

Great Tit Turns Out to be a Killer

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Great Tit, Parus major. Image: Luc Viatour, via Wikimedia Commons.

(PhysOrg.com) -- The Great Tit is an aggressive songbird found in Britain, continental Europe, parts of Northern Africa, and much of Asia. It is believed to survive mostly on seeds, nuts, fruit, insects, beetles, and spiders, but scientists studying a cave in Hungary have now discovered a population of Great Tits that kill and eat hibernating bats.

Researchers from the Max Planck Institute in Seewiesen, Bavaria, studied the Great Tits (Parus major) at a cave in the Bukk mountains in northeastern Hungary for two successive winters, and witnessed the birds deliberately seeking out and eating hibernating pipistrelle bats (Pipistrellus pipistrellus) on over a dozen occasions. They also discovered bat carcasses with peck marks.

The scientists, Péter Estók, Sándor Zsebők, and Björn M. Siemers, said



the birds flew close to the cave walls, often disappearing into crevices to look for bats. When the hibernating bats are disturbed, they squeak in a range audible to the Great Tits, and the researchers thought the birds may have learned to listen out for the squeaks. To test the hypothesis, they recorded bat squeaks. When played back, the birds were interested 80% of the time.

Pipistrelle bats have tiny bodies, being around one-quarter the size of the Great Tit. The birds were able to capture them on the cave floor or on the rocks, and either ate the bats where they found them or carried them out of the cave to devour them in trees near the entrance.

The report, published in the Royal Society's <u>Biology Letters</u>, said the birds' behavior indicated they hunted the bats systematically and killed them for food. The question is, how did they develop this behavior? The scientists could only speculate it might have been a type of cultural learning.

There have been a few previous reports of meat-eating Great Tits in Poland and Sweden, but it was unclear whether in those cases the birds had killed the bats or found them already dying or dead. If they did hunt the bats, Dr Siemers said it could be possible the hunting behavior was transmitted along the birds' migration routes. The scientists believe the birds would need a wide-mouthed cave such as the one in Hungary, to provide enough light for the birds to hunt. This again suggests the behavior would be extremely rare.

When the researchers provided alternative food for the birds, they took it in preference and the number of attacks on bats fell, which implies their hunting behavior was a response to the harsh winter food shortages. It seems when times are tough, the Great Tit gets even tougher.

More information: Péter Estók, Sándor Zsebők, and Björn M. Siemers,



Great tits search for, capture, kill and eat <u>hibernating bats</u>, *Biol. Lett.* published online before print September 9, 2009, <u>doi:10.1098/rsbl.2009.0611</u>

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