

Female banded mongooses lead battle for chance to find mates

November 9 2020, by Christina Larson



In this August 2013 photo provided by the Banded Mongoose Research Project in November 2020, banded mongooses form battle lines in Queen Elizabeth National Park, Uganda. When families of banded mongooses prepare to fight, they form battle lines. Each clan of about 20 animals stands nose to nose, their ears flattened back, as they stare down the enemy. A scrubby savanna separates them, until the first animals run forward. (Harry Marshall/Banded Mongoose Research Project via AP)

When families of banded mongooses prepare to fight, they form battle lines.

Each clan of about 20 animals stands nose to nose, their ears flattened back, as they stare down the enemy. A patch of scrubby savannah separates them, until the first animals run forward.

"Then they bunch up into writhing balls, chaotic and fast-moving, and you hear high-pitched screeches," said Michael Cant, a biologist at the University of Exeter who has been studying the species in Uganda for 25 years. "We call it mongoose warfare."

The [catlike striped mammals](#) only weigh up to 5 pounds each, but the vicious fights can last more than an hour. A question that has intrigued Cant and other scientists is: Why do these social animals fight?

Chimpanzees are the most famous example of family-oriented mammals who wage group [warfare](#)—both to defend or expand their [territories](#) and to [take females](#) from other families. But individual mongooses almost never leave the group they're born into.

Banded mongooses are known for almost unbreakable devotion to their birth family—as well as cooperative living habits, including sharing den-guarding and pup-rearing responsibilities, said Cant.

Combining field observations and analysis of 19 years of demographic and behavioral data for a population of 10 to 12 families—about 200 mongooses at any time—Cant and his colleagues have found that at least one purpose of the fights is to allow females a chance to mate with opponent males. That avoids or minimizes inbreeding.

"We think females play a role in inciting these conflicts to escape the males in their own family groups during the confusion and chaos of

battle," said Cant.

Their research, [published](#) Monday in the journal *Proceedings of the National Academy of Sciences*, found that almost all fights are initiated by groups when their females are in estrus or fertile, which happens among all females at the same time. Often the females take a lead in steering groups to places where they will encounter combative neighbors. About 20% of pups in a group are sired by males from opposing groups, DNA analysis showed.

"This is fascinating research on a pretty unique situation," said Michael Wilson, a biological anthropologist at the University of Minnesota, who studies [group fighting](#) in mammals and was not involved in the new study. "What's driving this is partly the dilemma the females find themselves in."

The female mongooses are strongly motivated to find mates in other groups, Wilson said. "But it's really hard to do that because as soon as they come into estrus, they get followed doggedly by a male in their own group. The only way they can shake him off is to visit the neighbors and start a fight."

Because of the risk of predation from leopards, pythons and birds of prey, mongooses almost never leave their family groups to wander alone, said Francis Mwanguhya, who works with Cant as field manager of the Banded Mongoose Research Project in Uganda.

In most social mammals, such as gorillas, lions, wolves and humans, offspring of at least one gender leave their parents' group to find mates and join other families.



In this May 2016 photo provided by the Banded Mongoose Research Project in November 2020, two banded mongoose groups form battle lines during an intergroup encounter in Queen Elizabeth National Park, Uganda. When families of banded mongooses prepare to fight, they form battle lines. Each clan of about 20 animals stands nose to nose, their ears flattened back, as they stare down the enemy. A scrubby savannah separates them, until the first animals run forward. (Dave Seager/Banded Mongoose Research Project via AP)

In the relatively few species where that's not the case, other strategies are needed to prevent inbreeding. Killer whales, for instance, [rarely leave](#) their birth families, but family groups come together for mating.

"You need different mating strategies when no one ever leaves the group," said Cant.

More information: Rufus A. Johnstone et al., "Exploitative leaders incite intergroup warfare in a social mammal," *PNAS* (2020).

www.pnas.org/cgi/doi/10.1073/pnas.2003745117

© 2020 The Associated Press. All rights reserved. This material may not be published, broadcast, rewritten or redistributed without permission.

Citation: Female banded mongooses lead battle for chance to find mates (2020, November 9) retrieved 23 April 2024 from <https://phys.org/news/2020-11-female-mongooses-chance.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.