6 Pilgrims Mead
Bishopdown Farm
Salisbury
SP1 3GX
07719 283231/ifdw@aol.com

BAT SURVEY OF WROXALL COPSE, ISLE OF WIGHT JUNE AND SEPTEMBER 2003

Ian Davidson-Watts

Report prepared by ID Wildlife

For-
Mr Michael Poland

CONTENTS

Introduction	**3**
Objectives	**3**
Methods	**3**
Results	**4**
Discussion	**5**
Acknowledgements	**6**

1. INTRODUCTION

1.1 Bats at Wroxall Copse

No information is available on bats at Wroxall Copse, however, Pope (A Biological survey of Wroxal Copse July 2002) suggests that the ancient trees might be important for tree roosting bats. The location of the copse on the north facing aspect of the Ventnor Downs, and the relative isolation of the copse from other woodland, however, would suggest that the copse may not be an important habitat for bats, for either roosting or feeding/commuting.

1.2 Objectives

1 Undertake a baseline survey of bats in Wroxall Copse

2. METHODS

2.1 Bat survey

A small team bat surveyors and volunteers from the Isle of Wight Bat Group visited Wroxall Copse on the 27 June 2003 to coincide with the height of the breeding season for bats (when female bats are pregnant or have recently given birth). A further survey was undertaken on 19 September 2003 to coincide with the main bat-mating season (when male and female bats interact).

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 on the central northern, central southern edges of the copse and from bats detected within the centre of the copse. 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 the public footpath in the center of the copse. 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.

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

3. RESULTS

27 June 2003

45 kHz Pipistrelle bats (*Pipistrellus pipistrellus*) were detected feeding and commuting on both the northern and southern edges of the copse at dusk (21:30). These bats were feeding individually or in small groups. This foraging behaviour continued until 22:38 when no more bats were detected.

From 22:45 45 kHz pipistrelle bats were detected sporadically within the center of the woodland. No distinctive feeding behaviour was observed and it appeared that the bats were commuting through the woodland. Sporadic calls from these bats were detected throughout the remainder of the survey.

At 23:59 an adult male Bechstein's bat was caught in a mist net across the public path in the center of the Copse.

19 September 2003

The first bat detected within the center of the copse was a 45 kHz Pipistrelle bat at 19:30. A similar level of feeding activity by pipistrelle bats to that of the 27 June was noted.

At 19:50 a different call was detected within the center of the Copse and on subsequent analysis it was found to be a commuting call from a Barbastelle bat (*Barbastella barbastellus*).

No bat activity was recorded until 21:58 when a 45 kHz Pipisrelle bat was detected commuting within the Copse. Sporadic calls were then detected from this species of bat throughout the remainder of the survey.

The mist net across the public footpath in conjunction with the playback of bat distress calls caught the following bats:

22:30	Brown Long-eared Bat (*Plecotus auritus*)	Male	Adult
22:31	Brown Long-eared Bat (*Plecotus auritus*)	Female	Adult
22:54	Bechsteins Bat (Myotis bechsteinii)	Male	Adult
23:00	Barbastelle Bat (Barbastella barbastellus)	Male	Adult
23:05	Brown Long-eared Bat (*Plecotus auritus*)	Female	Adult

4. DISCUSSION

It is difficult to draw conclusions from the data gathered during the two surveys. As bats are highly mobile mammals, and tree roosting bats in particular are highly nomadic in their roosting behaviour, the surveys can only act as a snapshot of the bats using Wroxall Copse.

The Copse does not appear to support a great number of feeding bats of any species. The most frequently recorded bat was the 45 kHz Pipistrelle bat (*Pipistrellus pipistrellus*). This species along with the 55 kHz pipistrelle (*Pipistrellus pygmaeus*) whilst the most abundant bats in the UK, are thought to have undergone a 70% decline in population since 1979 (Pipistrelle Bat Species Action Plan, The UK Biodiversity Action Plan).

Pipistrelle maternity colonies are usually associated with buildings during the summer months. Male bats often roost alone or in small groups, and trees may be utilised as roosting sites. As some of the feeding bats appeared very shortly after sunset during both surveys, it is likely that some of these pipistrelle bats roost in trees within Wroxall Copse.

The Brown Long-eared bat is also relatively abundant, although very difficult to detect with bat detectors due their quiet echolocation calls. The catching of three bats in autumn and the ratio of one female to two females may indicate mating behaviour, as females often 'visit' male mating territories during autumn.

Both surveys of Wroxall Copse have revealed the presence of two of Europe's rarest bats, the Barbastelle bat and Bechstein's bat. Both of these species are listed on Annex II of the European Habitats Directive providing these bats the highest levels of protection in Europe and the UK. Indeed only four of the UK's 16 resident bat species are listed on this part of the Directive. Wroxall Copse is clearly important to male Bechstein's bats throughout the summer and autumn and is possibly an important mating area. It is highly likely that the predominantly tree dwelling Bechstein's bats roost in some of the old trees within the Copse. Very little is known about male Bechstein's bats, however research in Germany has shown that they often roost alone and remain in discreet areas for a large proportion of the year.

The Barbastelle bat is generally known as a tree dweller, but unlike the Bechstein's bat it regularly travels great distances (>20km) to feeding areas (Greenaway *pers comm*). During the September survey this bat was confirmed as being present in the Copse just after dusk (bat detector) and then caught at 23:00. This could be the same bat, on the first occasion leaving the roost (a tree somewhere in the Copse) and when caught it could have been returning. However both records could quite easily have been different bats commuting through the Copse.

Initial views on Wroxall Copse suggested that the wood might support some tree roosting bats particularly given the nature of some of the veteran trees within it. However, the Copse's open, northerly aspect and woodland connectivity in the general area the overall, it was considered that the Copse would be of low value to bats. As a feeding area for bats the surveys appear to support the view that the Copse is of low value, at least to a wide range of bats, or bats that are easier to detect such as Pipistrelles and Noctules and Serotines. However, as a roosting and mating area the Copse may support some of the rarest tree roosting bats in Europe.

Further work could be carried on the bats in Wroxall Copse to identify roosts of the rare species discovered during 2003. This could involve the use of radio transmitters to track caught bats back to their roosting sites. Whilst this information would be useful and interesting, the conservation priority with these rare tree dwelling bat species still lies with female maternity roost location. It would therefore be a greater use of resources to search other woodlands on the Isle of Wight for maternity roosts.

The management recommendations outlined by Dr Colin Pope's Biological Survey would be consistent with the requirement of tree roosting bats, particularly in relation to maintaining humidity around old trees.

5. ACKNOWLEDGEMENTS

The author is enormously grateful for the help and assistance received from Joanna Ramsay, Colin and Jillie Pope, and Graham Street. All works were carried out under licence from English Nature.

