



**BATTY SOUP PROMOTION**

This October the Bat Conservation Trust teamed up with New Covent Garden Food Co. to raise awareness about bats in the lead up to Halloween. The company's October Soup of the Month, "Hubble Bubble Toil & Trouble: Pumpkin and Three Peppers", was a brand new recipe created in support of BCT. The soup manufacturer has kindly given a donation to BCT and also ran an on-pack promotion on every carton, offering a discounted membership to the charity.

I managed to buy a carton in a local Spa shop in Coventry but had some difficulty finding it in larger supermarkets even though they stocked a wide range of the company's other soups. In fact, in the Spa shop, it was featured in a BOGOF offer so I opted for a Carrot and Coriander carton as well.

New Covent Garden Food Co.'s "Hubble Bubble Toil & Trouble: Pumpkin and Three Pepper" Soup of the Month was (allegedly) available in supermarkets and independent retailers nationwide throughout October. However, I have to admit that I was a little disappointed in the product as it tasted rather bland.

**Julia Waller**

**BATS IN THE PLANNING SYSTEM  
A RESEARCH PROJECT BY PATRICIA  
SCOTT**

The research focused on potential gaps in the protection afforded to bats due to the separation between 'mainstream' planning applications – those governed by the Town & Country Planning Act (TCPA) – and those exempted from or automatically permitted by the TCPA or governed by other legislation – 'non-mainstream'.

Previous research has tended to focus on mainstream development and on the use of Environmental Impact Assessments on larger-scale developments. While there are fewer non-mainstream developments, the likelihood of the presence of bats is much greater, and this research has demonstrated that the number of non-mainstream developments which have implications for bats is likely to be greater than the number of mainstream developments where bats are involved. While the non-mainstream developments considered in this research tend to relate to small-scale developments, the number of bats present is not correlated with scale: a single old barn may house a roost of 100 individuals while an area being considered for a new housing estate or a new road may be home to no more than that.

**Variation in the approach to considering bats**

A key finding of this research is the failure of a majority of Local Planning Authorities (LPAs) to consider bats in the context of planning applications covered by legislation other than the TCPA or expressly excluded or permitted by that legislation. There is a belief in many LPAs that existing guidance does not apply to such applications and as a result bat surveys are never requested as material to their determination, while other LPAs request bat surveys in 100% of such cases. Even for mainstream applications, there is a reluctance to request bat surveys for smaller (e.g. householder) applications and a general lack of confidence in the ability to justify requesting a survey. In what appears to be a minority of cases, surveys are being required as conditions on planning permission, rather than as pre-requisites to determining the application, in spite of guidance to the contrary. This variation in the use of bat surveys is partly a reflection of the variation in approach to assessing the need for a bat survey: even those with access to an ecologist and/or the data held by their local ecological records centre (LRC) do not always make use of this resource. In the majority of LPAs and for the majority of both mainstream and non-mainstream applications, the decision to consult an ecologist is at the discretion of the case officer – the majority of whom have little understanding of the relationship between bats and the built environment. This research strongly indicates that a key factor in the propensity to consider bats is the presence in the LPA of a person – ecologist or planner – who both wishes and is able to influence development control practices.

**The role of guidance in creating and resolving variation**

The national guidance (PPS9 and its companion documents) is generally clear on how planning should incorporate the needs of bats but not so clear on its applicability: since it is associated with and written in the terminology of the TCPA, LPAs are – either deliberately or by default – applying it only to applications governed by the TCPA. Furthermore, some LPAs are using the apparent conflict with the 'relevance' test of Circular 11/95 to justify any failure to protect wildlife on the basis that they are protected by other legislation. If, as seems logical, PPS9 is intended to apply to non-mainstream applications, the relevant application forms need to include questions that will enable planners to identify those developments most likely to implicate bats.



This research has shown that, less than a year after its introduction, the NERC Act has had very little impact on LPAs. There appears to be a lack of awareness of its provisions or its implications and no evidence of it affecting the behaviour of development control staff. There is a need to ensure that sufficient training time is allocated to allow planners to do more than simply read new policy and guidance. For example, workshops which allow implementation and implications to be explored and discussed could be used to ensure that new requirements are properly assimilated and embedded. To encourage a commitment to the protection of bats, training must make clear the unique relationship between bats and the built environment which makes their survival so dependent on land-use decisions.

This research has shown that regional guidance and local policies do often refer to biodiversity action plan targets, many of which include species action plans for bats, but that this guidance is not being followed through into the operation of development control or into the indicators being measured by planning departments' Annual Monitoring Reports. A way of improving the integration of biodiversity policies into operations would be to incorporate development control

processes into the data collection: requiring protected species survey results to be fed back into the LRCs' records and including as a performance indicator the number of applications for which protected species surveys are requested.

LPA's also produce guidance and more could be done on this front: this research has presented examples of good practice in the use of planning websites, published guidance and 'informatives' which could be more widely implemented. In particular, while LPA's cannot control those developments which are outside their remit, there are ways in which they can influence the outcomes. LPA's webpages tend to include information on the types of work that do/do not require planning permission and most offer an enquiries service, both of which should be used to disseminate information on where bats might be and what must be done to protect them. Applications for a certificate of lawfulness (for validating permitted developments) could be adapted to incorporate requests for information about those features of the site that might make it suitable for bats and to provide information about the protection afforded to bats by law. DCLG's proposals for changing the criteria for permitted developments for householder applications also need to ensure that allowance is made for assessing the potential for bat roosts.

**Wider issues**

Finally, while there is a clear need to change the approach to non-mainstream applications, this research has mirrored findings from previous research on mainstream developments on:

- the need for simple validation checklists to enable any member of the planning department to identify whether a bat survey should be part of an application submission. ALGE are currently piloting a set of biodiversity checklists, but in the meantime the criteria in the new BCT Survey Guidelines could be used. A comprehensive communications effort will be needed to ensure that all planning departments have and use it.
- the need for better access to – and use of – the existing records of bat activity (roosting and foraging) so that all planning applications can be automatically screened for proximity to bats. The funding of LRCs and the exchange of bat survey results should be seen by LPA's as a key response to the duties imposed by the NERC Act. For this to produce real improvements in the protection of bats, there needs to be better co-operation between county

bat recorders and LRCs as well as between LRCs and LPA's.

In addition to making better use of existing data, further research is required to collect, collate and publish the evidence for the true probability of bat use of buildings of different types and in different settings. This would give planners a sounder basis for requiring the submission of bat surveys – with all types of application – on the grounds of a reasonable expectation that bats will be present.

**Summary and Recommendations of Scott, P. 2007. *Bats in the Planning System. An investigation of potential gaps in the protection afforded to bats by development control regulations and procedures.* MSc Thesis, Coventry University.**

**POETRY CORNER**

**Bats**

I wonder if you've wondered at the batty nature of a bat,  
the 'sonar-samar' of its sound  
that echo - echoes all around.

I wonder if he wonders too  
about the rainbow hue of you.  
Encased in wings, hung upside down,  
do young bats think, do young bats frown?

What does he feel?  
I'll never know.  
even though -  
phenomenologically

I'm as bats  
as bats  
as bats

as a 'me'  
can be.

**Julie Boden**

**ORIGINS OF THE GREATER HORSESHOE BAT**

Genetic work carried out as part of a Bristol University research project on the National Trust Purbeck Estate in Dorset has found that the UK's population of greater horseshoe bats originated from west Asia around 40,000 – 60,000 years ago.

By taking tiny, harmless tissue samples the project found that greater horseshoe bats colonised Europe before the last ice age. Samples were taken from sites across the species natural range from the UK to Japan, including Purbeck. DNA was extracted, sequenced and compared between different populations. In 2005 the

National Trust and the University of Bristol launched the UK's first landscape scale study into bats. During the course of his PhD, researcher Jon Flanders looked at roosts, flight patterns, diets, habitats and the influence of farming practices on bats in the Purbeck area, as well as the genetics of the greater horseshoe.



Jon Flanders, commenting about the findings, said: "It is amazing how we can look back at the history of the greater horseshoe bat and see how its distribution in Europe has altered over the last 60,000 years. This is not only important information in understanding the natural history of this bat, but could also reflect similar movements of other species of animal found in Europe."

The research was carried out in collaboration with another genetic project by Stephen Rossiter at Queen Mary, University of London. His research found that when the last ice age advanced, the greater horseshoe was forced to migrate to southern Europe along with bears, hedgehogs and grasshoppers. As the ice retreated, the bat returned to Northern Europe and the UK.

David Bullock, Head of Nature Conservation at the National Trust and bat expert, is enthusiastic about the findings, added: "We know the National Trust is extremely important for bats, but there are still so many mysteries surrounding their behaviour and ecology. Every new piece of information can help to shape our



management plans and protect these rare creatures in the future."

The National Trust is particularly important for bats. All 17 species in the UK are found on Trust land. Historic buildings and ancient woodland provide important roost and hibernation sites. Farmland, parks and water are vital for feeding. Even air raid shelters, grottos and icehouses have become homes to bats.

Research from the bat study has uncovered many previously unknown facts about bats and new records for the area. For example, previous monitoring of the greater horseshoe had focused on maternity roosts and little was known about the intermediary roosts. One such roost on National Trust land was thought to have just seven or eight bats, but the research showed there are over 30 individuals, a much more significant number. Two new populations of Bechstein's bats and three maternity roost trees were also found as well as a female Barbastelle indicating that there is at least one maternity colony at Purbeck. These findings will help build a more detailed population picture of these species in the UK.



Purbeck has historically had a rich bat fauna, with fifteen of the seventeen resident species of bat in the UK having once been recorded there. Abandoned inland quarries found all along the south Purbeck ridge are known to be used as hibernacula for at least ten species of bat, including the greater horseshoe bat (*Rhinolophus ferrumequinum*) and, until the 1980s, the greater Mouse-eared bat (*Myotis myotis*). This network of disused quarries was found to be nationally important for swarming bats, a behaviour that is still a mystery. Dozens of bats descend on the area in the autumn and swarm around the quarries. By catching the bats, it was found that most were male and this suggests it is a pre-mating gathering for displaying to females. The research found that different species use different quarries for swarming.

Once widespread, the greater horseshoe population has declined significantly across northern Europe and the UK during the last century. Changes to the way we farm our countryside are partly to blame. As agriculture intensified, the insects that the bats depend on disappeared from feeding grounds. On top of this, hibernation sites have declined by 23 percent. Now that we are returning to more environmentally-friendly farming, these traditional feeding grounds are being restocked with beetles and moths, favourite foods of the greater horseshoe.

The UK population of greater horseshoe bats has been estimated by one survey at 4,000 individuals with only 200 breeding females believed to be in Dorset. Greater horseshoe bats can live to be 30 years old and do not start breeding until three or four. They gather to breed in warm roof voids of old stable blocks or large houses and hibernate close to their summer roosts in cellars or underground quarries. They navigate across large areas of countryside at night, often following hedgerows and woodland edges.

Julia Waller

NEW BAT SOUND CALL LIBRARY

BCT have created an online bat sound library which features bat calls recorded from tuneable heterodyne detectors. It is an ongoing project which aims to provide recordings of all UK bat species, illustrating the differences and similarities between different species' calls and how they vary in different habitats.



This resource is exclusively for BCT members and NBMP volunteers. If you fall into one of these categories then we will send you your user name, password and web link. If you haven't received these yet then please contact Philip Briggs at pbriggs@bats.org.uk or on 020 7501 3622.

BATS & ROADSIDE MAMMALS SURVEY

The group completed the last of this year's BCT/MTUK Bats & Roadside Mammals Surveys in late September. Despite the appalling weather this year we managed to complete 6 separate transect routes from May to September, driving approximately 150 miles overall. As a result we've generated approximately 600 new records of bats and 80 new records of visually observed mammals.



Data for all seventeen groups participating in 2007 is currently being analysed and a report will be available in January 2008.

Jon Russ

ALL IN A FLAP: THE BEHAVIOUR OF ROOSTING LESSER-HORSESHOE BATS

As part of an ongoing programme of mammalian ecological and behavioural research at Swansea University, a study of the foraging behaviour of a maternity colony of lesser horseshoe bats was undertaken at the Monkey Sanctuary, a primate rescue and conservation trust based in Looe, Cornwall in the summer of 2006.

This thriving colony is located in the cellar of Murrayton House, a 19th century estate house now used to house staff and volunteers working for the Monkey Sanctuary Trust. In 2002 the Monkey Sanctuary Trust successfully secured a grant from Mammals Trust UK to purchase an infrared low light CCTV camera system to permit visitors a clear view of the colony without disturbing the bats. This camera has successfully increased the public's appreciation and awareness of these amazing animals in their natural surroundings, and has also allowed bat researchers to begin to delve into the mysterious and relatively unknown world of the and behaviour of bats in their roosts.

Bats were observed in the roost during daylight hours and prior to the bats' evening arousal and emergence. During the day, most of the bat pups were mixed together in a single tight cluster, seemingly protected by a dense outer ring of the adult bats. Similar spatially distinct adult and young clustering behaviour has been observed in a range of temperate living bat species and is likely to function as both a thermal buffer and potentially as a defence mechanism to minimize predation risk to the young bats within the colony. As might be expected, the arousal

activity of the bats was reasonably predictable and generally occurred 45 minutes before sunset. It is worth noting that the majority of bats left the confines of the roost 5-30 minutes after sunset with a significant amount of 'light testing' behaviour occurring.

This behavioural mechanism, by which bats undertake a number of very short flights (only a few metres) in and out of the main emergence points, allows the bats to access light levels which can then be used as a proxy for relative predation risk from predators such as sparrow hawks and barn owls. Generally speaking, the bats were physically active for approximately 30-35 minutes prior to full emergence from the roost.

The most intriguing behaviours observed within the roost occurred just prior to emergence. Many of the adult bats spent some considerable time stretching and flexing their wings and undertaking rapid, intense bursts of wing movements whilst they were still holding on to the ceiling. This behaviour is very much akin to pre-flight behaviour observed in the many passerine bird species and is likely to increase the temperature of the flight muscles thereby improving the efficiency of flight when the bat finally leaves the roost to forage. Remarkably, some bats were observed to climb physically onto others nearby before undertaking pre-flight warm-ups. There was at least two possible and non-mutually exclusive explanations for this unusual behaviour.

Assuming that pre-flight wing stretching and flapping is an important functional behaviour in this species (many of the bats engaged in this behaviour), space limitations, caused by the dense packing of bats together within the roost, may force individuals to attach themselves to others nearby. This may be because individual energy reserve limitations restrict the capability of some individuals to relocate physically to less cluttered areas of the roost prior to warming up flight muscles.

The behaviour observed may also represent a form of social contact or social bonding between related (and possibly unrelated) individuals within the roost and such behaviour might even be both inter and intra-sexual in context. As many female lesser horseshoe bats appear to display a remarkable degree of faithfulness to their roosts, are capable of living in excess of 10 years and generally live in colonies in which many individuals are to be related to one another, such physical contact between individuals might be expected. If empirical evidence to support this explanation is provided then it

may become apparent that the sociality of this (and possible many other species) may be more complex than previously considered. Clearly the behaviour described in this short article requires further focused investigation and clarification. Ultimately, this study highlights the remarkable and usually 'hidden' ecology of this fascinating bat species that can be revealed by the use of non-intrusive technologies such as licensed remote controlled infrared camera systems.

by Carl Walker & Dan Forman in Mammals News, Summer 2007.

BATTY VITAL STATISTICS!

Don't forget to pass on all your bat sightings to George Burton, Warks Bat Group's Records Officer. Included with this newsletter is a copy of a recording form. Send your records to:

Roost Records, The Old Dairy, 25 Brookside, Stretton-on-Dunsmore, Rugby, CV23 9NH  
Email: records@warksbats.co.uk

If you have access to the internet then you can enter the information directly at the Warwickshire Batgroup's website <http://www.warksbats.co.uk>

Click on the 'record entry form' link in the menu on the left hand side of the page.

THE 'E'-CHO

If you would like to receive an electronic copy of the newsletter via email then let me know.....

[newsletter@warksbats.co.uk](mailto:newsletter@warksbats.co.uk)

THE BAT-'E'-GROUP

As well as receiving newsletters electronically, you can also take part in an email discussion group. It's completely free and only open to bat group members so if you have access to email and aren't already on the "egroup", the why not drop an email to me at:

[web@warksbats.co.uk](mailto:web@warksbats.co.uk) and we'll sign you up!

DIARY

If you know of any batty events then please send us the details and then we can include them in the next issue as well as on Warks Bat Group's website: [www.warksbats.co.uk](http://www.warksbats.co.uk)

Warwickshire Wildlife Trust Site Survey Training Friday 2<sup>nd</sup> May

Bat Walk Ragley Hall 23<sup>rd</sup> May 2008 (time tbc)

A presentation on bats in the UK and Ragley, followed by a barbecue and a bat walk around the grounds. There will be an opportunity to see bats emerging from their roost at the start of the walk. Advanced booking essential, Tel: 0800 093 0290, <http://www.ragleyhall.com>. Cost to be confirmed.

NBMP Training Saturday, 7<sup>th</sup> June

Bat Walk Ragley Hall 18<sup>th</sup> July 2008 (time tbc)

A presentation on bats in the UK and Ragley, followed by a barbecue and a bat walk around the grounds. There will be an opportunity to see bats emerging from their roost at the start of the walk. Advanced booking essential, Tel: 0800 093 0290, <http://www.ragleyhall.com>. Cost to be confirmed.

Bat Walk Ragley Hall 22<sup>nd</sup> August 2008 (time tbc)

A presentation on bats in the UK and Ragley, followed by a barbecue and a bat walk around the grounds. There will be an opportunity to see bats emerging from their roost at the start of the walk. Advanced booking essential, Tel: 0800 093 0290, <http://www.ragleyhall.com>. Cost to be confirmed.

Bat Walk Ragley Hall 12<sup>th</sup> September 2008 (time tbc)

A presentation on bats in the UK and Ragley, followed by a barbecue and a bat walk around the grounds. There will be an opportunity to see bats emerging from their roost at the start of the walk. Advanced booking essential, Tel: 0800 093 0290, <http://www.ragleyhall.com>. Cost to be confirmed.

DON'T FORGET TO CHECK THE WEBSITE FOR RECENTLY ADDED DATES!

The next issue of the Echo is out on 15<sup>th</sup> February 2008. The deadline for articles is 1<sup>st</sup> February 2008. If you have any batty stories, anecdotes, interesting articles or research news then please send us the details so we can include them in the next newsletter.