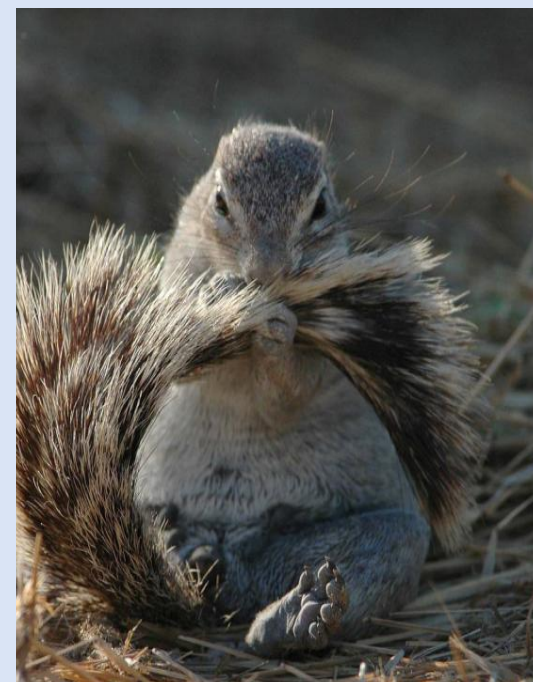


## Background

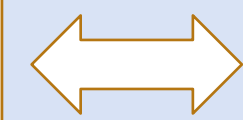
### Life history theory

Tradeoff between survival and reproduction determines pace of life



### Pace of life (POL)

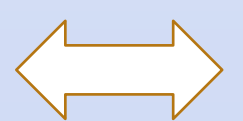
- **Fast POL**  
small size, high reproductive rate, low survival



### Personality Type

- **Proactive**  
active, aggressive, bold

- **Slow POL**  
larger size, low reproductive rate, high survival



- **Reactive**  
docile, social, cautious

### Why the Cape ground squirrel (*Xerus inauris*)?

- Small size but slow POL (uncommon)
- Easy to trap and handle
- Females do not disperse

## Does personality covary with survival in Cape ground squirrels?

Sophie Fergus and Jane M. Waterman

Department of Biological Sciences, University of Manitoba

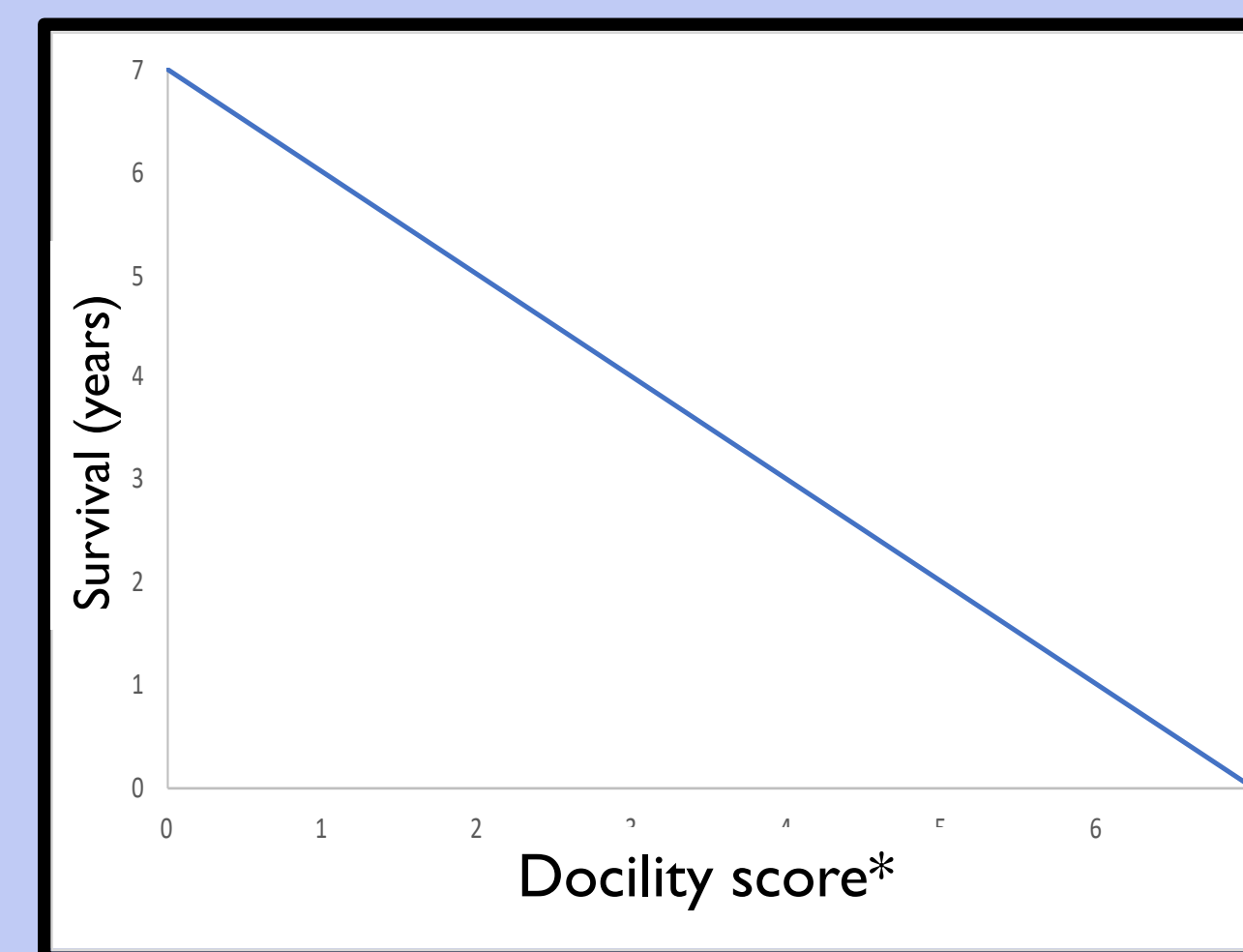
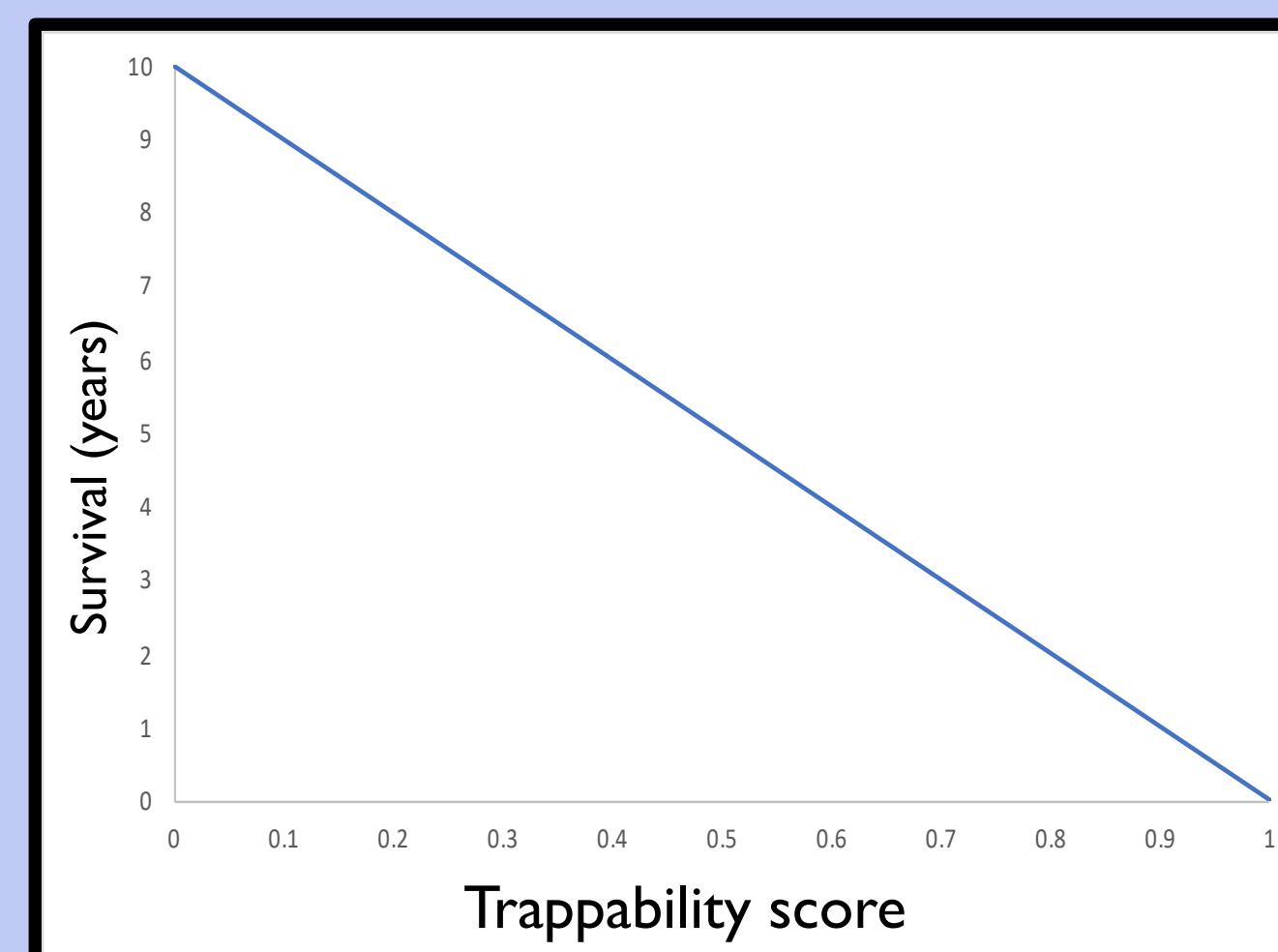
## Objective

Determine if personality and survival covary in Cape ground squirrels

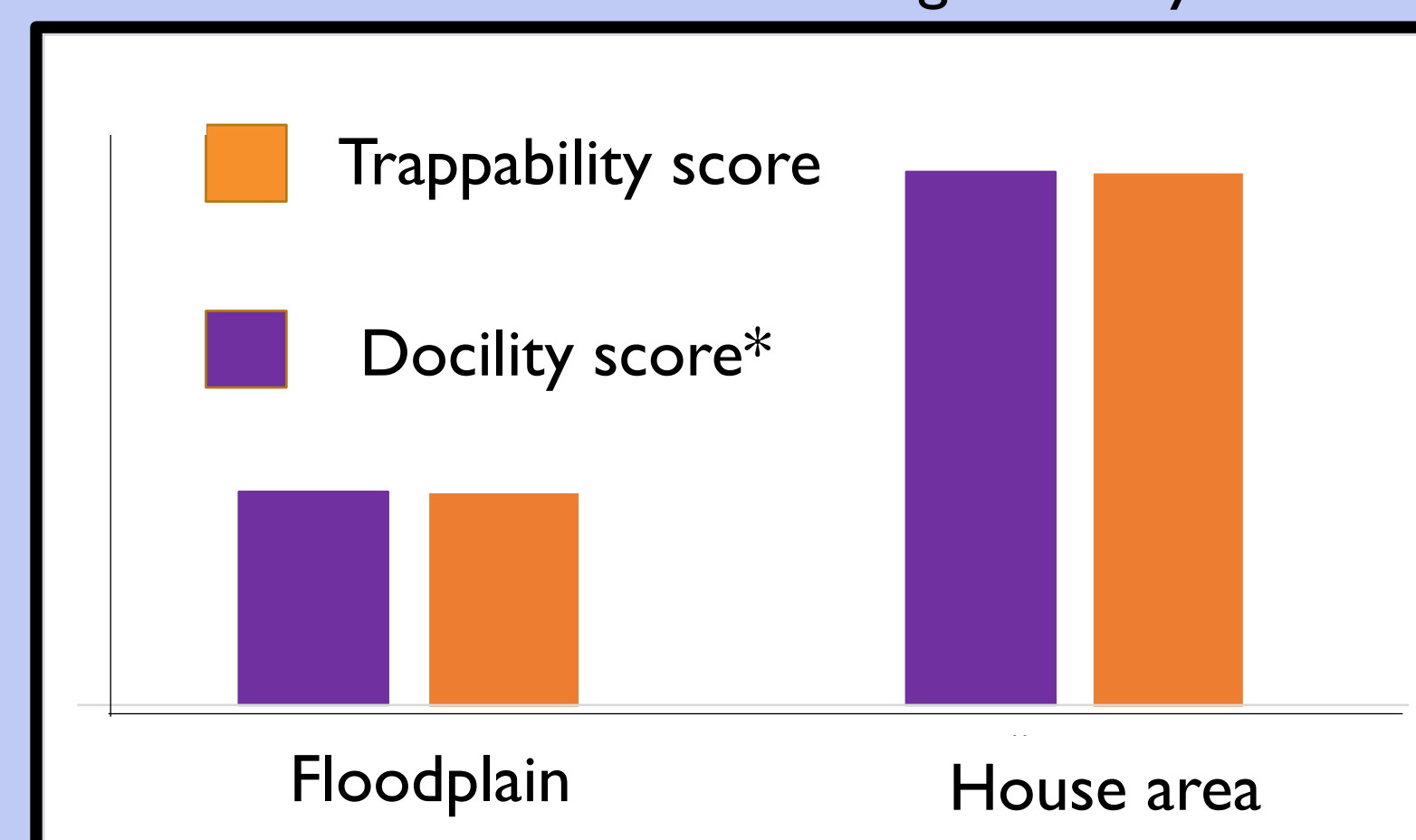
## Hypotheses and predictions

- $H_1$ : bolder individuals have higher mortality due to increased predation
- $P_1$ : lower survival seen in proactive squirrels, higher in reactive
- $H_2$ : Predation leads to more cautious individuals
- $P_2$ : reactive squirrels found in high predation site, proactive in low

## Expected results



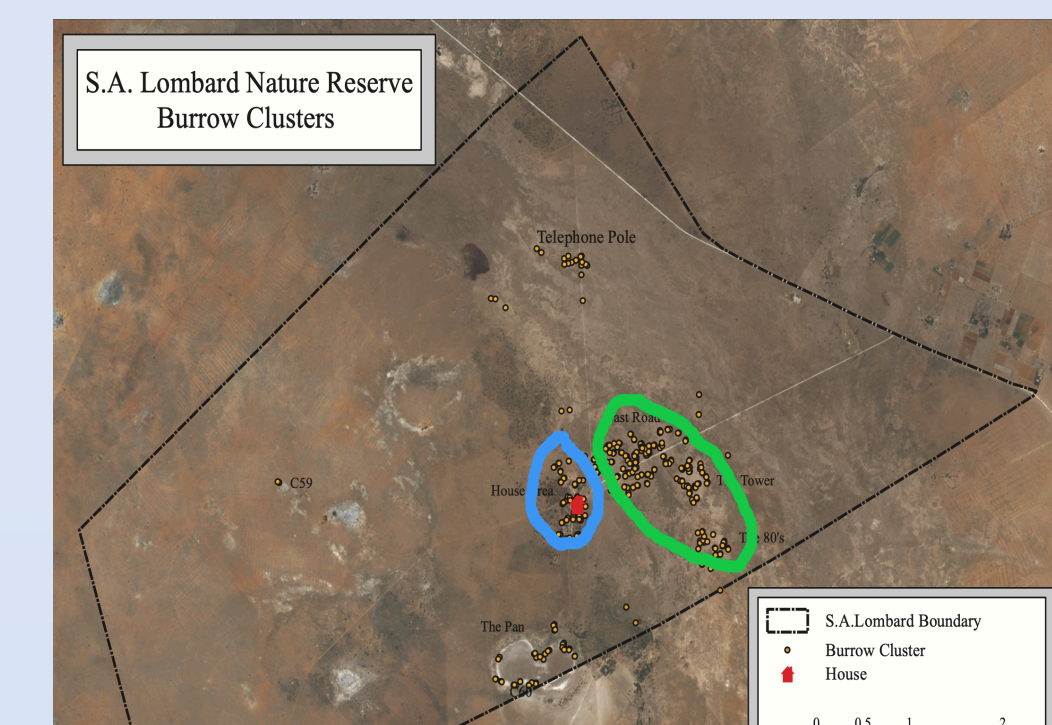
\*High docility score indicates low docility



University of Manitoba

## Methods

- Personality types measured by observing behaviours
  - trappability, docility while handling
- Calculations: trappability score, docility score, survival from long-term database
- High trappability and docility scores = proactive



- **House area** = low predation
- **Floodplain** = high predation

- Live traps
- Handling bags



## Conclusions

- Personality and survival may covary to affect the evolutionary success of an animal
- Implications for conservation
- Future research = how do resources affect this covariation?



### References

Réale, D., Garant, D., Humphries, M.M., Bergeron, P., Careau, V., and Montiglio, P.-O. 2010. Personality and the emergence of the pace-of-life syndrome concept at the population level. *Philos. Trans. Biol. Sci.* **365**(1560): 4051–4063. The Royal Society, England. doi:10.1098/rstb.2010.0208.