

Bats only roost with their closest buddies

13 September 2011, By Tamera Jones



Daubenton's bat.

Bats prefer to rest with their closest pals rather than with bats they don't know very well, researchers have discovered.

They found that although bats change where they sleep every few days, they nearly always roost with the same bunch of bats, forming tight-knit [social groups](#) with exclusive membership.

"Bats build long-term companionships with other individuals, and these companions are members of exclusive social groups that can last for many years," explains Tom August from the Center for Ecology & Hydrology (CEH), who's studying the bats as part of his PhD at the University of Exeter.

"I was interested in fitting together disease and ecology, and wanted to know if the ecology of bats influences the diseases they carry," he says.

Despite being cute-looking creatures, a very small number of UK bats carry rabies-like viruses. They can also be the source of emerging diseases. "The SARS virus originated from bats in China," says August.

By getting a better understanding of how individual bats interact with each other, researchers are hoping to predict how diseases might spread, "which may point to ways in which the risks to humans can be reduced."

Bats numbers have dropped dramatically in recent years, because of loss of habitat. They like roosting in buildings and trees, and during the winter, tend to hibernate in caves. Most bats in the UK are protected species.

Bat experts have long known that they often rest together: males roost on their own, or sometimes in small groups; while female bats establish so-called maternity colonies around June when many soon-to-be mothers come together to have their pups.

But this is the first time researchers have shown that bats form exclusive social groups - at least in the UK.

By revealing how bats stick together in distinct social groups, the research shows that conservation efforts should focus on whole areas used by groups, rather than just single roosts.

August and colleagues from CEH and the University of Exeter studied the hundreds of bats that live in Wytham Woods, just outside Oxford in the UK.

Around 200 Daubenton's and 200 Natterer's bats live in the woods, making use of some of the 1200 bird boxes which have been there for the last 40 or 50 years. Birds use them early in the season, but as soon as they leave, the bats move in.

Wytham Woods is owned by the University of Oxford and is probably the most heavily-studied woodland in the UK. Indeed all of the bats are fitted with tiny aluminium arm bands with unique numbers to make identifying them easier.

'The fact that bats change their roosts so frequently means this kind of study has been difficult up until now,' says August.

After taking meticulous notes of which bats associate with each other, August built up a 'spider-web' diagram to reveal the bats' social networks.

"Instead of a huge spider web, you get clusters, which clearly show how individual [bats](#) associate with each other," August says. "In this one wood, we found six or seven social groups."

Groups appear to be made up of around 20 to 40 individuals. "It could be that they're coming together to share information about where food is," says August.

The study will be presented to delegates of the British Ecological Society's annual meeting in Sheffield today.

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