The effect of environmental enrichment on the behaviour of meerkats, banded mongooses and dwarf mongooses in human care

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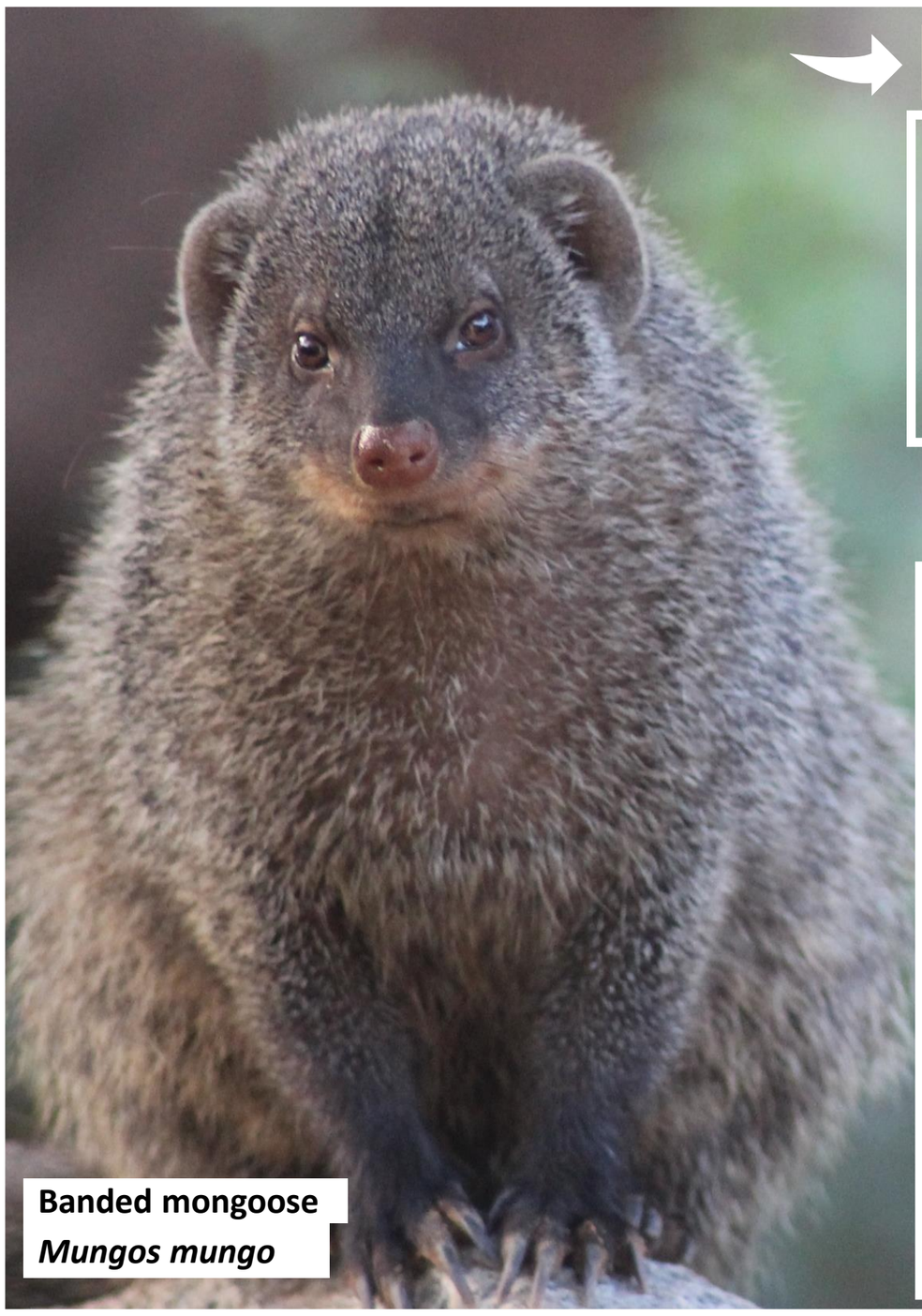
Meerkat
Suricata suricatta



Banded mongoose
Mungos mungo

Introduction

Animals in captivity can be deprived of performing some of their natural behaviours. Using enrichments may allow them to express a larger part of species-specific behaviour repertoire and with a better frequency distribution.

This project aims to study the effect of environmental enrichment on the behaviour of meerkats, banded mongooses and dwarf mongooses living in captivity, testing a food and an olfactory enrichment.

Methods

First, an ethogram was designed prior to the experiment. Then, to record how animals behaved in the presence/absence of the enrichments, a scan sampling method with intervals of 1 minute during sessions of 1 hour was used to record the numbers of individuals performing those behaviours. The time spent interacting with the enrichment was also measured.

Food enrichment

A cardboard tube filled with hay and 13 holes was used to simulate a tree trunk to increase 'foraging'. Mealworms were used as bait. Three different variations of the enrichment were presented (without food, with mealworms and with the double number of mealworms).

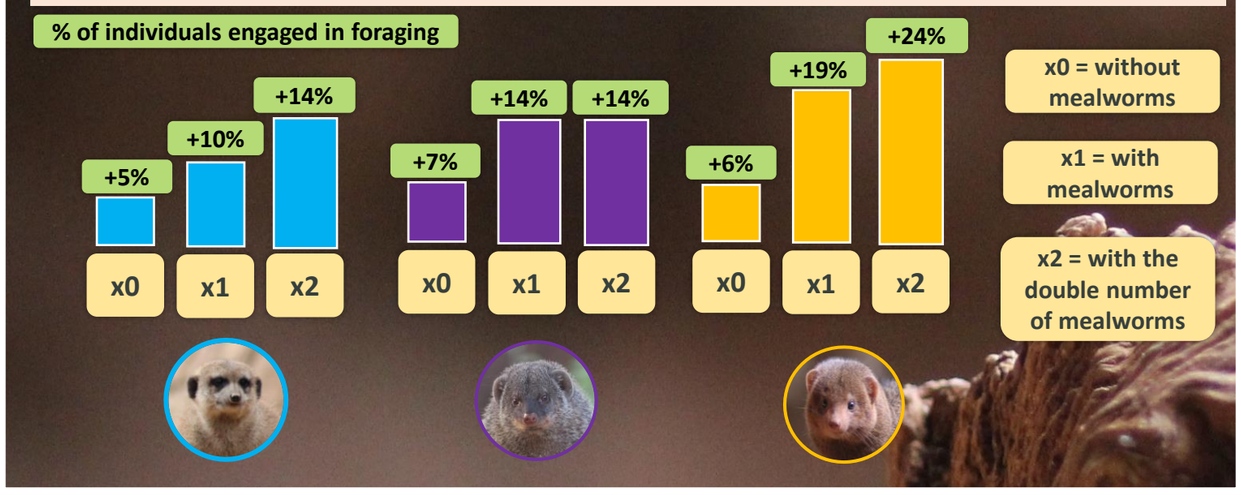
Olfactory enrichment

Two new odours from faecal samples of hyena (potential predator) and elephant (herbivore) were presented to study their behavioural response.

Results

Food enrichment

The food enrichment increased considerably 'foraging' behaviour. The presence of mealworms made that increase even bigger.



Olfactory enrichment

Animals did not seem to behave differently in the presence of both odours. The frequencies of behaviours and time spent interacting did not differ between these olfactory enrichments.

Dwarf mongoose
Helogale parvula

Conclusion

It can be concluded from the present study that environmental enrichments do affect behaviour. Using food devices can increase the frequency and duration of foraging up to 16%. On the other hand, based only upon the behaviours recorded and the time spent interacting with the faecal samples, neither of these three groups of mongooses reacted differently to the presence of a predator odour from a non-predator odour.

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