

Mongoose synchronize births to escape despotic females

December 23 2013



The study suggests that older, dominant females kill entire litters to which they had not contributed offspring, but allow the communal litter to live if there is a chance that it contains their own young. Credit: Andy Young/University of Exeter

Some mammals may have evolved to synchronise births as a way of evading the threat of infanticide, according to a study led by the University of Exeter.

To ensure groups remain productive, some [social animals](#) 'police' selfish [reproduction](#) by subordinate animals by killing any offspring they produce. For example, in honeybees and other [social insects](#) some workers lay their own eggs, but these are identified and killed by the rest of the workforce.

The new study asked whether policing can also explain patterns of reproduction in a highly social mammal, the banded mongoose (*Mungos mungo*). In this species groups contain 1-12 female breeders who give birth to a communal litter, usually on the same day.

In a seven year experiment on 11 groups of wild banded mongooses in Uganda's Queen Elizabeth National Park, Professor Michael Cant of Biosciences at the University of Exeter and colleagues manipulated which females contributed offspring to the communal litter using short-acting contraceptives.

Their results suggest that older, [dominant females](#) kill entire litters to which they had not contributed [offspring](#), but allow the communal litter to live if there is a chance that it contains their own young.

Their findings support the claim that policing plays a crucial role in the evolution of cooperation among vertebrates, and shows that threats of [infanticide](#) can lead to remarkable counterstrategies to evade reproductive control.

Professor Cant, of the Centre for Ecology and Conservation at the University of Exeter's Penryn Campus, said: "Unlike meerkats and other cooperative mammals in which there is usually a single dominant female breeder in each group, in banded mongooses up to 12 females can become pregnant and synchronise birth to the same day. Our experiment suggests that this remarkable feat of coordination is actually driven by intense conflict over reproduction. Females synchronise birth to the

same day because this confuses maternity in the communal litter, so any infanticidal female might end up killing her own young."

More information: Policing of reproduction by hidden threats in a cooperative mammal, www.pnas.org/cgi/doi/10.1073/pnas.1312626111

Provided by University of Exeter

Citation: Mongooses synchronize births to escape despotic females (2013, December 23)
retrieved 4 June 2024 from
<https://phys.org/news/2013-12-mongooses-synchronize-births-despotic-females.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.