Behavioural responses of Amur tigers (*Panthera tigris altaica*) and Bush dogs (*Speothos venaticus*) to a mammalian blood odour component

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Background

Animals held in captivity with limited external stimuli sometimes display stereotypies, which are expressions for supressed natural behaviours. Carnivores heavily rely on their sense of smell for social communication and foraging. Therefore odours as a form of enrichment might be suitable for carnivore species

Methods

Four different odour stimuli were applied on five wooden logs and presented to the Amur tigers (*Panthera tigris altaica*) and the Bush dogs (*Speothos venaticus*) at Kolmården wildlife park. The stimuli tested were the following : Horse blood, Trans-4,5-epoxy-(E)-2-decenal ("pig-blood odour"), Isopentyl acetate ("banana odour") and Diethyl phthalate (near odour-less solvent). The animals were observed for six hours (three morning hours and three afternoon hours). Each log-directed behaviour was recorded and also the length of the interaction. Each odour was tested five times with each species.

Results

Sniffing was, by far, the most common behaviour in both species. I found that "Pig-blood odour" and the horse blood were equally interesting to both species. Both the "Pig-blood odour" and the horse blood were significantly more interesting than both the "banana odour" and the solvent.
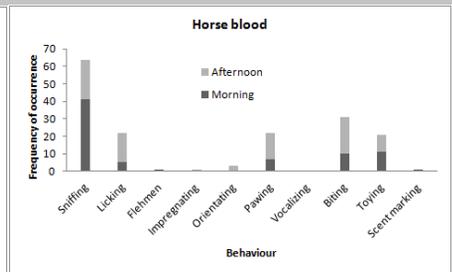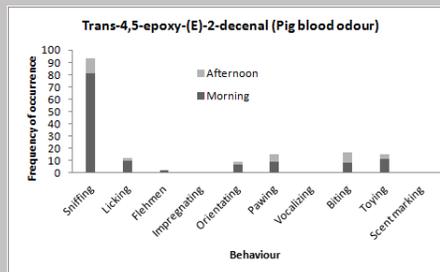
Number of interactions displayed by the tigers with the pig blood odour (left) and horse blood (right).
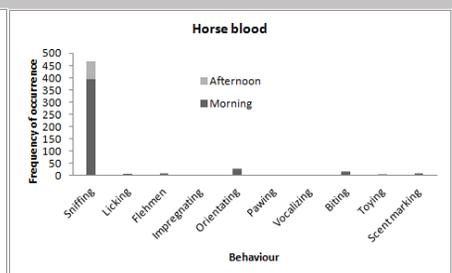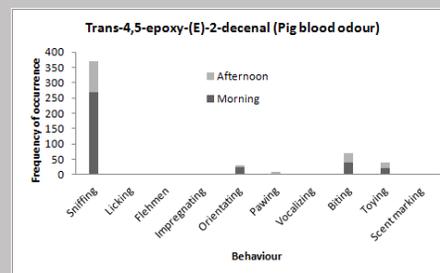
Number of interactions displayed by the bush dogs with the pig blood odour (left) and horse blood (right).

Conclusions

In both the Amur tigers and the Bush dogs, the single bloood odour component was as interesting as the horse blood. Odours as enrichment seem to be suitable as enrichment for carnivores in captivity.

Linköpings universitet

Kolmården