

Do bats know voices of friends they hang out with? (w/ video)

May 7 2013

Is it possible that mammals have the ability to recognize individuals of the same species, whom they know well, by their voice? A new study has found that even in nocturnal, fast-moving animals such as bats, there is an ability to recognize certain vocal aspects of other bats from their social groups. The study by Hanna Kastein from the University of Veterinary Medicine in Hannover, Germany, and her colleagues is published in the Springer journal *Animal Cognition*.

The authors chose [bats](#) for their study as they are social mammals whose aerial lifestyle favors the use of acoustic cues for both orientation and communication. Body contacts among the [social groups](#) in the False Vampire bat, *Megaderma lyra*, suggest individualized relationships. The authors suggest that the ability to recognize individuals by sound may govern the reunion of groups at night roosts. When isolated bats are observed, they emit calls which result in the bat being joined by members of its usual night roosting group, giving weight to the belief that others must recognize his call.

The researchers used two groups of bats for their study. The groups were kept in separate flight rooms and observed over a minimum of two months. The researchers observed the established body-contact partners and separated bats from their respective groups to evoke the emission of contact calls which they recorded. These calls were then played back to bats which were either body-contact partners, no body-contact partners or unknown bats from another group. The behavior of the experimental bat was measured using the turning reaction of the bat's body towards the

[loudspeaker](#) emitting the call.

The researchers found that the bats reacted to all single contact calls by turning towards the loudspeaker whether it was from a body-contact, no body-contact or unknown bat. This shows that they did not have a clear preference for calls from body-contact partners under these [circumstances](#). The strong response to all the calls could be caused by the high attractiveness of any contact call to temporarily isolated bats.

However, in the set of experiments where bats were repeatedly presented with a call from a known bat until they gave no reaction to the sound and then presented with a different call, they showed a stronger turning response to other partners from their social group compared to a different call from the previously presented bat. This would suggest that the bats make an individual evaluation of the voice.

The researchers conclude: "The experiments provide evidence for identity discrimination based on voice dissimilarity, and may indicate recognition of conspecifics by voice."

More information: Kastein, H.B. et al.(2013). Perception of individuality in bat vocal communication: discrimination between, or recognition of, interaction partners? *Animal Cognition* [DOI 10.1007/s10071-013-0628-9](#)

Provided by Springer

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