# Behavioral responses of African wild dogs *(Lycaon pictus)* and Dholes *(Cuon alpinus)* to a mammalian blood odor component

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## Background & Aim

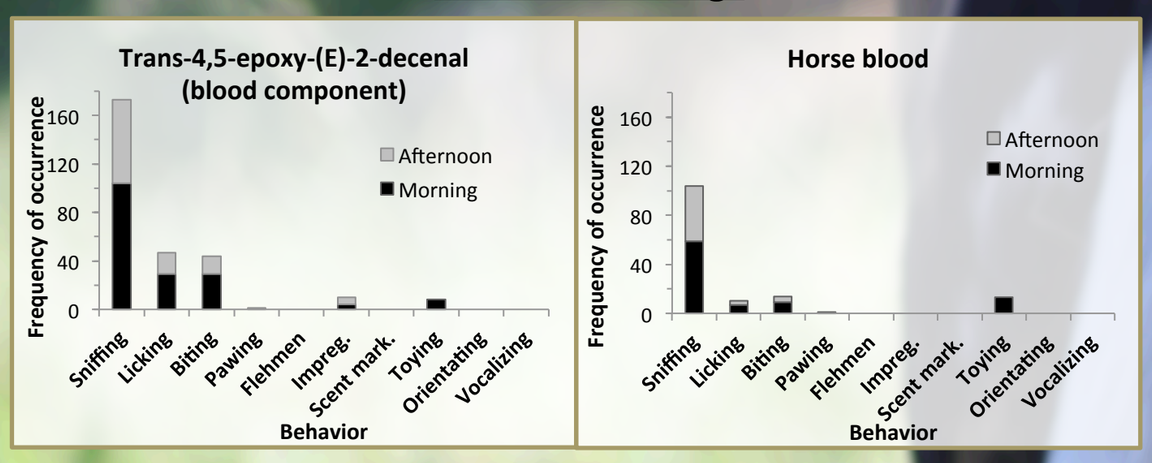
So far only a few examples are known in which single volatile components are sufficient for eliciting the same behavioral responses as the whole complex mixture of an odor does.

The aim of this study was to examine whether the single blood odor component trans-4,5-epoxy-(E)-2-decenal would elicit the same behavioral responses in African wild dogs and dholes as the whole complex mixture of real blood odor. Furthermore the study aimed to assess the suitability of odors as environmental enrichment for these two captive canine species.

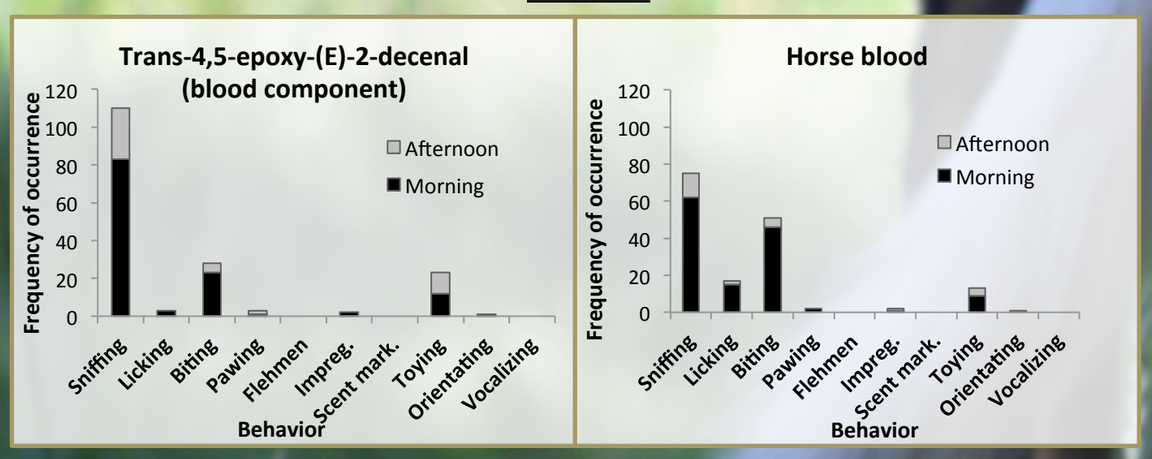
## Material & Methods

Wooden logs were odorized with one out of four odor stimuli (real horse blood, blood odor component, fruity odor or odorless control) and placed into the enclosure of the African wild dogs and the dholes kept at Kolmården Wildlife Park. The behavioral responses, the frequency of occurrence as well as the duration of all log-directed behaviors were recorded.

**African wild dogs**




**Dholes**




**Frequency of occurrence of the log-directed behaviors displayed by the African wild dogs and dholes across the five sessions with the blood component and horse blood, subdivided into morning and afternoon hours.**

## Results

- Both species displayed the highest number of log-directed behaviors when presented with the blood component or the horse blood compared to the other odor stimuli.
- Each of the three odorous stimuli (blood component, horse blood and fruity odor) elicited a significantly higher number of log-directed behaviors compared to the odorless control stimulus in both species.

## Conclusions

In both the African wild dogs and the dholes the single blood odor component was as, or even more, interesting as the whole complex mixture of real blood odor and may also be associated with prey or food by the two canine species. The higher interest in the three odorous stimuli compared to the odorless stimulus also indicate that the use of odors can be an efficient way of enriching the captive environment of these two canine species.

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