

Female mammals follow their noses to the right mates

March 17 2009

Female birds often choose their mates based on fancy feathers. Female mammals, on the other hand, may be more likely to follow their noses to the right mate. That's one conclusion of Cambridge zoologist Tim Clutton-Brock and Harvard researcher Katherine McAuliffe, whose review of evidence for female mate choice is published in the March 2009 issue of *The Quarterly Review of Biology*.

Historically, most examples of female [mate choice](#) and its evolutionary consequences are found in [birds](#). The classic case is the peacock's tail. The ornate tails do nothing to help peacocks survive. Rather, they emerged because peahens prefer to mate with males that have showy plumage.

Such vivid examples of female preferences in [mammals](#) are harder to find, leading to an assumption that mate choice plays a smaller role in mammals than in birds. But that's not necessarily the case, Clutton-Brock and McAuliffe conclude. Female mating preferences are likely to be just as important in mammals, though they may not be as obvious to human observers.

The researchers point out several factors that complicate the study of mammalian mate choice. One factor is the very nature of mammalian mating systems. Males compete fiercely with each other for access to female partners. Since the dominant males often chase away other males, it's hard to tell if [females](#) are choosing to mate with certain males, or are merely mating with them by default.

"The most convincing evidence for female mate choice in mammals comes from studies of captive mammals ...carried out under controlled conditions where the effects of male competition can be excluded ...," Clutton-Brock and McAuliffe write.

Lab studies of olfactory signaling, they say, may provide the best evidence for female mate choice in mammals. Unlike birds, many mammal species are sexually active at night. So mammals may be less inclined than birds to base preferences on visual cues. Instead, females of many [mammalian species](#) may be more likely to choose males using olfactory cues.

Research has shown that female mammals commonly investigate scent marks left by males. Females also show a preference to mate with males who scent mark more frequently.

Just what can a female learn about a male through his scent? Plenty, say Clutton-Brock and McAuliffe.

Recent studies have shown that mammalian females use scent to pick out genetically dissimilar males. Parents with dissimilar genes in a certain part of the genome tend to produce healthier offspring. So male mammals advertise their genotype via scent, and females pick up the signal and preferentially mate with dissimilar males. This ability to sniff out a good genetic match has been found in mice and humans.

Other studies of several rodent species have found that females dislike odors of males who are infected with parasites, and may avoid mating with them. Since resistance to parasites is often a genetic trait, choosing a parasite-free mate may be beneficial to offspring.

Study of olfactory mating cues is still in its infancy, Clutton-Brock and McAuliffe say. But they believe that this line of research will continue to

reveal much about mammalian mate choice.

"It is possible that in some mammals, males produce olfactory signals that match the elaboration and complexity of the peacock's tail ... or the sedge warbler's song ...," Clutton-Brock and McAuliffe write.

Source: University of Chicago ([news](#) : [web](#))

Citation: Female mammals follow their noses to the right mates (2009, March 17) retrieved 19 April 2024 from <https://phys.org/news/2009-03-female-mammals-noses.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.