

Moongoose females compete over reproduction

December 13 2019



A group of banded mongooses (*Mungos mungo*) enjoying morning sunshine at the study site, the Mweya peninsula in Western Uganda. Credit: Emma Vitikainen

Researchers at the University of Exeter, UK, followed a population of wild banded mongooses (*Mungos mungo*) in western Uganda for 15 years, using ultrasound imaging to track which females became pregnant

and which carried to full term. They discovered that there were more abortions during the dry season when food was scarce, and also when more females were competing over reproduction in the same group. Individual females were less likely to carry to term if they were young, in poor condition, or carrying smaller fetuses.

"Reproduction takes a lot of energy, and for a female whose offspring may have slim chances at survival, it makes sense to delay that investment until times are better. Spontaneous abortion may be an adaptive strategy in this species because it enables females to save energy for the next breeding attempt," says researcher, and senior author of the study, Emma Vitikainen from the Faculty of Biological and Environmental Sciences, University of Helsinki.

Banded mongooses are cooperative breeders that live in [family groups](#) where several females give birth at the same time to a litter that is jointly cared for by all the group members. Underneath this seemingly harmonious surface, co-breeding females compete over whose offspring do best. Pups that are born bigger have more help from their group members, grow faster and outcompete their littermates.

This study revealed that females adjust their own investment in response to the competition, and that females whose offspring would be more likely to lose out are more likely to cut their losses by aborting their fetuses mid-pregnancy. Banded mongooses also curb competition by evicting younger females. To focus on spontaneous pregnancy loss the researchers only looked at breeding events where no violent eviction events occurred.

"Female competition over reproduction is easily overlooked," explains lead author Emma Inzani from the University of Exeter, UK. "Males fight with horns and antlers over access to females, whereas female competition can be much more subtle. Our study shows that even in the

absence of overt aggression, females adjust their reproductive decisions in response to [competition](#) from other [females](#). "

More information: E. Inzani et al. Spontaneous abortion as a response to reproductive conflict in the banded mongoose, *Biology Letters* (2019). [DOI: 10.1098/rsbl.2019.0529](https://doi.org/10.1098/rsbl.2019.0529)

Provided by University of Helsinki

Citation: Moongoose females compete over reproduction (2019, December 13) retrieved 23 June 2024 from <https://phys.org/news/2019-12-moongoose-females-reproduction.html>

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