

From cow to the zoo: extrapolating positive welfare indicators, in domestic animals, to wild species in captivity.

1. Introduction

Animal welfare focuses not only on preventing negative experiences, but also on promoting positive emotional state. While several positive welfare indicators have been studied in domestic ungulates, important limitations remain in captive wild ungulates. This project explored the potential extrapolation of these indicators through an observational study on captive roe deer

2. Main objective

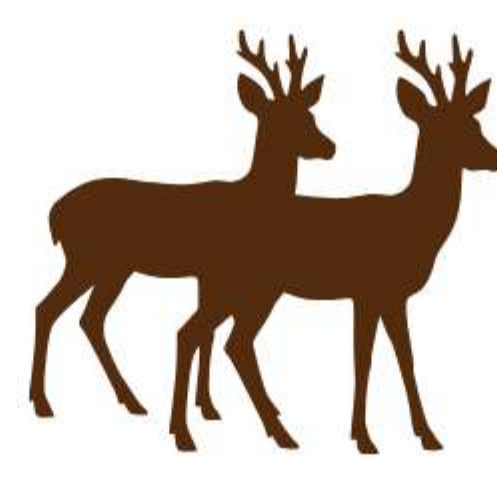
The aim of this study is to determine whether the positive indicators used in cattle (*Bos taurus*) can be extrapolated to assess the positive welfare of ungulates in captivity



Bos taurus

WHAT ABOUT

Wild ungulates?



Capreolus capreolus

3. Methodology → experimental study!

Sample: 4 Roe deer
1♀, 1♂, 2 neutered ♂

Setting: Aran Park
(captive)

Sessions: 3 obs./day
10-11h | 13-14h | 16-17h

Selected Indicators

- Group synchronicity
- Allogrooming
- Play (ind. & social)
- Qualitative Behaviour Assessment

Type of observation

- Scan sampling (5 min x 2)
- Focal sampling (10min x 4)
- Visual analogue scale (0-100mm)

4. Results

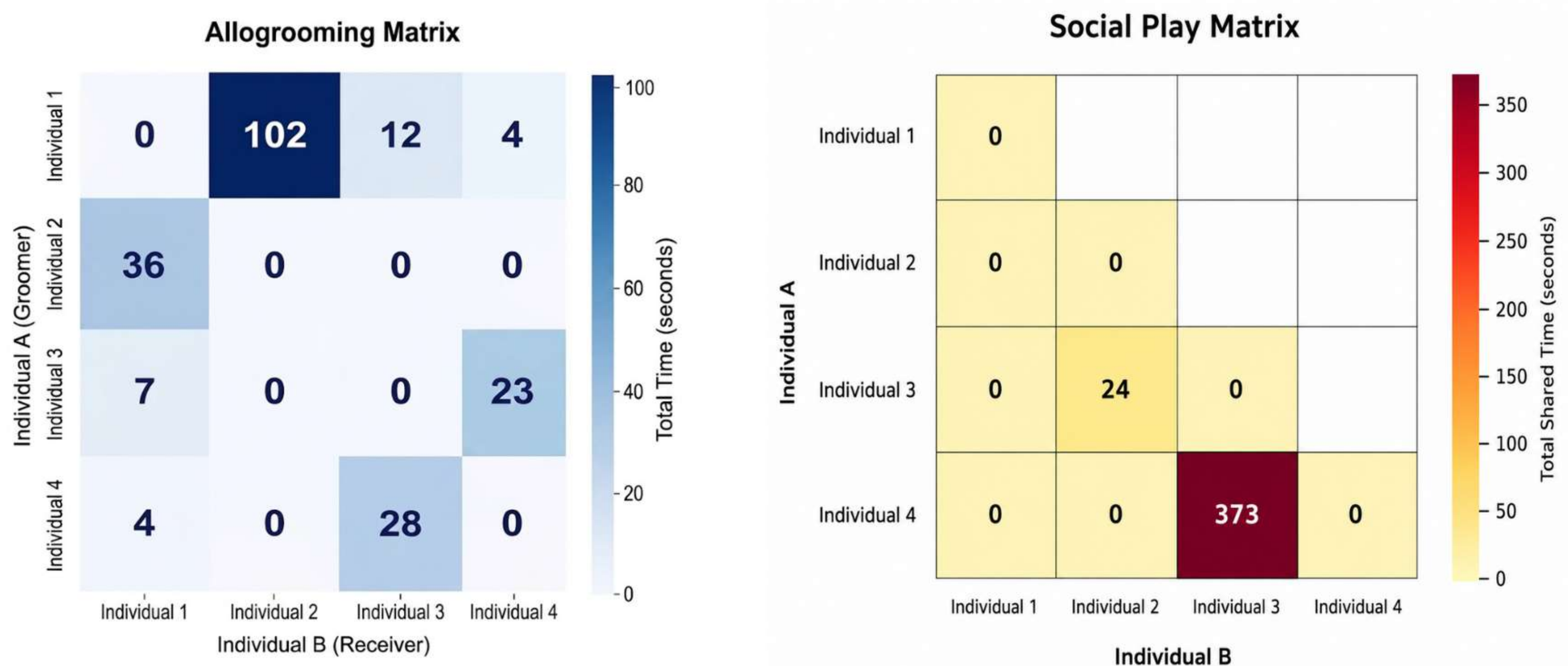


Fig.1. Heat maps of allogrooming (symmetric matrix) and social play (triangular matrix). Legend: individual 1 = adult female, individual 2 = intact male, individual 3 = castrated male, individual 4 = castrated male

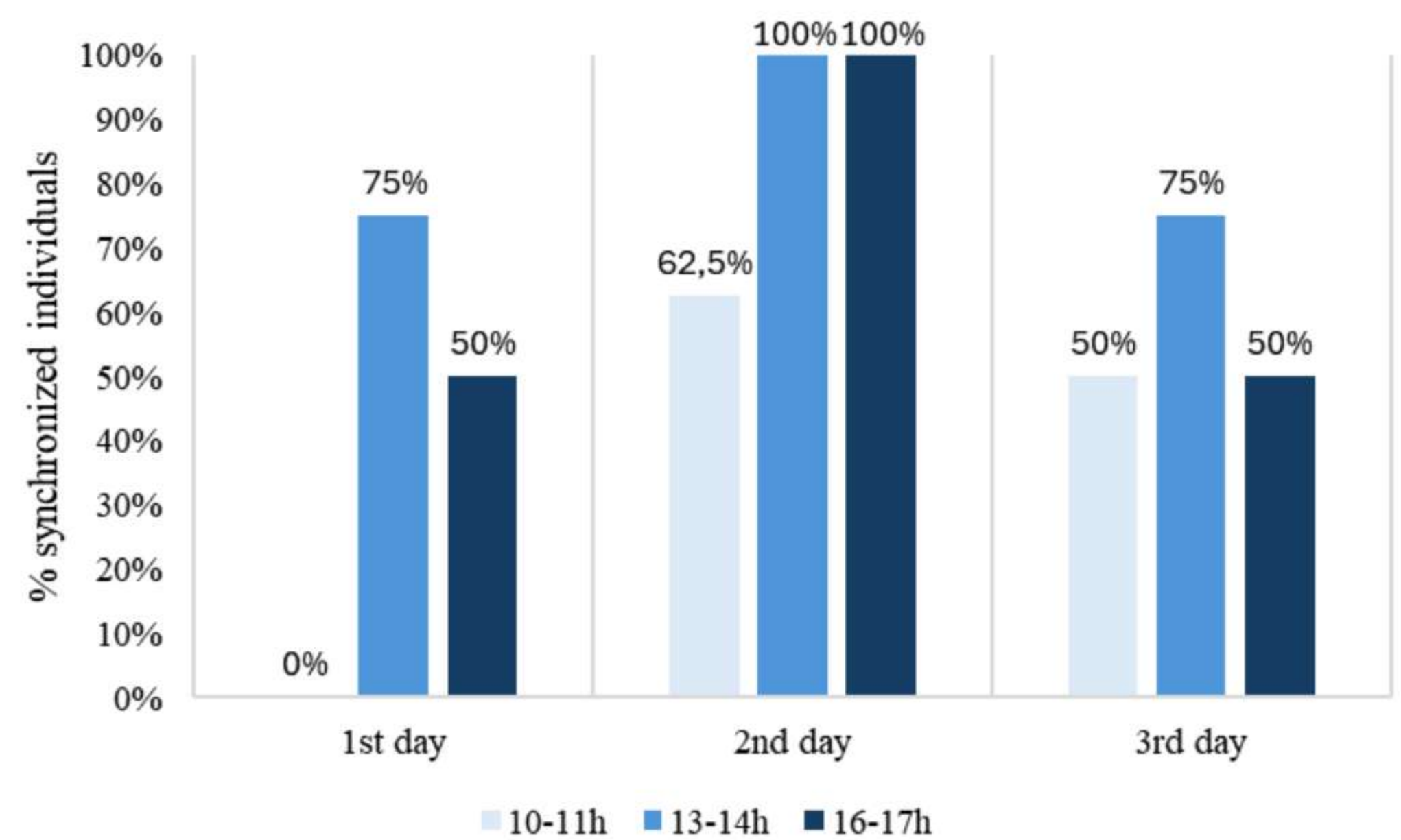
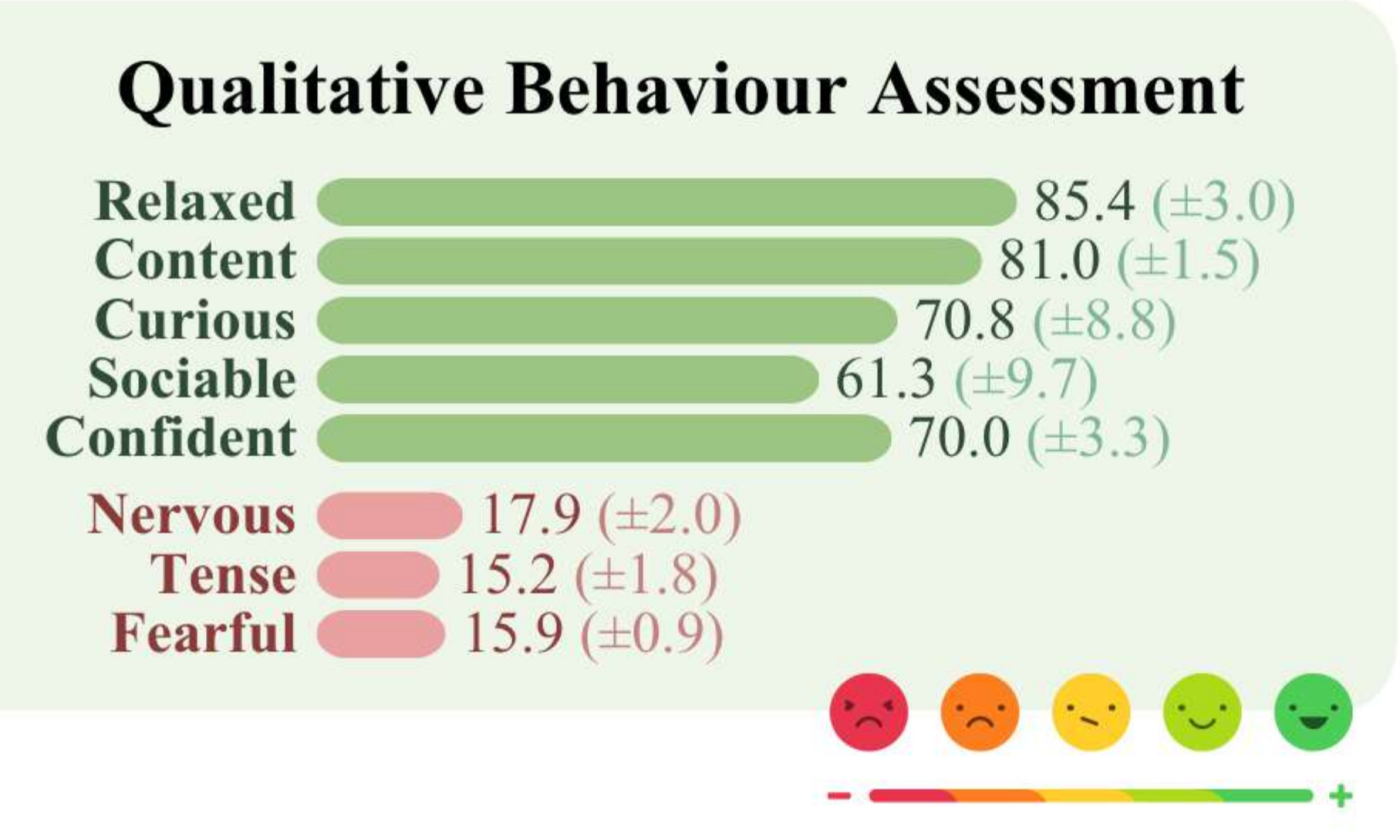


Fig.2. Graph of the percentage of synchronized animals performing the same activity, distributed in bands.



5. Discussion

+ Positive welfare! consistent presence of positive social behaviours and positive QBA scores

Influencing factors

- Age
- Social bonds
- Physiological status
- Environmental conditions

Younger castrated males showed higher levels of play behaviour, whereas allogrooming was more frequent between the adult **female and the intact male**.

Distribution of behaviours varied throughout the day, influenced by **temperature, visitor presence and natural cycles of rest or activity**.

6. Conclusions

- Welfare assessment methods developed for domestic ungulates **MAY ALSO BE USEFUL** in captive wild ungulates when adapted to the behavioural and social characteristics of each species
- The study highlights the importance of considering **social dynamics and species-specific behaviour** when evaluating welfare in zoo animals, as well as the need for further research on positive welfare in captive wildlife.

See the bibliography used here!:

