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Bat Survey

Trapping Survey
Interim report of results

Binsted Woods
MAVES Group

Arundel

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16-012-BS
2017

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1 Introduction

1.1 This Bat survey and interim report has been carried out and prepared by Daniel Whitby, an English Nature Licensed bat worker. The survey involved using trapping surveys across the site with an acoustic lure playing a range of species social calls to trap bats present on the site to identify species, sex and breeding status.

1.2 The objective of this survey was to conduct an initial baseline survey to indicate the species assemblages, however particular interest was aimed at identifying any notably rare species and if necessary radio tagging to identify roost locations of any notably rare species to inform on roost location and hence the site importance.

1.3 This report represents only the results of surveys from May 2017 and radio tagging of two individuals to identify roosts, further surveys are planned for later in the summer of 2017 and an updated report will be produced.

2 Background

2.1 Binsted is a small village tot eh west of Arundel just south of the A27, The MAVES group have commissioned a baseline bat survey, to include any roost locating of any notable rare species as part of a suite of surveys to inform on species present in the local area.

2.2 The area includes farmland including arable, pasture and hay meadows as well as a large block of mixed woodland and plantation, including some ancient parkland and mature Oak woodland. For a full description of the site a Phase 1 survey should be consulted.

2.3 The local area is known to be good for bats, extensive surveys have been conducted at Slindon National Trust estate over a number of years to identify the species present and study the Barbastelle colony discovered there.

2.4 There are historical records of bats from Binsted wood in the record centre, these include Common Pipistrelle, Serotine, Noctule, Natterers and Brown long-eared. However, all of the records have the same grid reference even when years apart for all species and there is no information provided on how these records were obtained, how they were recorded or how many bats were present and so cannot be considered accurate.

2.5 Surveys were conducted on the site in 2016 which identified 13 species present making this a highly diverse site for bats. Eight of these species were confirmed to be breeding populations with breeding females or juveniles caught on the site. This included Alcathoe and Bechstein's which were identified through radiotracking to have maternity colonies present roosting within trees within the woodland

2.6 Species list for Binsted woods confirmed in 2016 trapping surveys

- Barbastelle – *Barbastella barbastellus*

- Alcathoe bat – *Myotis alcathoe*
- Bechstein's bat – *Myotis bechsteinii*
- Brandt's bat – *Myotis brandtii*
- Daubenton's bat – *Myotis daubentonii*
- Natterer's bat – *Myotis nattereri*
- Whiskered bat – *Myotis mystacinus*
- Long-eared bat, Brown – *Plecotus auritus*
- Nathusius' pipistrelle – *Pipistrellus nathusii*
- Pipstrelle, Common – *Pipistrellus pipistrellus*
- Pipistrelle, Soprano – *Pipistrellus pygmaeus*
- Noctule – *Nyctalus noctula*
- Serotine – *Eptesicus serotinus*

3 Method

3.1 The site was assessed during daylight hours for the surveyor to familiarise with the site and identify areas of potential high bat activity and suitable access. Different habitats and features throughout the site were evaluated and assessed for their importance and the potential of different species which could be present to be surveyed for.

3.2 The night trapping surveys were conducted on the 22nd, 23rd and 24th May 2017 a time of the year when bats are active and are most likely to be found foraging on the site.

3.3 The survey involved catching bats using harp traps and Mist nets, with a sonic lure (Autobat) to attract any bats foraging in the area using a range of bat species social calls, this can increase the detection rate of quiet whispering species, such as Barbastelle, which can be under recorded on detector surveys. All bats were identified, sexed and reproductive status ascertained. All bats were released at the capture site on same night of capture.

3.4 Identifying the location of maternity roosts can only be accomplished by radio tracking, if any notably rare species were caught then these could be tagged to identify the location of maternity roosts. Radio tags (Biotrack UK) were fixed to a bat using a latex based adhesive (Torbot bonding cement)

3.5 Emergence surveys were conducted using professional night vision video cameras with IR illuminators to accurately identify and record bats emerging where possible to do so. This enabled accurate roost counts of visible roosts.

4 Constraints

4.1 Bats are difficult to locate and identify, they cannot be easily identified in flight and many species have very similar echolocation calls making accurate species

identification difficult, especially for cryptic groups like Myotis bats, trapping can improve species ID and sex and breeding status but trapping is more difficult.

4.2 Bats are difficult to locate in foraging habitat and difficult to catch especially in large, exposed open areas. Different species may also forage in different habitats throughout the year according to the availability of their preferred prey and particular weather conditions.

4.3 Much of the survey area is not easily accessible, some of the site is unmanaged and there is not vehicle access through the woodland, making access or setting up of trapping equipment prohibitive in some areas, as a result trapping was restricted to accessible areas with suitable trapping locations.

5 Results

5.1 **22nd May** – the first trapping session used two traps located in the eastern area of the woodland, Tortington Common. The weather was good with it warm, still and clear, becoming cool during the survey. Trapping was conducted from sunset until 4am. (See figure 1)

Trap 1 – SU99240622 – Harp trap with lure – located near pond on corner of Tortington common
1 – male – Soprano Pipistrelle
1 – Male – Bechstein's
1 – Male – Alcathoe bat
1 – Female – Soprano Pipistrelle – Pregnant
3 – Male – Daubenton's
1 – Female – Bechstein's - Parous
1 – Female – Bechstein's – Parous – Pregnant (tagged)

Trap 2 – SU99540620
1 – Female – Common Pipistrelle -Pregnant
1 – Female – Whiskered bat - Pregnant
1 – Male – Daubenton's
1 – Male – Brown Long-eared
1 – Female – Brown Long-eared - Pregnant

5.2 During this survey one bat was radio tagged, a Bechstein's believed to be in early pregnancy.

5.3 **23rd May** – this trapping session was located in the western end of Binsted woods. This survey used two traps and one Mist net. The weather was good with it warm, still and clear, but becoming cool during the survey. Trapping was conducted from sunset until approximately 3.30am. (See figure 1)

Trap 3 – SU98360677 – Harp trap with lure – located western end of wood.

1 – Female – Brown Long-eared – Pregnant
1 – Female – Whiskered bat – non breeder

Trap 4 – SU98610674
2 – Male – Alcathoe bat
2 – Male – Common Pipistrelle
1 – Male – Bechstein's

Trap 5 – SU98560672 – Mist net on track without lure.
1 – male – Brown Long-eared
1 – male – Soprano Pipistrelle
1 – Female – Brown Long-eared - Pregnant

5.4 **24th May** – the third trapping session used two traps located in the more southern part of the site, Spinning Wheel Copse. The weather was good with it warm, light breeze and clear, however it became notably cool and damp during the survey. (See figure 1)

Trap 6 – SU9888064 – Harp trap with lure – located near boggy area in wood.
1 – Male – Whiskered bat
1 – Male – Soprano Pipistrelle
1 – Female – Alcathoe bat – Pregnant - Radio tagged
1 – Male – Natterer's bat

Trap 7 – SU98910623 – Middle of narrow part of copse
1 – Male – Natterer's bat
1 – Male – Barbastelle
1 – Male – Common Pipistrelle

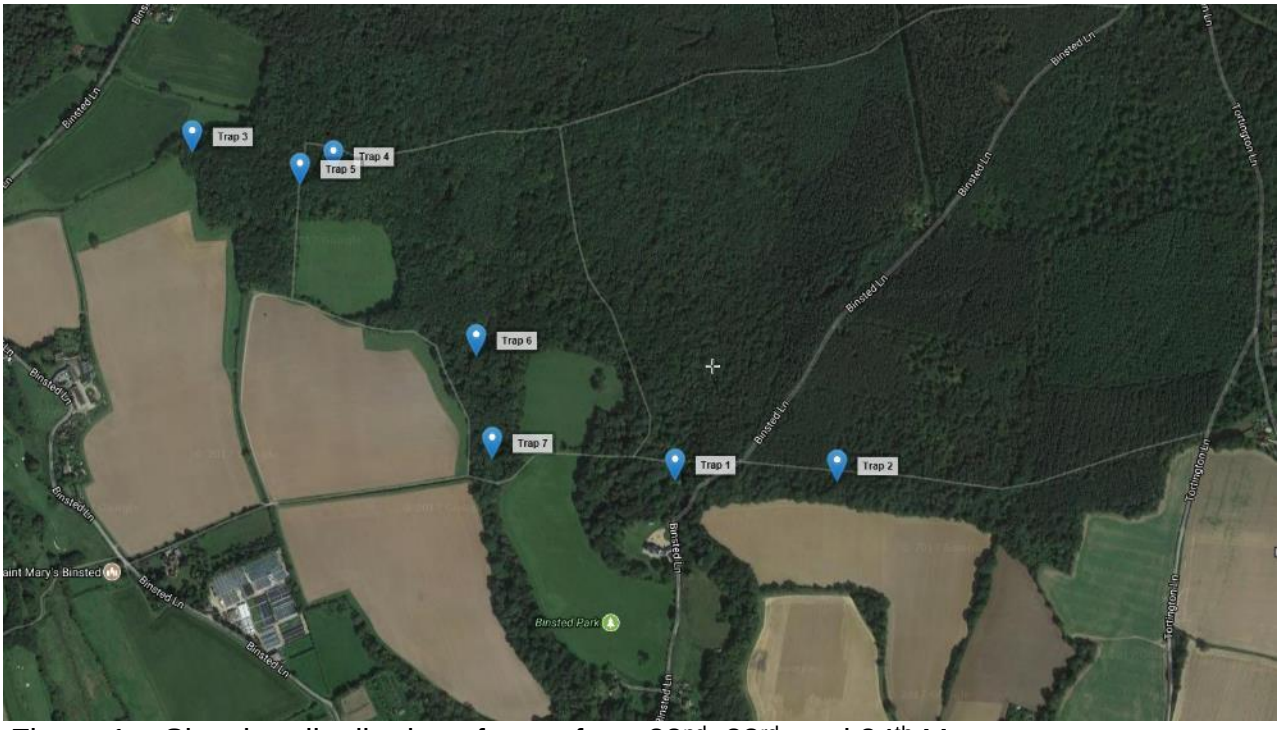

Figure 1 – Showing distribution of traps from 22nd, 23rd, and 24th May.

Radiotracking

5.5 A total of two bats were radio tracked with the aim of identifying location of roosts, and if possible obtain information on colonies and roost counts.

5.6 **Bechstein's bat** – this was tagged on the 22nd May – this species was tagged in 2016 and a maternity colony located in the southern part of Torrington common with a count of 26 bats. See figure 2

23rd May – Bat identified roosting in a Ash tree at TQ003560729
24th May – Same Roost
- During the night, the bat was identified foraging just north of Broad Field

25th May – Moved to Oak tree at 0042206960

Figure 2 – showing locations of identified Bechstein's roosts in 2016 and 2017

5.7 **<u>Alcathoe bat</u>** – this was tagged on the 24th May – this species was known to be present locally and breeding females were caught in 2016 and roosts identified through tagging one individual. See figure 3

25th May – No Signal
26th May – Bat identified foraging in Binsted wood and back tracked to roost at dawn, located at SU97110687. – Bat roosting high and not visible on emergence survey
27th May – Bat identified in new roost – SU9900606489
28th May – Bat back in first roost

Figure 3 – showing locations of identified Alcathoe roosts in 2016 and 2017

6 Constraints

6.1 Bats are difficult to locate and identify, they cannot be easily identified in flight and many species have very similar echolocation calls making accurate species identification difficult, especially for cryptic groups like Myotis bats, trapping can improve species ID and sex and breeding status but trapping is more difficult.

6.2 Bats are difficult to locate in foraging habitat and difficult to catch especially in large, exposed open areas. Different species may also forage in different habitats throughout the year according to the availability of their preferred prey and particular weather conditions.

6.3 This is an interim report and presenting the results to date, this should be read in conjunction with the 2016 survey results.

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