

Research duo discover first instance of non-human primates whispering to each other

September 25 2013, by Bob Yirka



A Cotton-top tamarin at Schwerin Zoo. Credit: Harald Hoyer / Wikipedia.

(Phys.org) —Psychology researchers Rachel Morrison and Diana Reiss of The City University of New York have discovered the first instance of non-human primates whispering to one another. In their paper published in *Zoo Biology*, the two describe how they recorded vocalizations of captive tamarin monkeys and found that when threatened they sometimes revert to whispering to one another to avoid

being overheard.

Whispering is a common strategy used by people to communicate with one or more people while simultaneously trying to avoid having others hear. Other animals have been found to lower the volume of their communications as well under certain circumstances, but never before has any [primate](#) other than humans been found to do so. In this new effort, the discovery was inadvertent.

The two researchers were studying cotton-top tamarins at New York's Central Park zoo, hoping to learn more about the kinds of calls the monkeys make to one another under different circumstances. Prior research had found that tamarins are capable of vocalizing a wide range of noises. Morrison and Reiss were most interested in what are known as mobbing calls—sounds members of a group make to confuse or intimidate [predators](#).

To better understand how the tiny monkeys use mobbing calls, the researchers recorded sounds a group made when a known threat entered the vicinity—a supervisor that had been part of the team that had captured them in the wild. Prior to the study, the monkeys had used mob calls whenever the supervisor came into their view. Neither of the researchers noticed anything unusual as recordings were made, but later during playback analysis they discovered the monkeys were engaging in vocalizations that were at such low amplitude that people in the area couldn't hear them—they were [whispering](#) to one another.

The researchers acknowledge that it's impossible to know for sure what exactly the [monkeys](#) were saying to each other, but it seems pretty clear from observation that they were reminding one another of the threat the man posed and were doing it in a way that wouldn't alert the threat to the calls they were making to each other. The discovery of whispering by a non-human primate, Morrison and Reiss suggest likely means that it

occurs in other species as well—researchers just haven't heard them yet.

More information: Morrison, R. and Reiss, D. (2013), Whisper-like behavior in a non-human primate. *Zoo Biol.* [DOI: 10.1002/zoo.21099](https://doi.org/10.1002/zoo.21099)

Abstract

In humans, whispering has evolved as a counteractive strategy against eavesdropping. Some evidence for whisper-like behavior exists in a few other species, but has not been reported in non-human primates. We discovered the first evidence of whisper-like behavior in a non-human primate, the cotton-top tamarin (*Saguinus oedipus*), in the course of investigating their use of human-directed mobbing calls. We exposed a family of captive cotton-top tamarins to a supervisor who previously elicited a strong mobbing response. Simultaneous audio–video recordings documented the animals' behavioral and vocal responses in the supervisor's presence and absence. Rather than exhibiting a mobbing response and producing loud human-directed mobbing calls, the tamarins exhibited other anti-predator behaviors and produced low amplitude vocalizations that initially eluded our detection. A post-hoc analysis of the data was conducted to test a new hypothesis—the tamarins were reducing the amplitude of their vocalizations in the context of exposure to a potential threat. Consistent with whisper-like behavior, the amplitude of the tamarins' vocalizations was significantly reduced only in the presence of the supervisor. Due to its subtle properties, this phenomenon may have eluded detection in this species. Increasing evidence of whisper-like behavior in non-human species suggests that such low amplitude signaling may represent a convergence in a communication strategy amongst highly social and cooperative species.

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