



# The Echo



Newsletter of the Warwickshire Bat Group

December 2003



*As 2003 draws to a close, we hope you all had an interesting batty year, and that you're looking forward to 2004 with lots of sightings & new discoveries.*

*George Burton, who has taken on the job of recorder for the group, has written an important article for this issue on "Bats & Development". George is a practising architect and, we are please to say, now an EN licenced bat worker. Its very important that we let him have details of all the locations where we see bats feeding or just commuting as well as any roosts we find. This information could have a vital role in future planning decisions, which might be critical for bat conservation. In the next Echo we will have a new reporting form for you to copy & use to send George your records. You will also be able to report on-line on the WBG website if you prefer.*

*Also in this issue, Julia Waller has sent us a report on the very successful "Barbastelle's at Brandon" talk that WBG was invited to by the Brandon Marsh Volunteers Group. Following on from this very enjoyable evening, we can look forward in 2004 to forging stronger links with the Brandon reserve. Julia has kindly written another piece, an account of a visit the Regional Committee made 'behind the scenes' at Chester Zoo's Twilight Z one.*

*There is no Diary this issue, but there will (hopefully) be an Echo early in the New Year with a bumper crop of batty events for 2004.*



*Finally, as no Xmas party has been organised this year, there is a special Echo Xmas quiz with a prize. A copy of the cassette "Echoes of the Night" by Dave King to the 'best' entry received by post or e-mail by 17<sup>th</sup>.Jan. If you heard the recent "Home Truths" on Radio 4 you will have heard some of Dave's music made from sounds sampled from his bat detectors. This is your chance to own the cassette from which the music was taken.*



## Barbastelles at Brandon Marsh

Sadly, the title of this piece does not refer to any newly discovered roosts but to some two-dimensional bats appearing in the slides of an audio-visual presentation at the headquarters of Warwickshire

Wildlife Trust. The members of the Voluntary Conservation Group based at Brandon Marsh had invited Sue and Ewan Parsons to talk about their work with Barbastelle bats at a barn in Norfolk. Very kindly they had also extended an invitation to all the members of Warwickshire Batgroup and so a number of us had taken advantage of their hospitality. In return, after the talk, those of us with bat detectors took small groups around the reserve as dusk was falling to search out the resident bat population.

It was a very popular evening and somehow we all managed to squeeze into the lecture room. Sue Parsons kicked off the evening talking about her study of a maternity colony of Barbastelle bats at Paston Barn, Norfolk. This is a very significant colony as in 1996 it was the very first maternity colony to be found in the UK and is the only one, out of four others, to be in a building; all the others are in trees. The barn itself is a Grade 2 Listed, Scheduled Ancient Monument and is owned by the North Norfolk Historic Buildings Trust who now lease it to English Nature. The building has had various work done on it since 1996 and in the winter of 1999 the main roof was re-thatched as well as that of an adjoining building. It was also in 1999 that EN designated the site a SSSI and in 2000 it was awarded candidate status for becoming a Special Area of Conservation.

Barbastelle bats' are associated with old woodland and they normally roost under the peeling bark of trees or in colder weather inside the trunk itself. The area around Paston Barn is ideal with leafy green woods and lanes linked with overgrown footpaths. It is near the coast and it seems that the wind direction can often determine where the bats go to feed. If the wind is blowing onshore the bats can usually be found around the region's trees and lanes. However, should the wind switch and blow offshore the bats take a trip to the seaside, flying around areas such as Mundesley Cliffs for hours on end. They are hardy bats with long shaggy fur that even extends to their feet.

The Barbastelles share their ancient barn with five other species: Natterer's, Brown Long-eared, Soprano Pipistrelle, Common Pipistrelle and Nathusius' Pipistrelle.

Built in 1581, it is a very large building 50m long and 9m wide and 16m tall. It is perhaps no coincidence that the arching wooden supports of its hammer beam roof resemble a tall woodland canopy where the bats will often fly around for 15 to 20 minutes before emerging from the barn.



The actual roost areas are in the gaps between the wooden lintels above the two large barn doors.

Sue and her fellow workers have studied the bats with much dedication and a variety of technology. Their

mainstay being the use of time-expansion bat detectors where they recorded the bats' calls and then used computer software to confirm what species they had been listening to. They have also used other gadgets such as radio tags to track the bats outside the barn and carefully placed infrared beams in the exit holes to count the bats' comings and goings. To track the radio-tagged bats they used a Landrover with an aerial fitted to the roof which came in very useful as the bats can be quite swift reaching speeds of 14mph. The latest count for this year is good news – they counted 35 adults, which increased to a total of 53 bats after the young began to take to the air.

## The Twilight Zone



On an unseasonably warm day in October a number of Batgroup Representatives from the West Midlands converged on Chester Zoo in order to investigate “behind the scenes” at the Twilight Zone. This is not a reference to the sixties American TV series, but to a unique attraction at the Zoo, which, incidentally, is holder of the Good Britain Guide Zoo of the Year Award 2003. The name, in a zoological context, comes from the fact that a cave is divided into two main zones, the twilight zone and the dark zone. The twilight zone starts at the opening of the cave and extends to where there is not enough light for humans to see.

The Zone is in reality a large factory unit but the bats seem very much at home inside where the environment is carefully controlled for them. For the convenience of visitors the bats night and day have been exchanged so that they are active when the Zoo is open (makes a lot of financial sense, really). It is also very hot and humid inside and on the day of our visit the area had a very distinctive aroma.

Your journey in Chester's Twilight Zone begins at one end of the building where you enter through two sets of double doors. From there on in the light levels begin to drop dramatically. As you fumble your way forward thinking that you should have allowed your eyes more time to adjust you come across a sign signifying the point of no return for bat-phobics. It basically points you in the direction of an exit warning you that you are

about to enter an area where bats are flying free. If you press onwards through closely spaced plastic strips you find yourself at one end of the unit. There is a winding concrete path that guides you through the exhibit and eventually through another bat airlock and out to the sunlight. Usually there is a member of staff on hand to answer any questions and help you find your way through the Zone.

When your eyes adjust you notice a small central pond, its surface being only occasionally disturbed by the movements of the two resident species of catfish. The pond is bordered by artificial foliage and branches and way above your head are long loops of rope where the larger Rodrigues fruit bats literally hang out until they decide to lazily flap around the roof area in search of the odd banana or decide to pick a fight with a bat lower down the pecking order. The larger bats, being less manoeuvrable, tend to keep their distance but the smaller Seba's Short-tailed bats are speed fiends in comparison. These little daredevils zoom past visitors with almost a blatant disregard for their own safety, and for most of your time in the Zone you can feel a short blast of air on your skin as they skim past you. One of the best spots to watch them in action is at a feeding point where fruit has been left out for them. They do echolocate but very quietly and they have a rich harmonic call that is difficult to interpret, especially on the heterodyne detectors we had brought with us.

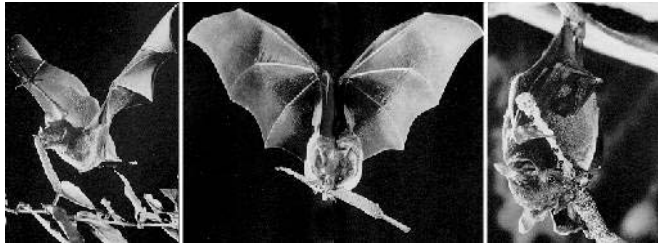
Eventually the keeper who was acting as our guide managed to pry us away from these little swarms of activity and led us past a rope cordon into a large brightly-lit backroom. He opened an ordinary-looking door and invited us to step into the dark room beyond. Unfortunately the bright lights had instantly destroyed any night vision and we inched our way into the darkness. Slowly we began to see a floor covered in black plastic over which a liberal layer of sawdust had been spread. Hanging from a low false lattice ceiling were long sheets of hessian sacking arranged in such a way as to break up the room into a number of tall cells. Our guide explained that they had deliberately left the sacking up for the bats to try and create a more suitable area for their roost site. Sure enough if you looked at the grid-like ceiling there were lots of small groups of Seba's bats looking back. They seemed a little agitated to have this sudden influx of large creatures and one of their keepers's shining a small torch at them. Very kindly the keepers had fed them early that day so that they would be easier for us to see at the feeding sites. However, it obviously doesn't take long for a Seba's to digest their food as we were directly in the line of fire of their waste products! You very quickly learnt not to stand directly underneath a jostling restless huddle but slightly to one side.

It was a real treat to be able to get so close to these bold little mammals and thanks must go firstly to Julia Summerton (West Midlands Batgroups Regional Representative) for organising this wonderful opportunity and also to the Twilight Zone Team Leader, Paul Howse, who made us feel very welcome and could not have been more helpful. It was a very happy little band of batworkers who gathered at the tearooms before setting off back to their respective roosts.



### Seba's Short-Tailed Bat (*Carollia perspicillata azteca*)

A leaf-nosed bat weighing a little over a half an ounce (19g), Seba's Short-tailed Fruit Bat is probably the most common bat in all of Latin America. It ranges from southern Mexico to northern Argentina and occurs in a variety of lowland tropical habitats. Research in West Africa has shown that seeds dropped by various species of bats account for up to 95 percent of forest re-growth on cleared land. In Latin America, one Seba's Short-tailed Fruit Bat, for example, is capable of spreading up to



60,000 seeds in just one night. If an average-sized colony of 400 bats were to disperse only 1,000 seeds nightly, and if only one-tenth of one percent fell where they could sprout, the annual result still would be approximately 146,000 new seedlings.

### Rodrigues Fruit Bat (*Pteropus Rodricensis*)

These large bats, with a wingspan of nearly three feet (90cm) and weighing about 13oz (350g), are found only in the rainforests of Rodrigues Island, off the coast of Madagascar. They do not echolocate and so rely on their large eyes to locate fruits and flowers, and occasionally leaves or bark.

Like other fruit bats, the Rodrigues Bat essentially drinks fruit juices. It crushes fruit in its wide mouth by pressing its tongue against its hard, ridged upper palate. It swallows the juices and the soft pulp, and spits out most of the pulp, seeds and skin, often in a neat bat-mouth-shaped pellet! Male Rodrigues fruit bats keep a harem of up to eight females, living together in the upper rainforest canopy. Females usually give birth to just one pup every year, which clings to its mother even when she is flying; babies learn to fly alone at about three to four months old.



This species face severe threats annually in the form of climatic disasters like tropical cyclones. During heavy storms not only

are many animals blown out to sea where they die but also the high winds can destroy much of their habitat, depriving the surviving bats of food and shelter. Due mainly to deforestation of their island home, Rodrigues fruit bats were on the brink of extinction in 1976 when Jersey Preservation Trust brought into captivity 10 bats for a captive breeding project. There are now various captive colonies worldwide and in the Lube Foundation in Florida researchers have observed a very unusual and rare activity known as *allomaternal* (care-giving) behaviour:

A female bat was obviously having great difficulty giving birth. For one thing, she was in the wrong position. Bats, who normally perch head down, usually give birth in a head-up, feet-down position, the same position used when they defecate or urinate. But this expectant mother was in the regular roosting

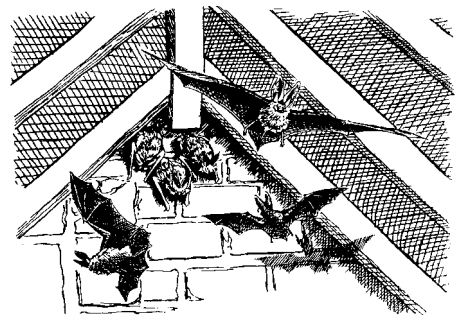
position. Then another female came over and did an astonishing thing. Perching directly in front of the labouring mother, she herself assumed the correct birthing position and began to emulate straining and contractions-as if to say "here's how you do it." The midwife bat also began licking the mother's vagina to stimulate birth, periodically wrapping her in outstretched wings.

Flying foxes normally give birth in about 40 minutes. But this behaviour continued for some three hours, during which time the mother moved into the birthing position only after the helper "tutored" the mother again and again. Except for one instance, the mother assumed the correct feet-down birth position only after the midwife demonstrated. During this time several other females appeared interested, but did not approach the pair. As the actual birth began, two males repositioned themselves between the mother and the researchers, spreading their wings when the researchers tried to move closer.

Finally, a wing and foot of the pup emerged -a breech birth. The midwife alternately licked the pup vigorously and fanned the mother when she was in the correct birthing posture. With the midwife's wings almost completely embracing the mother, the pup was at last born and cried almost immediately. While the midwife groomed the mother, another female bat arrived to fan the three of them. It was soon obvious that the exhausted newborn was having difficulty reaching its mother's breast. Despite attempts from both the mother and her helper to assist the pup, it fell six feet to the ground. In the wild, the fall would have been 100 feet or more to the forest floor, and the pup would not have survived. No attempt was made to retrieve the pup by either the mother or midwife. But in a captive colony, a rescue seemed justified so the human carers stepped in, returning the baby to its mother, and she readily accepted it.

## BATS & DEVELOPMENT

The conservation of bats and other protected species affected by developments is a subject which causes great concern.



Whether it is misplaced or not there is a general mistrust of developers and building contractors amongst the general public and the chances of such firms volunteering the presence of bats in a building, at the expense of the contract in terms of delays and potential financial penalty, seem slight.

The inclusion of the word *reckless* in The Countryside & Rights of Way Act, 2000 means that unscrupulous Contractors now have no excuse in legal terms if they cause disturbance to bats or their roosts. This is fine on the face of it but, as Health & Safety Legislation on building sites precludes the possibility of conservationists wandering around keeping an eye on things, this leaves the onus on the tradesmen to volunteer their findings when building owners were not previously aware of (or volunteering) the presence of bats in their building.

As roost records confirm, we should not assume that all builders are unlikely to come clean, but nevertheless this is not a healthy situation (for bats).

All is not lost however!

Though there are many unregulated areas of Construction, such as d.i.y., PVCu fascia replacement, etc., areas in which we, as bat workers, need to rely on the better nature of persons employed in such operations to protect our favourite creatures; there are many forms of development which require planning consent and it is through this process that protected species can be adequately considered and, ultimately, saved from destruction.

Most Local Planning Authorities (LPA's) have adopted policies in their Development Plans to seek ecological investigation when they deem it appropriate and Planning Policy Guidance Note 9 (PPG9) forms the basis of this requirement.

The methods by which LPA's seek to control development which might affect protected species vary. Some consult County Ecology Units where records are kept and receive a response based on the significance of the submitted plans; others employ in-house ecologists to perform a similar function, and, believe it or not, some still do not appear to consult as a matter of course applying some arbitrary method of determining when and whether to consult i.e. based on the Planning Officer's personal experience which could of course be nil.

Dependant on the potential impact of a development proposal the advice received by the LPA could lead to four common outcomes:

- i. A survey to be carried-out prior to determination (approval/refusal) of the application.
- ii. An approval issued subject to a condition requiring further investigation/mitigation prior to commencement of the works.
- iii. A 'Note to Applicant' included as a footnote to an approval notice warning the Applicant of the implications of finding protected species and advising them to contact English Nature in the event.
- iv. Nothing is done (or a refusal ensues, in which case there is no issue).

Sadly, in my experience running an architectural practice, the latter is all too often the case with certain authorities. This is unfortunate as, to my mind, the Planning Process is *the* most important tool available to the conservation movement to minimise destruction of species, roost sites and habitat where potential for control exists.

It is with this in mind that one is led to the conclusion that we should lobby Local Authorities in Warwickshire, where only 2 of 5 Authorities currently consult the County Ecology Unit roost records, in order to raise awareness and advise on situations in which consultation is necessary.

Currently those smaller development proposals not requiring Planning Consent appear to be beyond control, except in situations alluded to in my second paragraph, but there are circumstances in which further protection could be afforded and this would be gained through the Building Control process. Building Control (BCO) Departments of Local Authorities implement the Building Regulations which lay down standards for the physical construction of buildings. Not surprisingly, perhaps, there is nothing in 'the reg's' which covers protected species but there is no doubt that the issue of advice leaflets with letters acknowledging receipt of the applications would make many more Homeowners and Contractors aware of their obligations. I am particularly thinking of loft conversions these being typical situations in which Householders will actively avoid

the need for planning applications by keeping any fenestration to the rear elevation.

Certainly it is true that the Development Control/Technical Services Departments of Local Authorities with responsibility for both Planning and Building Control issues do not appear to appreciate the impact even the most modest forms of development can have on bats but, with guidance and advice on when and how to respond to applicants this should be an area where adequate control would result in far more robust protection for our favourite species.

Through my work, and active involvement with Warwickshire Bat Group, I find myself in a good position to pursue this angle with the relevant Local Authorities and while this will clearly take some time I intend to start the process soon. Perhaps, I will be able to report some positive news in future editions of The Echo!

### THE WBG XMAS QUIZ



The 'best' entry received by 17<sup>th</sup>. Jan 2004 will be sent a copy of the cassette "Echoes of the Night", music composed using samples of bat sounds as heard on ultrasonic detectors.

1. Who is the president of the BCT?

- a. Bruce Wayne
- b. Adam West
- c. David Bellamy.



2. Is Merlin Tuttle a made up name? If not, what organisation did he found?

3. What is the connection between the word 'Congress' & bats(*any reference to the Karma Sutra will be disallowed*).



4. What is the scientific name of the Hammer-headed Fruit bat?

(*Be creative but not insulting!*)

5. Where do bats go in the winter?

- a. to hibernate
- b. to parties.



6. Can you name any or all of this family?  
(*Yes or No will do*).

