

Research suggests meerkat predator-scanning behaviour is altruistic

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In order to spot potential predators, adult meerkats often climb to a higher vantage point or stand on their hind legs. If a predator is detected, they use several different alarm calls to warn the rest of the group. New Cambridge research shows that they are more likely to exhibit this behaviour when there are young pups present, suggesting that the predator-scanning behaviour is for the benefit of the group rather than the individual.

[Meerkats](#) are a cooperatively breeding species, with a dominant breeding pair and up to 40 'helpers' of both sexes who do not normally breed but instead assist with a number of cooperative activities such as babysitting and feeding of offspring.

However, scientists have questioned whether sentinel behaviour, when helper meerkats climb to a high point to scan for predators, and other vigilance behaviour, such as standing on their [hind legs](#), is done for their own preservation (with the group's increased safety being an indirect consequence) or if the primary goal is altruistic, with the main purpose being the protection of the group.

Peter Santema, a [PhD student](#) at the University of Cambridge's Department of Zoology, said: "You see similar behaviour in a range of mammal and [bird species](#), and we know from previous work that other group members are less likely to be attacked by predators when someone is on guard. Biologists have been debating, however, whether the protection that other group members enjoy is just a side-effect or one of

the reasons why individuals perform these guarding [behaviours](#)."

For the research, which was funded by the BBSRC, scientists observed non-breeding helpers in the period just before the dominant female's pups had joined the group on foraging trips. They repeated the observations immediately after the pups joined the group. When they compared the results, they found that after the pups had joined the group on foraging trips, helpers showed a sudden increase in their vigilance behaviour.

Santema added: "These results are exciting, as they show us that individuals are not just on the look-out for their own safety, but that the protection of other group members is another motivation for these behaviours. Our results thus suggest that [vigilance](#) and sentinel behaviour in meerkats represent forms of cooperation."

More information: The paper 'Meerkat helpers increase sentinel behaviour and bipedal vigilance in the presence of pups' will be published in the 05 February 2013 edition of *Animal Behaviour*.

Provided by University of Cambridge

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