

Fussy eating prevents mongoose family feuds

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Banded mongoose. Credit: Harry Marshall

Mongoose living in large groups develop "specialist" diets so they don't have to fight over food, new research shows.

Banded mongooses cooperate closely but are also prone to violence - both between groups and within them - and competition for food increases as a group grows.

To get round this, individual mongooses find a dietary "niche", according to researchers from the universities of Exeter and Roehampton. Group living has advantages and disadvantages, and the findings suggest specialisation is one way to prevent groups being torn apart by fighting.

"Social animals can gain many benefits from group living, but they also suffer from competition over shared food resources," said Professor Michael Cant, of the Centre for Ecology and Conservation on the University of Exeter's Penryn Campus in Cornwall.

"Our research shows that banded mongooses respond to this competition by developing specialised foraging preferences.

"The study helps to explain why animals vary so much in their foraging behaviour, even when they live in the same place and have access to the same [food](#)."

The study examined wild banded mongooses in Uganda. Their [diet](#) includes millipedes, ants, termites and beetles, and sometimes vertebrates such as frogs, mice and reptiles.

The researchers tested opposing theories: that increased competition would lead to more varied diets, or that it would cause mongooses to find a dietary "niche".

They were able to compare individual [mongoose](#) diets by analysing the chemical composition of their whiskers, using the stable isotope facility at the Environment and Sustainability Institute, also at Exeter's Penryn

Campus.

Rather than eating a wider range of foods, mongooses in [large groups](#) tended to become specialists in eating certain things - leaving other foodstuffs for different members of their groups.

"This is the first test of these competing ideas about the effect of social competition on diet in mammals," Dr Harry Marshall, Lecturer in Zoology at the Centre for Research in Ecology, Evolution and Behaviour at the University of Roehampton.

"This research confirms the hypothesis that mongooses adopt niche dietary preferences in response to competition from within their social groups.



There are banded mongooses. Credit: Feargus Cooney

"The findings suggest that group living may be one of the processes that promotes greater specialisation."

The findings are part of the Banded Mongoose Research Project, which has been running in Uganda for more than 20 years.

The paper, published in the journal *Ecology Letters*, is entitled: "Intragroup [competition](#) predicts individual foraging specialisation in a group-living mammal."

More information: *Ecology Letters* (2018). [DOI: 10.1111/ele.12933](https://doi.org/10.1111/ele.12933)

Provided by University of Exeter

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