

## Acknowledgement



Do enclosure characteristics  
affect anti-predator  
behaviour in the European  
bison (*Bison bonasus*)?

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Final Thesis

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## Introduction

The European bison is a species that was close to extinction in early 20th century but was saved from extinction thanks to intense captive breeding.

Some captive-bred animals have failed to express appropriate anti-predator behaviour when released into the wild. The ability to respond to a predator may be lost over time in a predator-free environment, but not always.

## Methods

### Enclosures

Animals in 4 naturalistic and 3 barren enclosures were observed.

### Stimuli

Olfactory and auditory stimuli from moose, wolf and bear, and a visual stimulus (silhouette of a wolf) were presented to the animals. Their response to and duration of interest in the stimuli were analysed.

## Results

- No difference between animals in different enclosures was found for olfactory stimuli.

- Animals in...

- ...barren enclosures responded stronger than animals in naturalistic to auditory stimuli.

- ...naturalistic enclosures responded stronger than animals in barren to the visual stimulus.

- ...naturalistic enclosures responded stronger to the visual stimulus than to auditory stimuli.

## Aim

Investigate if captive-bred European bison would respond different to various stimuli depending on the characteristics of the enclosure they were kept in.

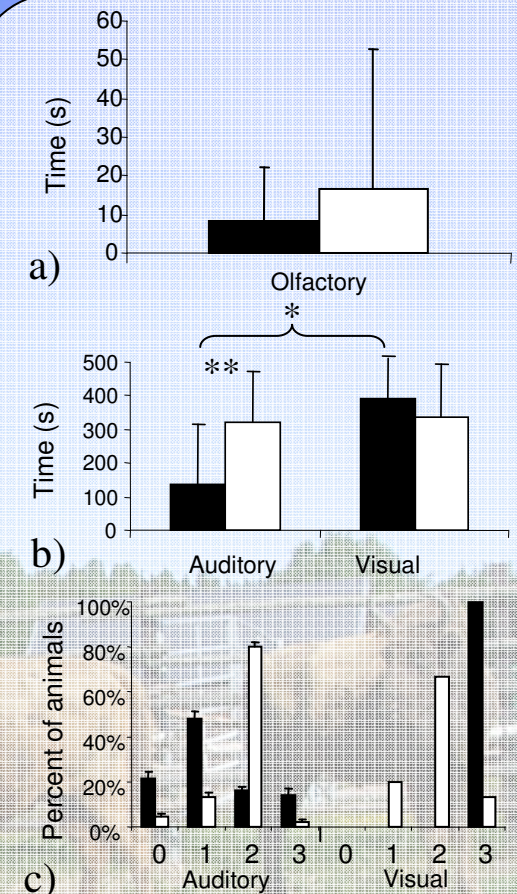


Figure 1. Mean time of interest in a) olfactory and b) auditory and visual stimuli, and c) percent of animals in each response category (0= no response, 3= most intense response) for animals in naturalistic (black bar) and barren (white bar) enclosures, \*\* $p \leq 0.01$  \* $p \leq 0.05$ .

## Conclusion

**Enclosure characteristics might have an effect on the anti-predator behaviour in the European bison.**