

# Shrewd savannah species choose friends with benefits on the African plains

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Mixed-species group of zebras, eland, wildebeest and impala in the Masai Mara.  
Credit: Jakob Bro-Jørgensen

For species trying to boost their chances of avoiding predation, it could be a classic case of 'it's not what you know, it's who you know that matters,' according to new research.

Seeing groups of different wild animals hanging out together on the

plains of Africa is not unusual, but why and how these social groups form has puzzled ecologists for many years.

For four years, a team of zoologists from the universities of Liverpool and York has been studying the formation of mixed groups of herbivore species on the African savannahs in Masai Mara, Kenya.

Their findings, published in *Ecology Letters*, show that herbivores seek out the company of species with the most informative alarm calls who can alert them to the threat of nearby predators.

"Often ecologists focus simply on the location of food and predators to understand how animals distribute themselves in nature, but we've shown that [animals](#) choose to live alongside other species who can provide them with valuable information, in this case about predation risk," explains University of Liverpool researcher Dr. Jakob Bro-Jorgensen.

To carry out the study, the researchers created a theoretical model that predicts which combinations of characteristics cause species to join in mixed groups in a multi-species community. They then tested their model's predictions in a community-wide field study of African savannah herbivores using multi-layered network analysis.

In addition to informative alarm calls, vigilance and vulnerability were also found to be driving factors of social group formation. Species who are not themselves very vigilant were found to be more likely to join mixed groups, presumably to compensate for their lower ability to spot predators. Similarly, species deemed to be more vulnerable to predators were also more likely to seek out the security provided by being in a mixed group.

Dr. Jakob Bro-Jorgensen said: "Our study points to an intriguing complex social world where social relations between species range from

mutually beneficial to parasitic.

"The impact of communication between species on social attraction and survival highlights the importance of taking behavioural links between species into account in order to understand how the natural world operates.

"This, in turn is crucial to uncovering how animal communities respond to current environmental changes and could help conservationists better predict the risk of extinction faced by endangered [species](#) who rely on information from others."

**More information:** Alarm communication networks as a driver of community structure in African savannah herbivores, *Ecology Letters*, [DOI: 10.1111/ele.13432](https://doi.org/10.1111/ele.13432)

Provided by University of Liverpool

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