesford Woods Research Area, 2004 - 2024.

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Juveniles	34	11	22	10	34	6	35	5	7	17	26
Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Juveniles	32	47	65	31	53	51	21	38	26	4	

Research aim, treatment methods and areas:

The aim of the research project, which began in 2000 in a 17 ha area of Ribbesford Woods, 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 (Figure 3):

Treatment 1: Hand cut with chainsaws and forwarder extraction in autumn / winter. 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 five years. Work 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). Half of this area was clear-felled in 2015/16 with the remaining conifers removed in October 2020.

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, half of this area clear-felled in 2015/16 with the rest removed in October 2020.

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, 2015/16 and remaining conifers removed in October 2020.

Treatment 4: Harvester operation with forwarder extraction in autumn / winter. Two larger areas of conifers were felled during each operation (approx. 0.3ha). This replicates the normal coppice size in 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 five years. Work was carried out during autumn / winter of 2003/04, 2009/10, 2015/16 and remaining conifers removed in October 2020.

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. Twenty dormouse boxes were erected in 2002.

New Plantation: Area planted with Corsican Pine and European Larch in 2000. Forty dormouse boxes were erected in 2004

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

Conclusion:

Numbers of Dormice seemed to be fairly stable in RWRA, until the final clear-fell of conifers in 2020. Since then, numbers appear to have fluctuated and show a downward trend. This is extremely frustrating, and many theories have been discussed as to why numbers appear to be declining. It is possible that, by removing the remaining conifers, it has altered the dynamics of connected habitats. Much of the previous areas cleared have regenerated either as birch scrub or bracken, which has suppressed most regrowth of broadleaves. Typical of the soils of the area, there seems be a dominance of either bracken or bramble. However, the bramble areas have created what appear to be good habitat, but not many Dormice! The current Dormice in RWRA have evolved with a dominance of conifers since they were planted in the 1970s. Did they rely on the structure and food diversity which conifers provide and, without these are they struggling to adapt? It is perhaps poignant that 53% of individuals found this year were in the "New plantation", planted with mixed conifers in 2000, which is only 15% of the research area but is the only remaining conifer plantation.

Although the habitat appears to be degrading as connections reduce and the understory becomes more barren, Dormice numbers remain fairly good, but they don't seem to be moving out into the newly created native broadleaved habitat. It is also highly likely that the recent warm, wet winters, followed by cool, wet springs have had an effect on these hibernating animals. The only two animals we found again after the first inspection lost weight between May and June. This suggests that food availability was poor and would have affected their ability to breed which is possibly why we found so few youngsters. No one reason stands out for their recent decline. It's likely to be multiple problems most of which are beyond our control. We will continue to monitor the site for the foreseeable future and hope their numbers recover shortly!

I would like to thank Roger Trout and volunteers, Andy Bucklitch, Charline Hue and Samantha Faggetter for their continued effort and support in monitoring and micro chipping, over the last 24, 13, 10 and 5 years respectively. Without them it would be extremely difficult to maintain this level of monitoring.

Table 3. Number of Dormice micro-chipped in Ribbesford woods Research Area, 2004 - 2024.

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	No of Dormice chipped in 2012	No of Dormice chipped in 2013	No of Dormice chipped in 2014
1	4	0	3	1	0	2	8	0	1	1	5
2	7	4	12	5	11	2	2	4	0	5	3
3	13	3	9	4	2	3	4	2	2	1	1
4	8	3	0	0	2	2	4	3	7	5	3
Sausage	3	0	0	1	2	0	1	1	2	6	3
New plantation	Not surveyed	3	1	0	4	1	19	3	4	4	15
Unthinned area	0	0	0	0	3	1	1	0	0	0	0
Total	35	13	25	11	24	11	39	13	16	22	30

Treatment No	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	No of Dormice chipped in 2020	No of Dormice chipped in 2021	No of Dormice chipped in 2022	No of Dormice chipped in 2023	No of Dormice chipped in 2024
1	0	1	6	1	3	5	7	2	5	2
2	6	12	11	7	3	7	0	9	6	3
3	0	1	0	1	2	1	0	0	0	0
4	9	1	12	2	15	9	2	7	4	0
Sausage	5	3	4	0	3	0	1	3	0	0
New plantation	4	12	15	13	13	12	4	5	5	3
Unthinned area	0	0	0	0	0	0	0	0	0	0
Total	24	30	48	24	39	34	14	26	20	8

Table 4. Number of individual Dormice recorded in Ribbesford Woods Research Area by treatment area, 2004 - 2024.

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	No of individual Dormice found 2012	No of individual Dormice found 2013	No of individual Dormice found 2014
1	4	1	3	4	3	3	9	4	1	1	6
2	9	9	14	11	13	3	5	9	1	7	4
3	16	10	13	9	4	11	5	0	3	1	1
4	9	4	3	1	4	2	6	3	11	11	6
Sausage	3	0	2	1	2	0	2	2	1	6	6
New plantation	Not surveyed	3	1	0	4	1	26	7	4	6	19
Unthinned area	0	0	1	2	3	2	2	1	1	0	0
Total	41	27	37	28	33	22	55	26	22	32	42

Treatment No	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	No of individual Dormice found 2020	No of individual Dormice found 2021	No of individual Dormice found 2022	No of individual Dormice found 2023	No of individual Dormice found 2024
1	2	1	7	1	4	5	2	4	7	4
2	9	15	14	8	6	10	6	11	11	3
3	4	2	1	2	3	2	0	0	0	0
4	13	3	14	9	22	16	4	7	3	1
Sausage	6	8	4	4	4	2	3	7	1	0
New plantation	14	19	21	18	17	19	10	11	12	9
Unthinned area	0	0	0	0	0	0	0	0	0	0
Total	48	48	61	42	56	54	25	40	34	17

Table 5. Number of Dormice recorded and re-captured in Ribbesford Woods Research Area, 2005 - 2024.

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	Dormice found 2010	Re captures from previous years	Re captures from previous years	Dormice found 2012
1	4	1	4	1	9	2	1	1	3	0	19	1	3	1
2	23	4	28	9	20	7	36	6	12	3	13	3	2	2
3	26	5	28	10	21	12	11	3	17	7	8	1	0	3
4	6	1	2	2	2	1	4	2	5	1	11	2	0	18
Sausage	0	0	0	0	5	0	10	0	0	0	2	1	2	3
New Plantation	4	*	2	1	7	0	5	1	1	0	50	7	5	4
Unthinned area	0	0	1	0	2	0	3	0	2	1	2	1	1	1
Total	63	11	65	23	66	22	70	13	40	12	105	16	13	32

Treatment No	Dormice found 2011	Re captures from previous years	Dormice found 2013	Re captures from previous years	Dormice found 2014	Re captures from previous years	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
1	7	0	1	0	15	1	4	2	1	0	14	1	1	0
2	14	0	8	3	4	1	26	3	38	3	25	3	12	1
3	0	2	1	0	1	0	6	4	2	1	2	1	2	1
4	3	3	14	5	19	1	35	4	14	3	41	2	15	8
Sausage	6	0	7	0	15	4	1	1	13	4	13	0	5	2
New Plantation	10	0	8	1	31	3	43	9	31	7	38	6	39	4
Unthinned area	2	1	0	0	0	0	0	0	0	0	0	0	0	0
Total	42	6	39	9	85	10	115	23	99	18	133	13	74	16

Treatment No	Dormice found 2019	Re captures from previous years	Dormice found 2020	Re captures from previous years	Dormice found 2021	Re captures from previous years	Dormice found 2022	Re captures from previous years	Dormice found 2023	Re captures from previous years	Dormice found 2024	Re captures from previous years
1	14	1	7	1	3	0	7	2	10	3	5	2
2	9	3	17	3	8	1	24	2	15	5	3	0
3	11	0	5	1	0	0	0	0	0	0	0	0
4	32	4	33	5	11	1	13	0	21	1	1	1
Sausage	10	2	18	2	7	3	10	4	16	0	0	0
New Plantation	43	5	45	8	24	6	45	6	22	5	16	6
Unthinned area	0	0	0	0	0	0	0	0	0	0	0	0
Total	119	15	125	20	53	11	99	14	84	14	25	9

Table 6. Dormice, over one year old, recaptured in Ribbesford Woods Research Area, 2005 - 2024.

Micro-Chip number	Date micro-chipped	Age when micro-chipped	Sex	Number of different boxes used	Number of recaptures after being chipped	Number of captures in 2024	Approx age in 2024
703828	May-21	Mature	Male	6	16	5	4
659037	Oct-22	Mature	Female	2	3	1	3
703810	Oct-21	Juv	Male	2	4	2	3
651734	May-23	Mature	Male	1	1	1	2
655058	Sep-22	Juv	Female	3	3	2	2
655065	May-23	Mature	Male	3	2	1	2
655066	May-23	Mature	Male	4	4	1	2
655067	Oct-22	Juv	Male	2	3	1	2
658002	Oct-23	Mature	Female	1	1	1	2

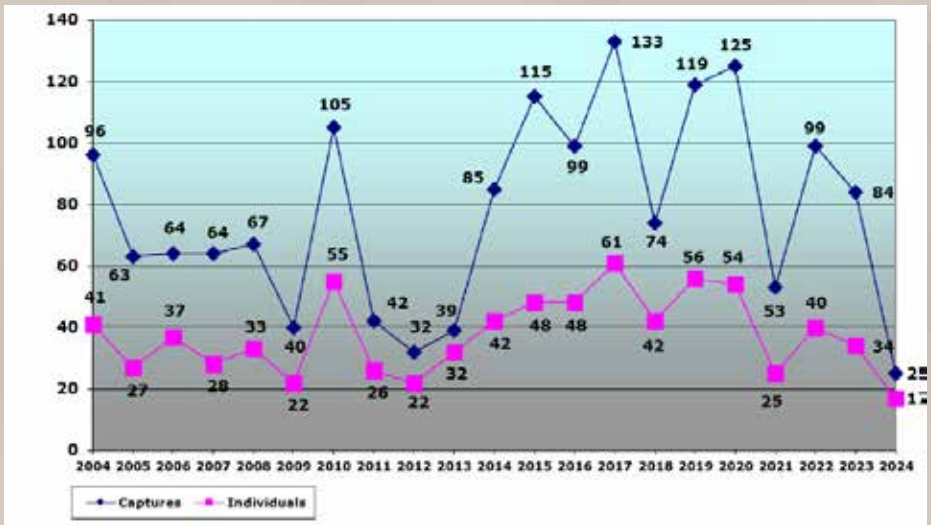


Figure 2. Graph showing the number of Dormice found in Ribbesford Woods Research Area, 2004 - 2024.

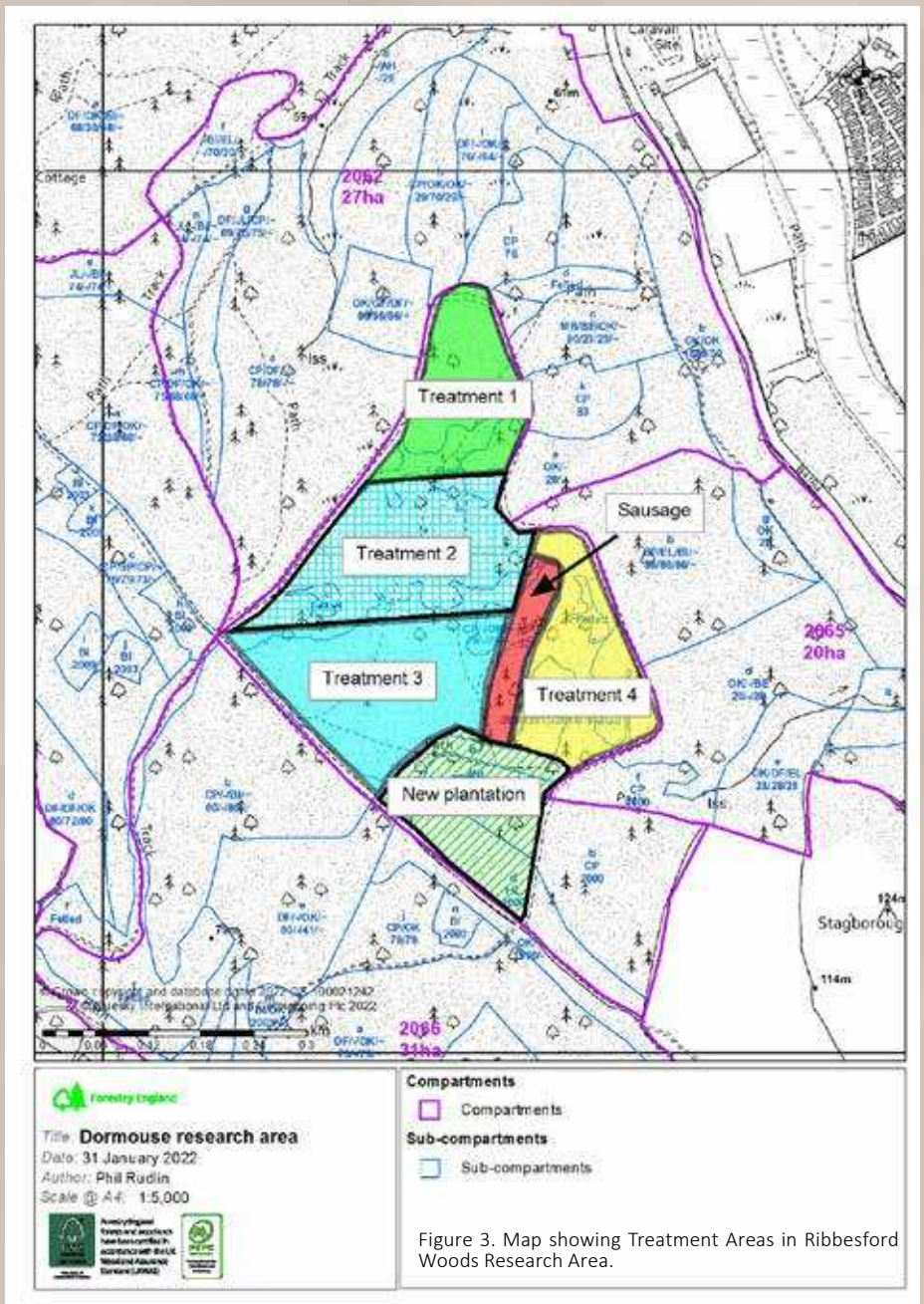


Figure 3. Map showing Treatment Areas in Ribbesford Woods Research Area.

Wyre Forest Records:

The five sites monitored in the main block of Wyre Forest fared no better than RWRA with only one site showing any evidence of Dormice in 2024 (Table 7). Poor numbers have been recorded across most of the country which suggests that the weather had a major impact on their survival during the winter and subsequent breeding in 2024.

The Betts Reserve was not surveyed in 2024.

Table 7. Records of Dormice in Wyre Forest Main Block 2013 - 2024.

	Button Oak		Longdon Orchard		Wimperhill		Parkhouse		Betts Reserve	
Year	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
2020	8	1	6	4	0	0	3	0	0	2
2021	10	3	2	0	0	0	0	0	0	0
2022	6	1	0	0	0	0	0	0	0	0
2023	11	0	6	0	0	0	0	0	?	?
2024	1	0	0	0	0	0	0	0	?	?