

"SOPRANO" SQUIRRELS

If you happen to be using a bat detector in the state of Dakota and come across some unusual calls you may be picking up the ultrasonic warnings of a ground squirrel. James Hare, an Associate Professor of Zoology from Manitoba University, was studying these little rodents that are often mistakenly called 'gophers' when he noticed them making what he thought were whispers.



Richardson's Ground Squirrels (*Spermophilus richardsonii*) live in sandy well-drained soils of the prairie and pastures. Their range reaches from southern Canada to the North American states of Montana, Wyoming and North Dakota where they dig colonial burrows and can reach densities of 20 squirrels per acre. They are preyed on by a large number of animals including hawks, falcons, foxes, coyotes badgers and rattlesnakes.

Professor Hare used a bat detector to record the silent calls and then analysed them on a computer. He found that the squirrels were using ultrasonic alarm calls at about 50kHz to warn their family of a



possible threat. From his research he has concluded that these ultrasonic

shrieks indicate a lower level of threat as the squirrels produce a loud audible alarm call when in greater danger.

The advantage of using ultrasound is that it probably cannot be heard by predators such as coyotes or hawks. It also is highly directional and weakens after a short distance, enabling the squirrels to direct the alarm calls only to squirrels close by.

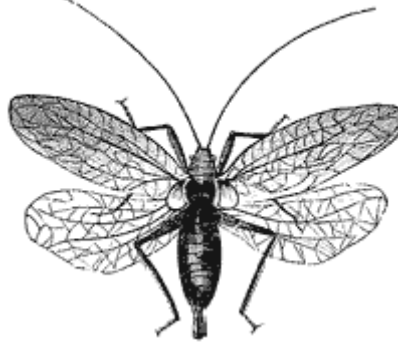
There is an audiovisual movie of the squirrels in action at "The Animal Communication Project" website:

<http://acp.eugraph.com/news/news04/wilson.html>

KATYDIDS AND BATS

Crickets are not the only animals that inadvertently signal to another species. A close cousin of the field cricket, the greener, longer-legged Katydid, faces a similar challenge. Instead of attracting the female he bargained for when he launched into full voice, a male Katydid may find himself becoming a meal for a bat. A repetitive staccato trill made up of many frequencies proves easy to locate, no matter what species produces it. This is, of course, the purpose of the male katydid's trill.

But in Panama, where bats are numerous, katydids change their tune. They sing a higher-pitched song, with a narrower frequency range, much harder to locate. They also sing a lot less. In an experimental situation, loud, enthusiastic katydids caged with hungry bats survived less than a minute. Shyer, quieter males lasted more than half an hour before becoming bat bait.



But if males must remain quiet to survive, how can they attract a mate? A quiet, infrequent trill can bring a female into the vicinity, perhaps to the same plant. The quieter males then complete their attractive act with a silent dance but with such enthusiasm they actually shake the leaf they're standing on. Females detect the dance through the plant, locating the source of call and movement.

One species of bat known to prey on the Katydids is the White-throated Round-eared bat *Lophostoma silvicolum* (formerly known as *Tonatia silvicola*).



These bats spend the day and part of the night in active, arboreal termite nests which are hollowed out at the bottom. Their short broad wings allow for great

agility when flying in a cluttered environment such as deep forest understory.



<http://katydid.uni-graz.at/batkey/videos.asp>

This is a website dedicated to neotropical bats. It even has some movies of the bats that the research group has studied including the White-throated Round-eared bat.

DIARY

**Bonkers about Bats!
Coombe Country Park**

Sat, 4 September 2004 20:00 - 21:30
Your second chance to see our night-time hunters as they chase their evening meal. Find out about the life of a bat, where they live, what they eat and how you can help to protect them. For bookings and more information phone (024) 7645 3720. £1.50 adults £1 children and passport to leisure and learning.

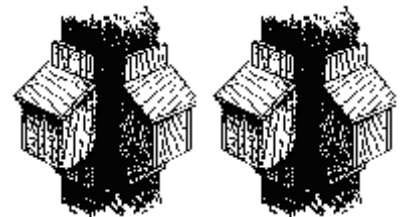
Bat Walk @ Charlecote Park

Fri, 10 September 2004 19:30 - 21:00
Join us to find out more about these fantastic creatures. Led by John Waller of Warwickshire bat group. Organised by The National Trust, Charlecote Park. Advanced booking essential, contact 0778 865 8495. £3 per person (price to be confirmed).

"Moths and Bats"

Pooley Country Park & Heritage Centre

Fri, 10 September 2004 19:30 - 21:30
Search the darkness for the beautiful moths that inhabit this site and use a bat detector to determine the hiding places for these nocturnal creatures. Please bring a torch. Meet at the Visitors Centre. Organised by Warks County Council. Booking essential on 01827 897438 or 07990 58506. £2.50 per person (includes tea and biscuits).



**Bat Box Check
Abbey Fields, Kenilworth**

Sat, 11 September 2004 10:00
Meet in the car park off Bridge Street.

**National Bat Conference 2004
University of Reading**

Fri, 17 - Sun, 19 September 2004

The next issue of the Echo is out on 1st December. Deadline for entries is 22nd November.