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BAT SURVEY OF ROWBOROUGH AND ROLANDS WOODS, ISLE OF WIGHT

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1. INTRODUCTION

1.1 This report outlines the findings of bat surveys undertaken on parts of the estate of Mr Michael Poland (Isle of Wight). This report follows that of Davidson-Watts (2003 and 2005 unpublished bat surveys) which had previously investigated bat use of Wroxall Copse, Chillingwood and Coombe Plantation on the Isle of Wight.

1.2 Objectives

1 Undertake a baseline survey of bats in Rowborough and Rowlands Woods

2. METHODS

2.1 Bat survey

A small team bat surveyors, with assistance of volunteers visited Rowborough Wood on the 1 June 2006 and Rowlands wood on the 5 August 2006.

2.2 Ultrasound detectors and Batsound analysis

On both surveys time expansion bat detectors were used to record calls from feeding and commuting bats species within the woodlands. The recorded bat calls were downloaded onto a Sony Professional cassette recorder. These bat detectors were used to compliment and guide the catching methods employed during this survey,

The recorded calls were subsequently analysed on Batsound Pro 3.1 (Pettersson Elektronik AB, Sweden) to determine the species or genus of the bat calls recorded and assess bat activity levels in that location.

2.3 Catching bats

Three 6-12 meter mist nets and a 2 x 4m² harp traps were placed across selected woodland rides in both woodlands. From 22:30 previously recorded ultrasonic bat distress calls (Russ 2002), were replayed at hourly intervals for approximately 20 minutes through a laptop computer and high-speed sampling card system, with the aim of drawing any nearby bats to the mist nets. The Sussex Autobat system (using synthesised bat calls) was also employed to lure bats to the nets.

Caught bats were identified, sexed, aged (juvenile/adult) and breeding condition (where appropriate) was noted. Forearm measurements were also made.

3. RESULTS

1 June 2006 – Rowborough

The nets were set on the main track running east-west through a valley in this wood (SZ 453853). There was little bat activity recorded by bat detectors throughout the evening. A barbastelle bat was heard at approximately 22:15 and some Pipistrelle (45 kHz) bat activity was detected around 22:30.

However the ultrasonic lures between them were able to attract the following bats:

22:00	<i>Barbastella barbastellus</i>	female	Adult- pregnant - tagged
23:05	<i>Myotis nattereri</i>	male	Adult
23:20	<i>Pipistrellus pipistrellus</i>	female	Adult
23:22	<i>Pipistrellus pipistrellus</i>	female	Adult
00:25	<i>Barbastella barbastellus</i>	male	Adult
00:47	<i>Barbastella barbastellus</i>	female	Adult – pregnant
01:02	<i>Barbastella barbastellus</i>	female	Adult – pregnant
01:05	<i>Pipistrellus pipistrellus</i>	female	Adult – pregnant
01:20	<i>Barbastella barbastellus</i>	female	Adult

Following the capture of a pregnant barbastelle bat at 22:00, a radio-transmitter was attached to her back in an attempt to discover her roosting location and possibly a maternity roost. Searches for the released bat were made to track down her roost the following day, but despite an extensive search on foot and by vehicle the tagged bat was not located. On the 5 June an aerial search was conducted using a light aircraft (Cessna 152) based at Old Sarum near Salisbury. The signal from the tagged bat was quickly identified and the tagged bat was located in an area of Newbarn Down (SZ 431852).

5 August 2006 – Rowlands Wood

The nets were set in the south east corner of Rowlands wood cluttered ride to the south of a small pond in the center of Coombe plantation. A Noctule bat was detected quite early in the evening at 21:50.

The nets with assistance from both ultrasonic lures were able to capture the following bats:

22:30 <i>Myotis bechsteinii</i>	Male	Juvenile
22:55 <i>Barbastella barbastellus</i>	Female	Adult- Lactating
22:55 <i>Pipistrellus pipistrellus</i>	Female	Adult
23:50 <i>Plecotus auritus</i>	Male	Adult- lactating
23:50 <i>Pipistrellus pipistrellus</i>	Male	Adult
23:51 <i>Myotis bechsteinii</i>	Female	Adult- Lactating
00:15 <i>Pipistrellus pygmaeus</i>	Male	
00:15 <i>Nyctalus noctula</i>	Male	

The male juvenile Bechstein's bat caught at 22:30 was fitted with a transmitter in attempt to locate its roosting site. The following day after a short search it's signal was located in the southern side of Chillingwood. Its roost was located in a rot hole in an ash tree at SZ 560893. An emergence count using infrared cameras revealed 11 bats emerging from 21:50.

The female barbastelle bat caught at 22:55 was also fitted with a transmitter. Her roost was located at East Ashley farm in small copse grid SZ 584882. Due to access not being granted from the landowners, the type of tree roost or the number of bats could not be established; however the bat used this site for at least 7 days indicating that this was an important site.

4. DISCUSSION

Rowborough Wood

The high numbers of barbastelle bats caught in this woodland clearly highlights its importance as a feeding/commuting area for these rare woodland bat species. The Brighstone Forest complex of woodlands may be particularly significant for these bats and allow them to safely commute to feeding areas at either end of the chalk ridge. Chalk grassland restoration works involving the removal of woodland areas will need to consider the connective importance to these bats species.

It would appear that a breeding colony is likely to roost in the Newbarn down area, although this was not confirmed on the ground. Other studies of the roosting habitats of this species (Davidson-Watts, unpublished data- Mottisfont, Hampshire 2006) showed that a breeding colony of up to 50 bats uses over 36 maternity roost sites within 1 km square area.

This area appears support a lower diversity of bats, just three species were recorded. However these results were from just one night of survey effort and a greater level of effort, particularly at other times of the year may be more revealing. Notwithstanding the low diversity of bats here, the discovering of the barbastelle bats makes this area of international significance. This Newbarn roost area is the second only colony to be located on the Isle of Wight and less than 15 colonies are known within the UK.

Rowlands

This ancient woodland is part of a wider network of woodlands in the NorthEast of the Isle of Wight, which includes the Briddlesford Copse/Combely Great wood complex. In 2005 Bechstein's bats were also discovered in Chillingwood which is linked to Rowlands wood and the Briddlesford complex. The results of this survey confirm the high importance of all these woodlands to breeding Bechstein's bats. Bechstein's were also caught in Combely Great wood during summer 2006.

The location of the breeding roost in Chillingwood is of major significance and demonstrates the importance of the whole area to these woodland specialists. However, despite the increased level of recorded Bechstein's bats during these surveys, it is not possible to clarify whether the bats of Chillingwood and Rowlands woods are directly connected to the colony occupying Briddlesford Copse. Bats of this species have now been located in all the major woodlands in this area and DNA samples from all bats captured have been taken. Analysis of these DNA data should be revealing in understanding the relationships between

the bats captured; however funding is currently not available to undertake these analyses.

Although clearly important to Bechstein's bats, Rowlands also appears to support the foraging requirements of barbastelle bats. The lactating female caught and tagged was roosting over 2 km away in relatively isolated and small woodland. Both these species are known to roost in the same woodlands and it is possible that barbastelle bats could also roost in Rowlands or Chillingwood. The presence of both breeding Annex II species is of international significance and the SAC designation of Briddlesford should be reconsidered to include these areas.

Other bats were also captured, including both soprano and common pipistrelle bats, and the noctule bat, another tree roosting specialist.

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