

# Qualia

## Cheating monkeys practice deception to conceal infidelity

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About 17% of a group of gelada monkey's offspring is the result of cheating, meaning the dominant male may not be the father of all of the offspring in this family group. (Image: Dave Watts, flickr)

People who cheat on a loved one often try to cover their tracks to avoid discovery. It turns out this type of tactical deception isn't unique to humans. New research documents for the first time how wild gelada monkeys also actively try to conceal their infidelity from dominant males.

For three years, researchers from the University of Michigan, University of the Free State-Qwaqwa in South Africa, and University of Pennsylvania observed 19 groups of gelada monkeys in the Simien Mountains National Park of Ethiopia. They published [their findings in \*Nature Communications\*](#) on February 12.

Geladas (*Theropithecus gelada*) live in small units that consist of up to a dozen females, a few subordinate males, and one dominant male, who holds exclusive reproductive rights to the females. They live in an open grassland habitat and when mating, the dominant male and the female produce loud calls that can be heard from more than 30 meters away. The loud sexual vocalizations and lack of hiding places would seem to help the dominant male easily detect any monkey business and stop it from happening. But previous studies revealed that subordinate males father about 17 percent of a group's offspring. Somehow, geladas are getting away with illicit sexual couplings. Could they be capable of tactical deception in order to cuckold the dominant male?

Tactical deception involves not only cheating, but actively taking steps to not be discovered. Despite many anecdotal reports, empirical data supporting tactical deception (and its consequence, punishment) in animals is nearly non-existent. Other studies have instead found evidence for functional deception, which occurs when an individual simply takes advantage of an opportunity that's presented. For example, another primate, the long-tailed macaque, is more likely to mate when potentially harassing bystanders are not present. The difference between the two types of deception center around whether the individual who is doing the deceiving understands that they are creating false belief in the individual or individuals they are fooling.

In this new study, the authors recorded 939 sexual pairings between a dominant male gelada and one of his females and 93 sexual pairings between a subordinate male and a female. They found that the illicit pairs were more likely to copulate when they were at least 65 feet away from the dominant male, similar to the behavior previously seen in macaques. But geladas took their deception a step further. Cheating geladas were much less vocal during sex. This combination of behavior suggests the cheating couples' tactically change their behavior to avoid detection by the dominant male.

And cheaters have good reason to try to avoid detection. If the dominant male caught an illicit couple in the act, he would retaliate by chasing them apart and biting them. About 20 percent of illicit copulations ended this way, but the punishment did not seem to discourage future cheating by the geladas.

The authors say this evidence of both tactical deception and retaliatory punishment in a natural setting is a first. The cheating geladas' behavior suggests they are taking into account the perspective of the dominant male and altering their behavior based on what he can see and hear.

Tactical deception, especially that involving sexual infidelity, is common among humans but until now has been hard to conclusively demonstrate in other animals, even our closest relatives. This study provides evidence that some primates are sneaky in the same ways we are, and given the anecdotal reports, other species might be deceptive, as well. The authors hope their findings will lead to more studies of deception and punishment in the animal kingdom and clues to the evolutionary roots of our own behavior.

## **Related Links:**

["Evidence for tactical concealment in a wild primate" in \*Nature Communications\*](#)