

Call of the wild: Male geladas captivate females with moans, yawns

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For female gelada monkeys, a grunt from a male primate won't suffice to get her attention. The call of the wild must involve moans, wobbles or yawns to entice these females, according to a new University of Michigan study involving the Ethiopian mammals.

In findings appearing in *Scientific Reports*, U-M researchers found that female geladas who heard recorded playbacks of male vocal sequences containing one of three derived call types—moans, wobbles and yawns—lingered longer and spent more time near the speaker.

Each of these call types are acoustically interesting, the researchers say. Moans are long in duration, wobbles have a high degree of frequency change and yawns use a large frequency bandwidth.

"Females pay more attention to male vocal sequences that contain acoustically elaborate calls," said Morgan Gustison, a doctoral student in the Department of Psychology and the study's lead author. "Not only do the females look longer, but they also choose to hang around the area where they heard an elaborate sequence."

Study subjects were 36 adult female geladas in Simien Mountains National Park, located in eastern Africa. Identified by their unique body markings, these animals—who lived outside the three groups studied by the U-M Gelada Research Project—were chosen so they would be unfamiliar with the 12 adult male geladas from which researchers recorded playback stimuli.

The playback consisted of 18 "grunt only" and 18 more complex "derived call" vocal sequences.

An adult female was chosen as a subject for the playback trial if she was stationary—either feeding or resting—and not engaged in social activity. The primate also had to be close to vegetation where the speaker could be hidden.

The females would hear the vocal sequences and look toward it, possibly trying to determine its origins. They spent more time in the general location when the sound involved a derived call, Gustison said.

"When the sound only involved the grunt, the females might be curious briefly, but not as interested as when they heard varied sounds," she said.

The findings also indicate that male geladas utilize a more complex string of sounds to maintain social bonds with the females in their harem-like reproductive units. A unit usually has about a half-dozen [females](#) and one male, who does all of the mating until a younger male suitor is able to kick him out..

Researchers said their work contributes to the debate about the origins of highly complex forms of communication like human language.

"The results of this study build support for the idea that sexual selection could play an important role in the emergence of complexity in primate vocal systems," said Gustison, who worked on the study with Thore Bergman, an associate professor of psychology and ecology and evolutionary biology.

Provided by University of Michigan

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