



DORMOUSE MONITORING IN FREEHOLDERS' WOOD 2017



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Introduction

A reintroduction of 35 captive bred Hazel Dormouse *Muscardinus avellanarius* into Freeholders' Wood, Aysgarth was undertaken in 2008 and has previously been documented by White and Court (2012).

This report contains details of the monitoring work undertaken at Freeholders' Wood between 2009 and 2017 as part of the National Dormouse Monitoring Programme. In order to provide some context to the results, data is compared with results from the national dataset and Briddlesford Woods, a 160 ha semi ancient natural woodland on the Isle of Wight that is owned by PTES and is one of the key sites in the National Dormouse Monitoring Programme (NDMP).

Methodology

The monitoring work was undertaken in accordance with the National Dormouse Monitoring Programme (NDMP) survey guidelines (PTES, 2011), with licenced fieldworkers checking nest boxes once each month from May to October. The numbers of boxes that contained distinctive Dormouse nests but where no Dormice were present were also recorded. Where a Dormouse was found, the sex, weight, breeding condition and whether the animal was active or in torpor were also recorded. The Dormice were also aged as an adult (i.e. an animal that has survived at least one winter) by the orange-brown colour of the fur, or as a juvenile (i.e. independent young in their first year with a weight of >10g) with more brownish fur than an adult. The number of young were counted, weighed where appropriate, and classed as pink (no fur), grey (grey fur and eyes still closed) or eyes open (grey-brown fur and eyes open).

In order for comparisons to be made, the number of dormice found per 50 nest boxes checked is derived.

A summary of weather conditions during the season have been derived from national monthly summary data provided by the Met Office (2018).

Results

The monthly national weather summary for 2017 was as follows:

April

At the beginning of the month it was often warm with plenty of sunshine. From the 10th onwards temperatures were close to average, but there were some cool nights. This was followed by a brief cold snap with wintry showers and some overnight frosts. Mean temperatures were just above normal and rainfall totals were average.

May

A slackening low pressure system at the start of May resulted in dry and sunny weather in the north. More unsettled weather arrived mid-month with a mixture of rain showers and brighter periods. Overall it was the second warmest May, with mean minimum temperatures between 1 and 2°C above average in all regions. Rainfall was below normal across northern England.

June

It was an unsettled start to the month with significant amounts of rain, followed by a period of very warm weather from the 16th. This didn't last long and was soon followed by a low pressure system bringing more unsettled weather and heavy rain at the start of the month. Overall it was a wet month with higher than average rainfall.

July

It was an unsettled month, with only brief periods of fine weather. The end of the month was particularly cool with some heavy and persistent rain at times. Temperatures were mostly below average with more than the normal amount of rainfall.

August

The westerly airflow continued into August resulting in mainly cool conditions with cloud and rain at times. Temperatures increased between 17th and 23rd in association with some fine weather but it was cool and showery again by the end of the month. Overall temperatures were average, with slightly higher than normal rainfall.

September

Apart from a brief period of dry and sunny weather at the start of the month, it was generally unsettled with an unusually high number of rain days across England in particular. North-westerly winds brought belts of rain, interspersed with bright showery condition. After the passage of Storm Aileen it was generally warmer from 20th onwards with some cloud and rain.

October

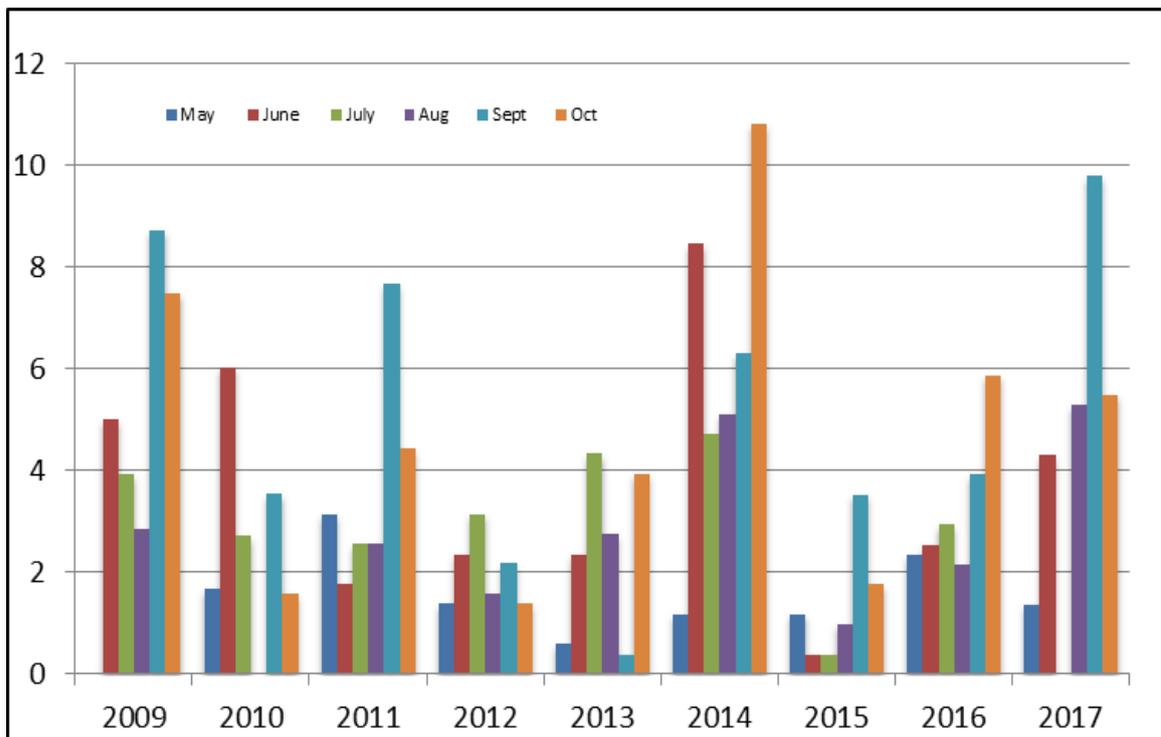
There was a succession of frontal systems moving across the country at the start of the month bringing a mixture of bright and showery weather. Although it remained cloudy through the middle of the month but rainfall levels were relatively low. It became colder towards the end of the month, with a ground frost on the last few days.

The number of Dormice found in Freeholders' Wood in 2018 is shown in Table 1. The number of Dormice found per 50 nest boxes between 2008 and 2017 are shown in Figure 1.

Table 1. The number of Dormice found during monitoring work in Freeholders' wood in 2017.

Survey date	No. of Dormice found	No. of empty nests	No. of boxes checked	No. Dormice per 50 boxes checked
17/05/2017	7	2	255	1.37
21/06/2017	22	3	255	4.31
23/08/2017	27	14	255	5.29
20/09/2017	50	27	255	9.80
18/10/2017	28	17	255	5.49

Figure 1 . The number of Dormice found per 50 boxes checked at Freeholders' Wood, Aysgarth between 2008 and 2017.

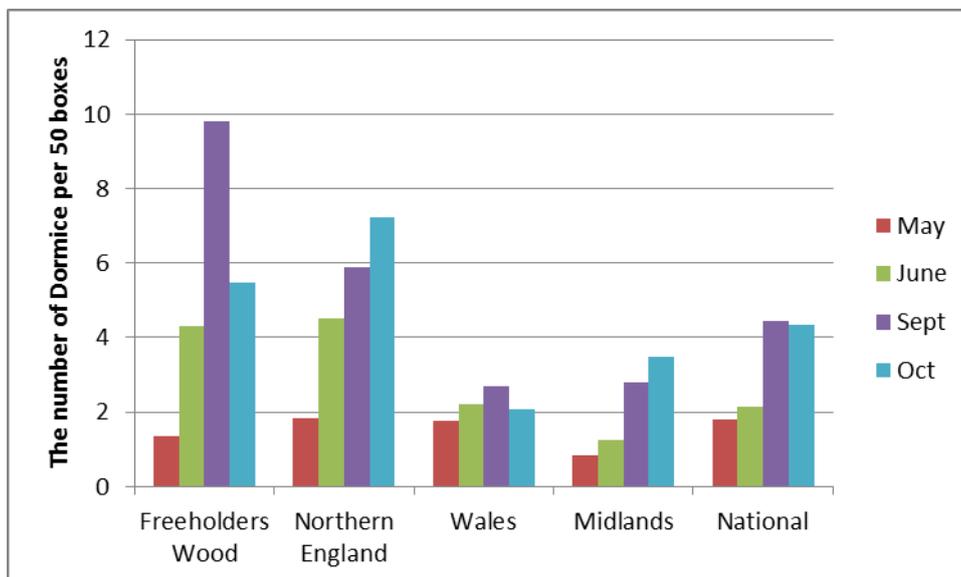


In order to give a context to the data from Freeholders' Wood, NDMP results from other areas of the country in May, June, September and October are shown in Table 2 and figure 2.

Table 2. The number of Dormice found per 50 boxes checked in Freeholders' Wood, the Northern Counties (Cumbria, North Yorks), Wales, the Midlands (Cheshire, Derbyshire, Shropshire, Warwickshire, Staffordshire and Nottinghamshire) and nationally as part of the NDMP in 2017.

No. of Dormice per 50 boxes in wood or area recorded for the National Dormouse Monitoring Programme (NDMP) in 2017					
	Freeholders Wood	Northern England	Wales	Midlands	National
Max. no. sites checked	1	3	39	20	364
Total no. boxes checked	255	390	1569	1314	17851
Month					
May	1.37	1.82	1.76	0.84	1.79
June	4.31	4.51	2.21	1.25	2.13
Sept	9.8	5.90	2.68	2.79	4.45
Oct	5.49	7.24	2.08	3.49	4.33

Figure 2. The number of Dormice found per 50 boxes checked in Freeholders' Wood, the Northern Counties (Cumbria, North Yorks), Wales, the Midlands (Cheshire, Derbyshire, Shropshire, Warwickshire, Staffordshire and Nottinghamshire) and nationally as part of the NDMP in 2017.



The total numbers of Dormice found at Freeholders' Wood during monthly counts in 2017 and selected monthly counts from Briddlesford Wood are shown in Table 3.

Table 3. The number of Dormice and empty Dormice nests found during monthly monitoring work at Freeholders' Wood and selected months from Briddlesford Wood in 2017.

Freeholders' Wood				
Survey date	Total no. of Dormice	No. of empty nests	No. of boxes checked	No. Dormice per 50 boxes checked
17/05/2017	7	2	255	1.37
21/06/2017	22	3	255	4.31
July	No nest box checks completed.			
23/08/2017	27	14	255	5.29
20/09/2017	50	27	255	9.80
18/10/2017	28	17	255	5.49
Briddlesford Wood				
May 2017	35	38	549	3.19
Jun 2017	15	45	542	1.38
Sep 2017	45	75	548	4.11
Oct 2017	59	99	493	5.98

Discussion

Over-winter survival was reasonable with the number of Dormice found in May and June within the range of previous years.

Breeding success is assessed by determining the number of litters with young of age class pink or grey recorded each month. In 2017 there were three litters in June, three in August, and five in September with none in October. Unfortunately there were no nest box checks in July. The number of litters found in June and August were identical to those found in 2016, but there were three more litters found in September compared to the previous year. Although at the time it did not appear to be a particularly successful breeding season, the October count of 9.8 Dormice per 50 boxes checked (28 individual Dormice) was the second highest count at Freeholders' Wood.

Bright *et al.* (2006) indicate that juveniles need to reach a minimum weight of 15g by late October in order to survive hibernation, and so looking at the weights recorded in autumn will give an indication of food supply and potentially over-winter survival.

The average weight of juvenile Dormice at Freeholders' Wood in October was 12.6g (n = 16 dormice), lower than the mean weight of 16.9g (n = 5 Dormice) in 2016. Only four of the juvenile Dormice weighed 15g or above.

The weights of the adults were exceptional, with a mean weight of 26g (n=10 Dormice), compared to a mean of 19.9g (n = 9 Dormice) in 2016. The weights of a number of individual adults were the highest ever recorded at Freeholder's Wood and included weights of 36g, 30g and two at 28g, with the lowest weight at 21g. This would suggest

that there was an excellent food supply and foraging conditions were good during the late autumn period.

Although annual fluctuations make determining a definitive population trend difficult, it would appear that the Dormouse population at Freeholders' Wood is stable.

As part of the monitoring work, two trainees have been working towards their Natural England licences, with one applying for an individual licence at the end of the survey season.

Acknowledgements

The monitoring work was also undertaken by licenced fieldworkers Roger Gaynor, David Preston, Paul Sheehan and Tony Serjeant with assistance from Meghann Hull and Rosalind Radonicich.

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