

NIGHT FLIGHTS

A healthy wetland means a healthy bat population. Richard Bullock explains why the London Wetland Centre is one of the healthiest of all

LET ME TAKE YOU ON A JOURNEY. A NIGHT JOURNEY. It begins among the 2,500 acres of Richmond Park, probably the most exciting of London's Royal Parks for wildlife. Ancient oaks, centuries old, rustle in the warm spring night air, but we leave them behind and head north-east to the open spaces of Roehampton golf course. From there it's a short trip to Rosslyn Park, famed for its rugby team, although no one is playing at this time of night. A couple of roads to cross, and we're at Barnes Common, one of the largest areas of unenclosed common land close to London, beyond which bubbles Beverley Brook. Nearly there now. A hop, skip and a jump across a series of playing fields, and our destination is in sight. WWT's London Wetland Centre lies straight ahead, and I promise you it contains all the insects you could ever need for a good night's foraging.

OK, as a human it might not seem all that enticing a trip. But if you were a bat, it would be perfect, absolutely perfect. From their roosts in the old oaks at Richmond, and indeed from even further south-west of Richmond, too, for night upon night during the spring, summer and autumn months, bats make their way along this dark corridor to the Wetland Centre and feast on the insects that wait in abundance. It's a bit of a journey, true, but it's worth it.

It's the phrase 'dark corridor' that is so important to this nocturnal travel. Bats are great travellers, but the conditions have to be right. Some species, such as the Daubenton's, are able to travel up to 10km from their roosts in search of suitable hunting grounds, but they tend only to pick routes that are relatively free from artificial light, to which they're ►





a greater abundance and variety of nocturnal insect life than any other environment. It's for this reason that the centre is, in fact, in the top 5% of prime London bat sites.

And it's rising even further to the top. When I was first involved with the site back in the mid-1990s its reservoirs made it a good spot for bats. Yet, in recent years, the greenery in the Wetland Centre has become better established, enticing a huge range of insects. The bat activity has increased accordingly every year, and is showing no signs of relenting.

I'm not just talking about a few species, either. Of the 17 bat species that are known to live year-round in Britain, no fewer than 10 occur in Barnes, with seven of these regularly recorded at the Wetland Centre. This is an extraordinary statistic. Pipistrelles are the commonest, and of the three 'pip' species, the soprano is the most abundant of all. This amazing species was only discovered in the 1990s, bat enthusiasts noticing that some common pipistrelles seemed to be echolocating – using their sonar to navigate and hunt – at a higher frequency than the rest. DNA-testing showed that what was thought to be one species was in fact two, the one with the higher 'voice' gaining the name Soprano Pipistrelle. It wasn't long before it was realised that a third 'pip' species had colonised Britain, too: the Nathusius' Pipistrelle. Barnes has got those, too.

Of the big bats, the Noctule is the centre's commonest, with its distinctive swoops and dives during early dusk, followed by the Leisler's bat. The Serotine, which prefers to hunt over pastures, has leapt in numbers since we started grazing the land with sheep and cattle in 2002/3. Daubenton's, which flies low over rivers and lakes and scoops insects off the water surface, is pretty common here, too. A few years ago visitors

sensitive, and which can hamper their unique feeding techniques. Around London, of course, there are few such dark corridors available, making the Richmond-Barnes link such an important stretch of land.

But why do the bats bother to go as far as Barnes anyway? Why not simply do their hunting around the woodlands and pastures of Richmond? The answer is that wetland habitats are prime targets for hungry bats, hosting as they do

Sound effects

Bat detectors have volume and frequency dials, with different species producing outputs on the detectors at different frequencies. For example, tune the detector at the following frequencies for the different bat species:

Species	Detector Frequency	Repetition Rate	Sound Levels
Noctule	22 kHz	very slow	very loud
Serotine	28 kHz	slow	loud
Daubenton's Bat	40 kHz	very fast	quite quiet
Nathusius' Pipistrelle	38 kHz	fast	readily audible
Common Pipistrelle	45 kHz	fast	readily audible
Soprano Pipistrelle	55 kHz	fast	readily audible

There are several types of bat detector on the market, so before you decide which to buy, why not pay a visit to your local centre and enjoy a guided bat walk, where you'll be able to try out a number of detectors for yourself.

take action >>

The London Wetland Centre, and WWT's other centres, offer many guided bat walks through the spring and summer months. The walks are aimed at encouraging the novice to discover bats for the first time, and bat detectors are provided. For further details see the events listings on page 58, or visit our website www.wwt.org.uk/visit.



Bat facts

- When hibernating, bats can lower their body temperatures to as little as 2-3°C, going into a torpor in the process. During this time, water vapour can condense on them.
- Most bats feed on insects, but the Greater Noctule of southern Europe has occasionally been known to feed on small birds, while the Ghost Bat of Australia actually feeds on other bat species.
- Bats roost in a variety of places: Noctules prefer tree holes, while pipistrelles can often be found in buildings. Horseshoe Bats are the most likely to be found roosting in old buildings, including mansions, stables and barns, while a hunt under old bridges may well turn up a Daubenton's roost.

When art meets nature

When the artist Jeremy Deller won the 2004 Turner Prize for his film of bats emerging at dusk from caves in Texas, he realised he had a concept that could move beyond just the medium of film. He got in contact with the architectural innovators Surface to Air, and with them developed the idea to build 'a large Bat House somewhere in the UK. This would be a piece of architecture, a sculpture and a living, working object'.



WWT, whose London Wetland Centre may be where the Bat House is built if permissions and funding are achieved, became partners of the project, with the Royal Society of Arts, the Bat Conservation Trust, plusequals, the Arts Council England, and the Office of the Mayor of London.

But who would actually design the Bat House? Here comes the truly fun and democratic bit. The project has been thrown open to the public, with a series of bat-related artistic challenges running through 2007 which culminate in the actual main competition for the ideal architectural design. The overall brief is to imagine 'a building of aesthetic and environmental excellence, made with sustainable materials, that offers a home for several bat species and the opportunity for visitors to engage with its residents'.

If you would like to enter the Great Bat House Project, www.bathouseproject.org has all the details.

were treated to the extraordinary sight of one hunting across the lake in front of the main centre during the hours of daylight! Whiskered/Brandt's and Natterer's bats have been less frequently recorded, and in 2006 the 10th species, the Brown Long-eared Bat, made its first appearance.

Ten species in all: but it's not just the variety, it's also the volume. Sometimes bat activity is so great on a Barnes summer night that we need more than just our detectors to monitor them all. Tape recordings and data loggers that count the number of bat passes are all part of our monitoring gear at such times.

Not all of these bats travel on a nightly basis to Barnes, though. Some of them roost here already. The pipistrelles make up the majority of these. Aiming to strengthen the site's biodiversity, WWT is looking to encourage even more of them to take up residence at the centre, and is currently hoping to do so through what I think is a highly imaginative project – a Bat House (see box, right).

It's a truly exciting idea, and once it's built, the London Wetland Centre will have a bat house to rival any other, anywhere in the world.

Just as it currently has a bat population to rival anywhere in London. By keeping the dark corridor dark, and by opening the bat house for new residents, we aim to keep it that way.

Richard Bullock is London Wetland Centre's Biodiversity Officer. For details about the Bat House Project, please visit www.bathouseproject.org

Field guide

Identification and flight tips to some of the most easily seen species in the UK



Noctule

Britain's largest species, the Noctule, has a head and body length of 6.5-8cm, but looks a lot bigger when in flight with its wingspan of 35cm. The first species to appear, it flies high in the air, dramatically stooping in its flight path every so often. Favourite food items include non-biting midges, also larger moths and beetles.



Pipistrelle

Pipistrelles are Britain's smallest bat species, with a head and body length of 4cm and the weight of a 2p coin. With a wingspan of 20cm, these bats appear bigger in flight. Pipistrelles usually appear about 10 minutes after the first Noctules appear, but fly closer to the ground. They will often hunt up and down a regular 'beat', twisting and turning as they detect and pursue tiny insects.



Daubenton's

Daubenton's Bat has a head and body length of 5cm, and a wingspan of 26cm. These bats usually appear about 30-40 minutes after the first Noctules. They fly close to the surface of water, feeding off insects within 0.5m of the water, sometimes even picking insects off the surface with their large feet. Daubenton's can be detected by shining a powerful torch across the water, but this should be done briefly, as they are sensitive to light.



Serotine

The serotine is about the same size as the noctule, but slightly smaller: head and body length of 6.5-8cm with a wingspan of 32-36cm. It also appears much later in the evening. It has broad wings and a leisurely flapping flight interspersed with short glides. It feeds closer to the ground than the Noctule.