

SCAN ME



Animal Welfare Assessment Protocol for lions and tigers in captivity: Validation of a faecal scale

Author: Matilde Bandeira Supervisors: Matthias Laska & Sara Sequeira



Background

FOUR PAWS is developing a welfare assessment protocol for lions and tigers under human care, including valid, reliable, and feasible animal-based welfare indicators. One of these indicators is a visual faecal scale that has not yet been validated or tested for reliability.



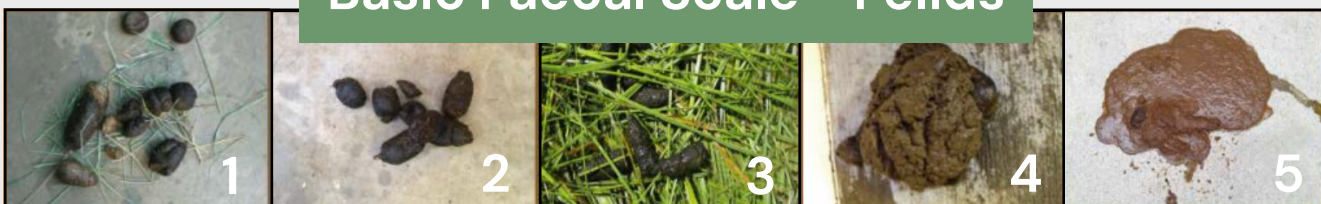
Methods

Faecal Sampling:



- Collected five consecutive days per week
- Visually assessed, photographed, and scored using the "Basic Faecal Scale - Felids"

Basic Faecal Scale - Felids



Behavioural Observations:



- Conducted in parallel to investigate the correlation between the previous day's behaviour and the faeces of that day
- BORIS software and standard ethogram for felines

Lab Analysis:



- Faecal samples were thawed, weighed and dried

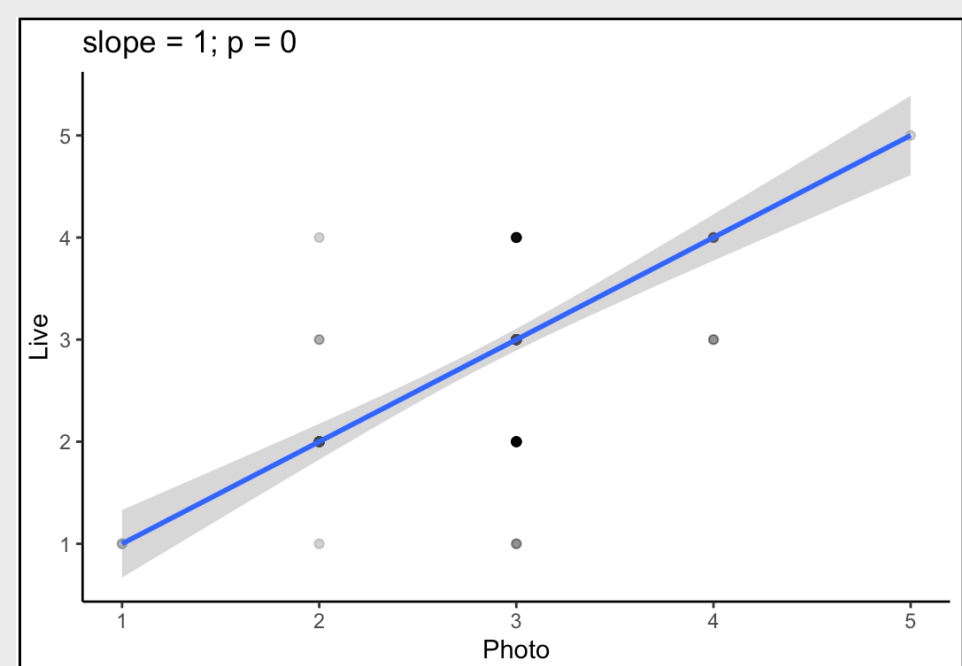
Discussion

- **Photo scoring** of lions' and tigers' **faecal samples** showed low inter-observer reliability, suggesting that **individual readers** may interpret faecal consistency scores differently.
- High **intra-observer reliability** was found, suggesting **consistent responses** from the same researcher at different moments.
- **Behavioural correlations** suggest that not all behaviours should be used alongside faecal consistency, as some **may not necessarily impact** them.

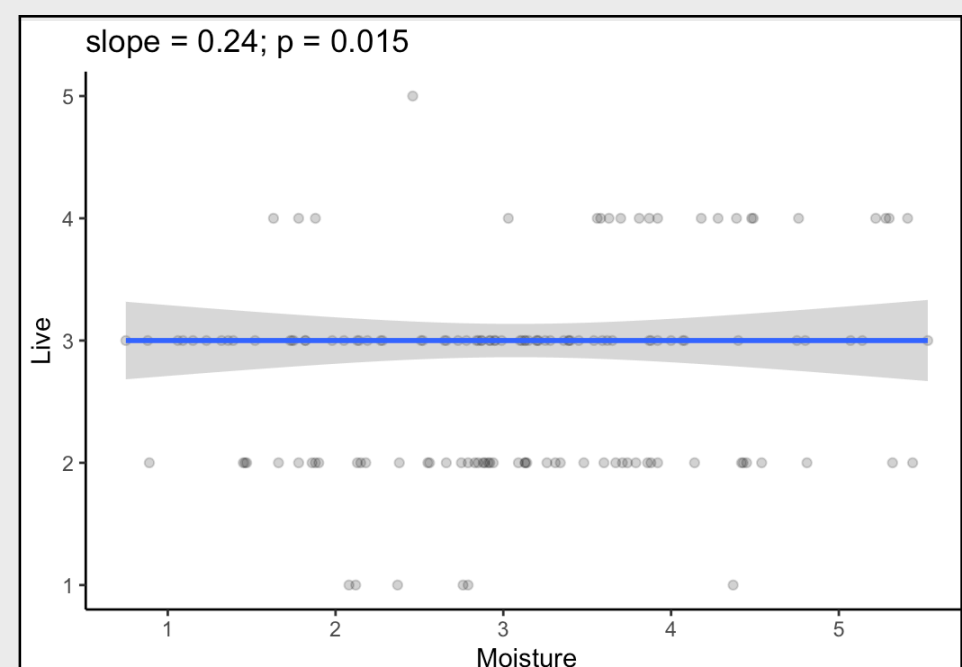
Aim

1. Validate a faecal scale for captive lions and tigers under human care
2. Investigate a potential correlation between their behaviour and faecal types

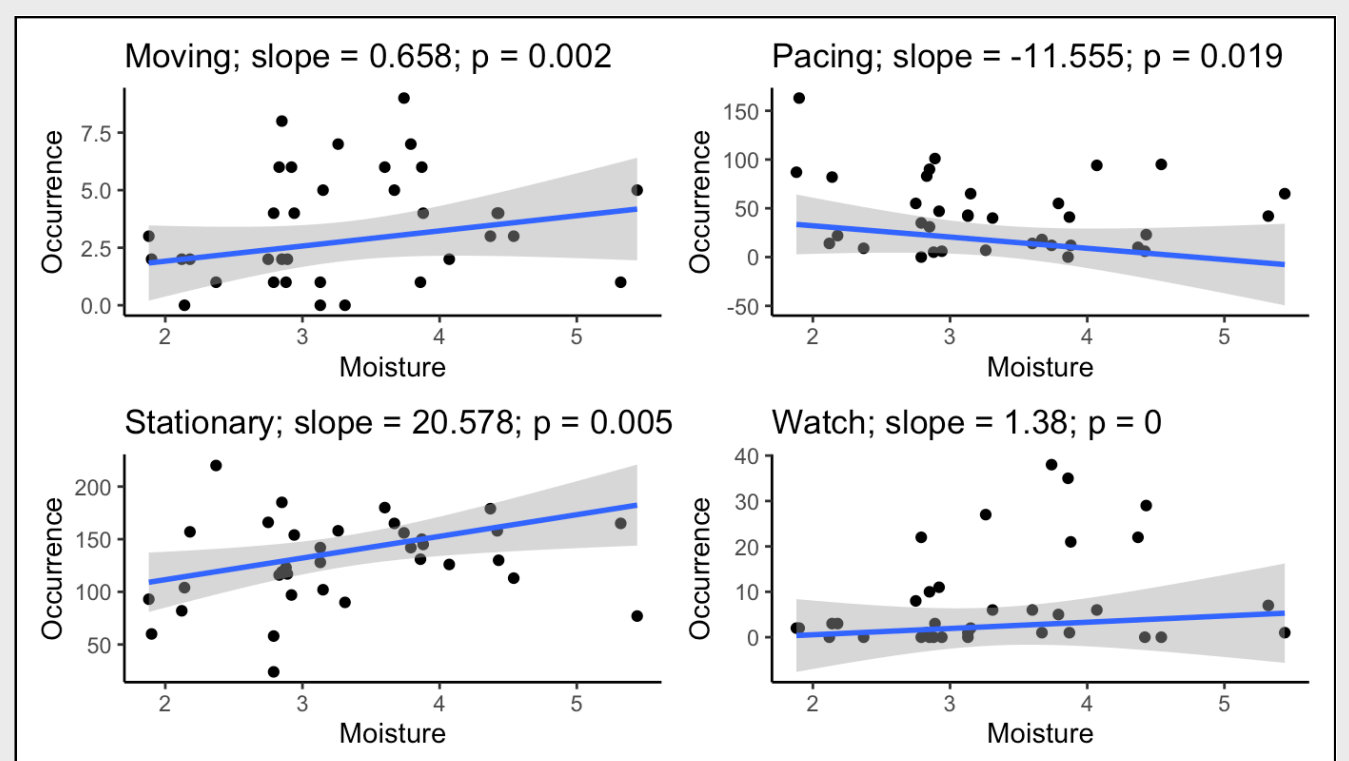
Results



- **Low inter-observer reliability** was found
- **High intra-observer reliability** was found



- A **significant correlation** was found between live scoring and faecal moisture



- **No significant correlation** was found between faecal moisture and the behaviours of Bobby, Simba & Tsezar
- A **significant positive correlation** was found between Elza's faecal moisture and her moving, stationary and watching behaviour
- A **significant negative correlation** was found between Elza's faecal moisture and her pacing behaviour