

# **Dormouse Survey for Great Cockshill Wood, Knepp Estate**

**January 2015**

## **Introduction**

A personal communication indicated the presence of a dormouse *Muscardinus avellanarius* in the woodyard at the Knepp Estate, West Grinstead at 'Cricketing Field'. The adjacent area of woodland, Great Cockshill Wood (Grid Ref TQ1520 2320), supports suitable dormouse habitat and, therefore, it was decided that it would be beneficial to set up a National Dormouse Monitoring Programme (NDMP) recording site to monitor the population.

A records search from the Sussex Wildlife Trust Biological Records Centre revealed one record of a dormouse in the Horsham area in 1984. However, given the lack of any nearby or recent records it was agreed with SxBRC that it would be advantageous to carry out a survey of the wood, initially, to prove presence before setting up and monitoring an NDMP site.

Therefore, a dormouse survey was set up in the wood for 2014, which is described in this report.

Great Cockshill Wood is primarily composed of hazel *Corylus avellana* coppice with oak *Quercus robur* and ash *Fraxinus excelsior* standards with field maple *Acer campestre*, common hawthorn *Crataegus monogyna*, elder *Sambucus nigra* and honeysuckle *Lonicera periclymenum* in the understorey. The canopy is relatively closed leading to an impoverished ground flora. The rides are more diverse botanically but brambles *Rubus fruticosus* can dominate more open areas. Towards the north of the wood there is a discrete area where young ash saplings dominate.

A large area in the eastern half of the woodland consists of a dense conifer plantation. This area was considered to provide limited suitability to dormice and was, therefore, excluded from the survey effort.

## **Legislation**

Dormice are fully protected under Schedule 5 of the Wildlife & Countryside Act (1981), and Schedule 2 of the Conservation of Habitats and Species Regulations 2010. These Acts and Regulations make it an offence to:

- Intentionally capture, kill or injure a dormouse;
- Deliberately disturb a dormouse or damage or destroy a dormouse breeding site or resting place;
- Possess or transport a dormouse or any part of a dormouse;
- Sell, barter or exchange dormice or parts of dormice.

## **Methodology**

A recommended survey methodology, as set out within the Dormouse Conservation Handbook (English Nature 2006) was followed. This involved the installation of 50 nesting tubes at the end of April 2014 to cover as much of the area of woodland as possible. Hazel dormice have been found to readily use nest tubes occasionally for breeding as well as for daytime shelter. The tubes are made from stiff double walled black plastic sheet, 5 x 5cm in cross section and 25 cm long. A small plywood

tray is placed inside, projecting 5 cm beyond the tube's entrance to allow the animals' easy access. The opposite end of the tube is sealed with a wooden block mounted on the tray.

The tubes were located in groups of ten, as shown in Figure 1, and supplemented at every tenth tube with a nesting box in order to maximise the potential to attract dormice. They were placed in areas of the woodland thought to provide the best suitable habitat, particularly the overgrown hedge boundaries around the edge of the wood, which support the densest understorey.

The tubes were allowed to 'bed in' for two months before the first survey visit was undertaken. The survey, itself, was carried out by Bob Antonini (survey class licence CLS0331) between July and October 2014 and involved monthly visits to carefully inspect each tube and nest box for dormice or their signs on the following dates:

- 20<sup>th</sup> of July 2014
- 18<sup>th</sup> of August 2014
- 21<sup>st</sup> of September 2014
- 26<sup>th</sup> of October 2014

The Dormouse Conservation Handbook provides an index of probability of finding dormice present in nest tubes in any one month. Using 50 nest tubes as a standard (spaced at 20m intervals) and also the table below as an index of the 'value' of different months for surveying, a score can be devised as an indicator of the thoroughness of a survey. Thus, the 50 tubes left out from May onwards scored 24 (the sum of the indices for the remaining 7 months). This search effort may not sometimes be enough to detect dormice, but assumed absence should not be based on a search effort score of less than 20.

| Month     | Index of probability |
|-----------|----------------------|
| April     | 1                    |
| May       | 4                    |
| June      | 2                    |
| July      | 2                    |
| August    | 5                    |
| September | 7                    |
| October   | 2                    |
| November  | 2                    |

*Table 1 - Index of probability of finding dormice present in nest tubes in any one month*

## **Results**

**Two juvenile male dormice were recorded in nest tube 10 (Grid Ref TQ1513 2317) weighing 14g each, along with their nest.** Interestingly, nest box 1 which is only a couple of metres away was

totally unused. This record was submitted to the SxBRC to update their database of dormouse woodlands in Sussex.

Below is a table detailing other findings made throughout the survey.

| Date     | Recordings   |
|----------|--|
| 20/7/14  | <ul style="list-style-type: none"><li>• Tube 15 – Cache of gnawed hazelnuts (<i>Apodemus</i> sp.)</li><li>• Box 2 – Old bird's nest (<i>Parus</i> sp.)</li><li>• Tube 28 – 3 wrens flew out the tube on approach</li><li>• Box 3 – Blue tit nest with dead fledglings</li></ul>                                      |
| 18/08/14 | <ul style="list-style-type: none"><li>• Tube 15 – Cache of gnawed nuts has increased in size</li><li>• Box 2 – <i>Apodemus</i> sp. nest within box</li></ul>   |
| 21/9/14  | <ul style="list-style-type: none"><li>• Tube 15 – Cache of nuts has gone mouldy</li><li>• Tube 19 – One fresh gnawed hazel nut (<i>Apodemus</i> sp.)</li><li>• Tube 23 - A few, loose, dead leaves in tube</li><li>• Box 3 – Collection of fresh field maple leaves with no woven nest (possible dormouse)</li></ul> |
| 26/10/14 | <ul style="list-style-type: none"><li>• Tube 10 – 2 juv male dormice with nest as above</li><li>• Box 2 - <i>Apodemus</i> sp. nest still present</li><li>• Box 3 - Nets recorded in Sept has not progressed any further</li><li>• Box 5 – Dormouse nest recorded but not in use at the time</li></ul>                |

*Table 2 – Results of survey*

### **Conclusion and Recommendations**

It has now been established that Great Cockshill Wood supports dormice. What is not clear is whether the two juvenile individuals recorded are part of an established breeding population or whether they have migrated along the highly suitable commuting corridors in the area from other woodland areas to the north.

Although one record cannot provide an unequivocal pattern of distribution, it is interesting to note that the two juveniles should have been recorded adjacent to the wide, dense overgrown hedge boundaries surrounding the wood. At first glance these look more suitable than the habitat occurring within the main body of the wood.

It is recommended, therefore, that an NDMP scheme is set up in Great Cockshill Wood and monitored for future years. This will help to resolve the issues raised above and provide a better understanding of the population size and distribution of dormice in the wood.

It will also help to inform future management of the wood, in relation to improving the habitat it provides for dormice. At present it would be prudent to exercise caution in changing the present management regime since it has been demonstrated to provide habitat suitable to support dormice. However, below are suggestions for initial management that may improve the present habitat potential:

- Much of the hazel coppice in the western half of the wood is now overgrown and becoming 'leggy' reducing the amount of dense cover and feeding opportunities for dormice. Small scale re-coppicing of individual (or small groups of) stools whilst maintaining connectivity around the wood would increase the density of low level cover. This should be undertaken in the winter during hibernation.

- As an addition to the above, planting of hazel and honeysuckle whips should be considered in the newly created open areas to increase the density of future stools. Alternatively, 'layering' of existing branches will also provide new stools once roots develop.
- Planting of hazel and honeysuckle whips is recommended amongst the ash saplings in the open, northern section of the wood in order to provide a more suitable understorey as the latter develop.

### **References**

Bright Paul, Morris Pat and Mitchell-Jones Tony (2006), *The Dormouse Conservation Handbook* (second edition), English Nature Peterborough