

# Bats recognize the individual voices of other bats

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Bats can use the characteristics of other bats' voices to recognize each other, according to a study by researchers from the University of Tuebingen, Germany and the University of Applied Sciences in Konstanz, Germany. The study, published June 5 in the open-access journal *PLoS Computational Biology*, explains how bats use echolocation for more than just spatial knowledge.

The researchers first tested the ability of four greater mouse-eared [bats](#) to distinguish between the echolocation calls of other bats. After observing that the bats learned to discriminate the voices of other bats, they then programmed a [computer model](#) that reproduces the recognition behaviour of the bats. Analysis of the model suggests that the spectral energy distribution in the signals contains individual-specific information that allows one bat to recognize another.

Animals must recognize each other in order to engage in [social behaviour](#). Vocal communication signals are helpful for recognizing individuals, especially in nocturnal organisms such as bats. Little is known about how bats perform strenuous social tasks, such as remaining in a group when flying at high speeds in darkness, or avoiding interference between echolocation calls. The finding that bats can recognize other bats within their own species based on their echolocation calls may therefore have some significant implications.

More information: Yovel Y, Melcon ML, Franz MO, Denzinger A, Schnitzler H-U (2009) The Voice of Bats: How Greater Mouse-eared Bats Recognize Individuals Based on Their Echolocation Calls. *PLoS Comput Biol* 5(6): e1000400. doi:10.1371/journal.pcbi.1000400; [dx.plos.org/10.1371/journal.pcbi.1000400](http://dx.plos.org/10.1371/journal.pcbi.1000400)

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