How does impala decide what and where to eat?

Jorista Botha, Jason P. Marshal
School of Animal, Plant & Environmental Sciences, University of the Witwatersrand, Wits 2050, South Africa

Introduction

Impala = mixed feeder → prefers grass

Resource selection → Secondary compounds
Spinescence
Nutrition etc.

Introduction

Which factors determine selection:

Species?

Feeding station?

Feeding site?

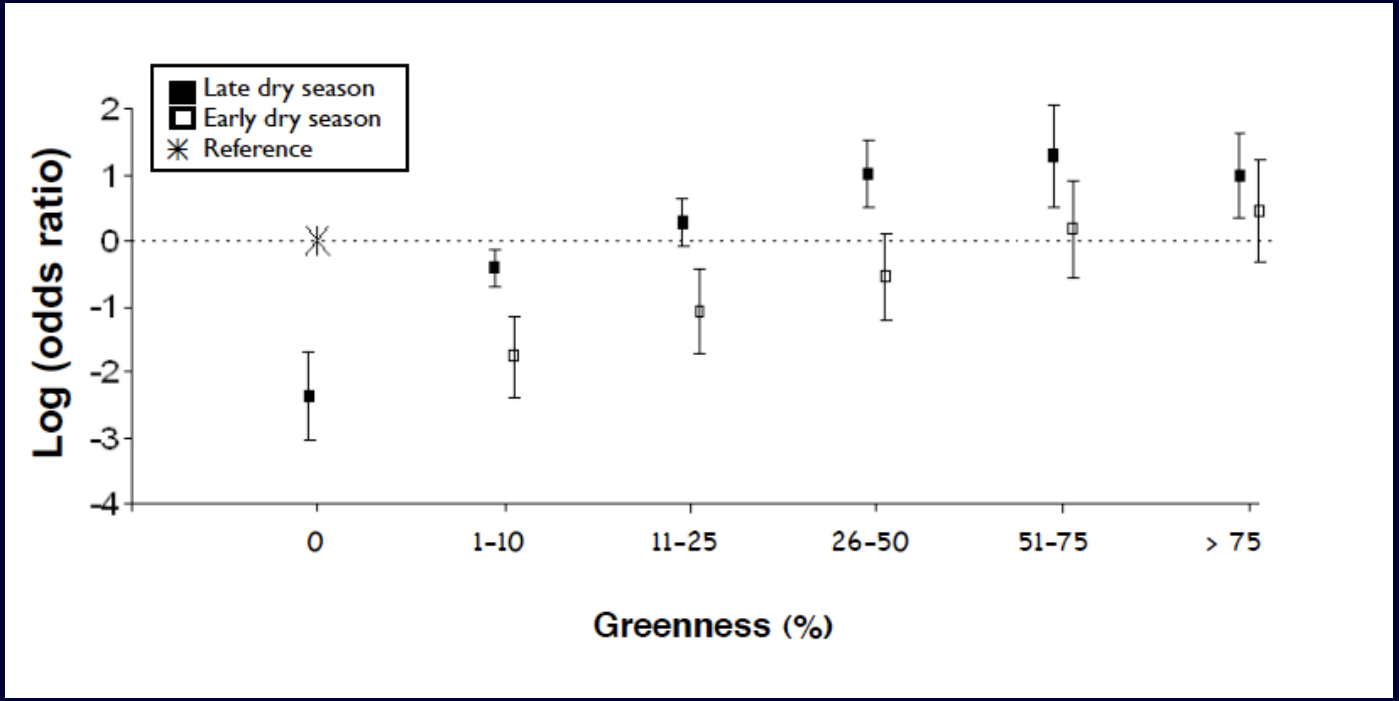
Methods

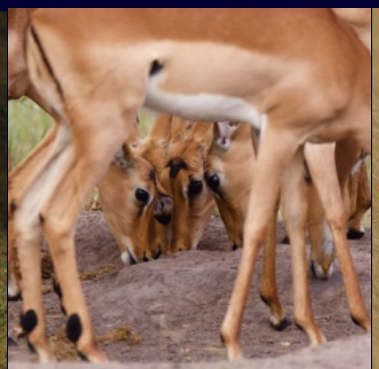
- Manyeleti Game Reserve
- 5 feeding stations (0.5m X 0.5m plots) within each observed feeding site
- Used and unused plant species identified and various attributes of tufts, plots and sites measured

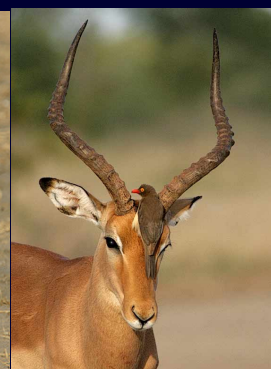
Map showing the location of Manyeleti Game Reserve

Results

Species selection based on greenness

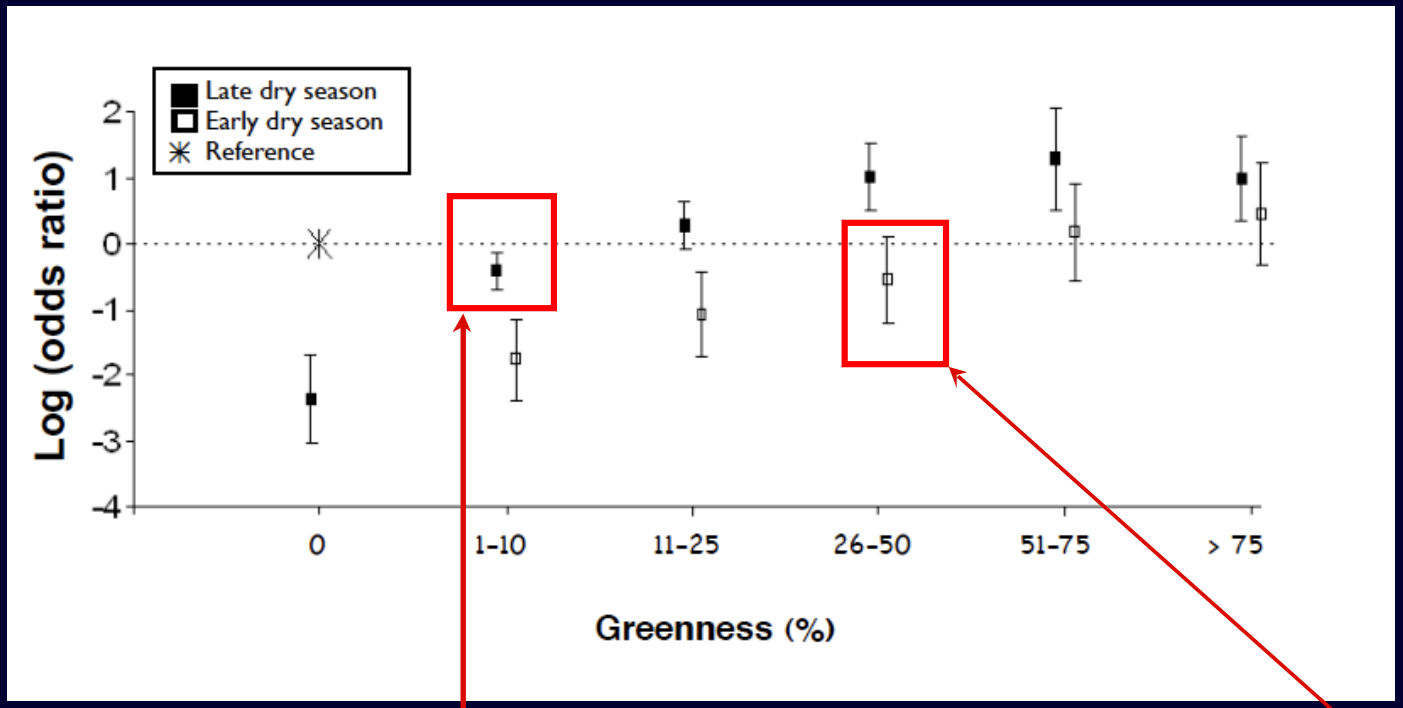


Results

Species selection based on greenness

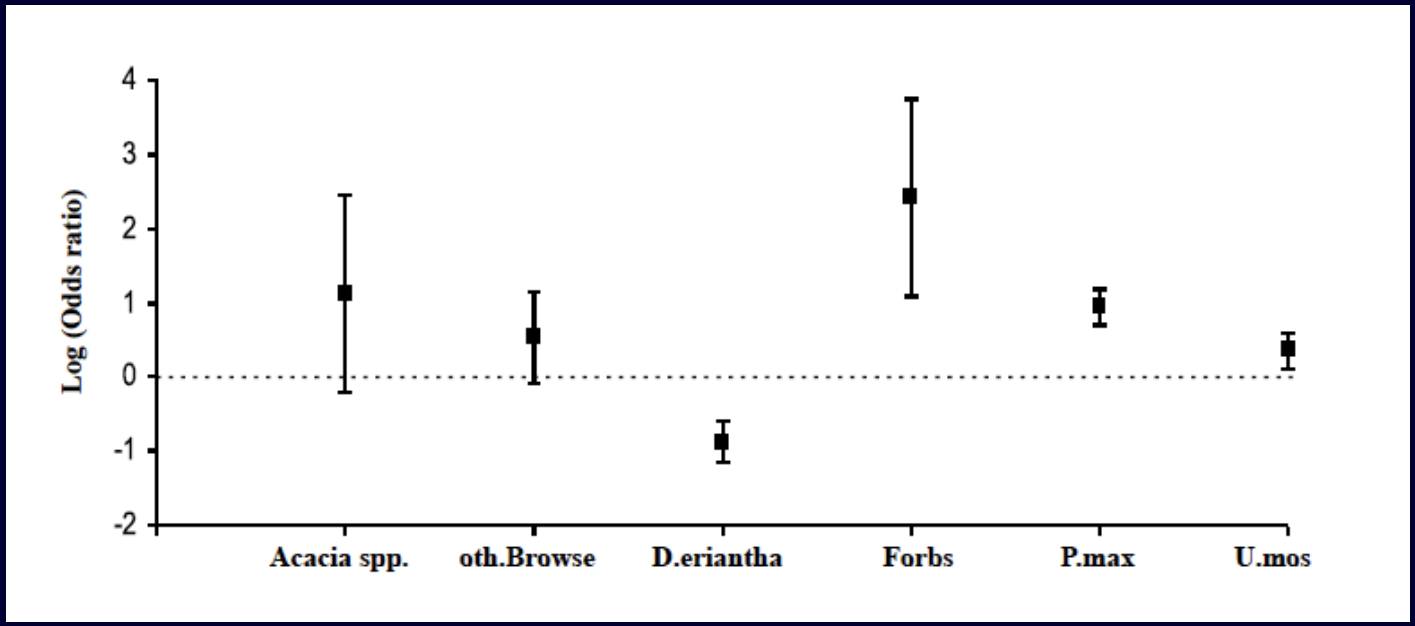


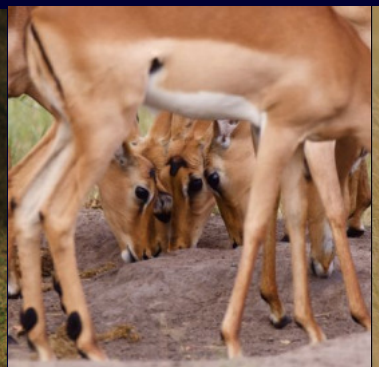
Late dry = ↓green = avoidance of spp < 10% green

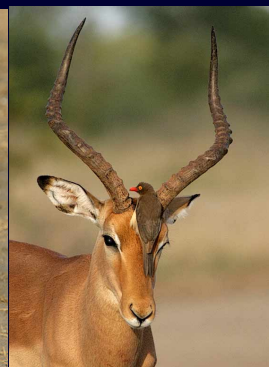
Early dry = ↑green = avoidance of spp < 50% green

Results

Feeding station selection based on presence of species

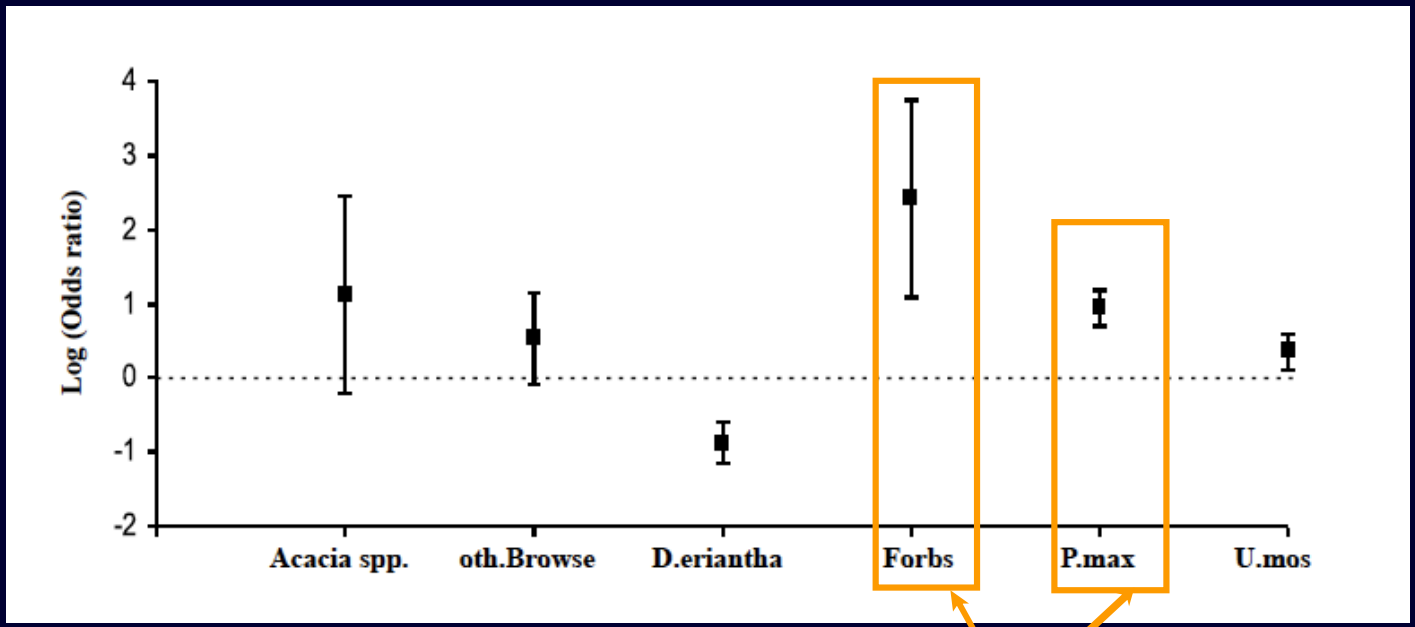


Results

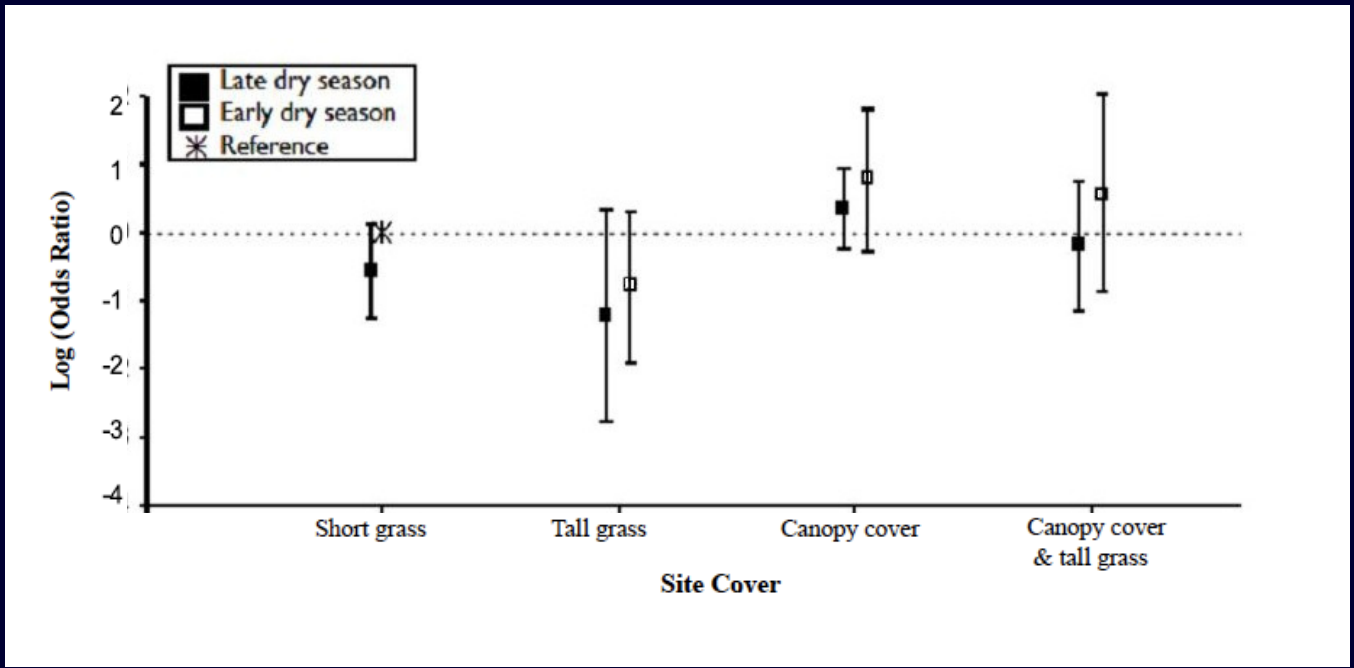
Feeding station selection based on presence of species



Feeding station selection ↑ with presence of forb spp. even though P.max made up > 80% of diet

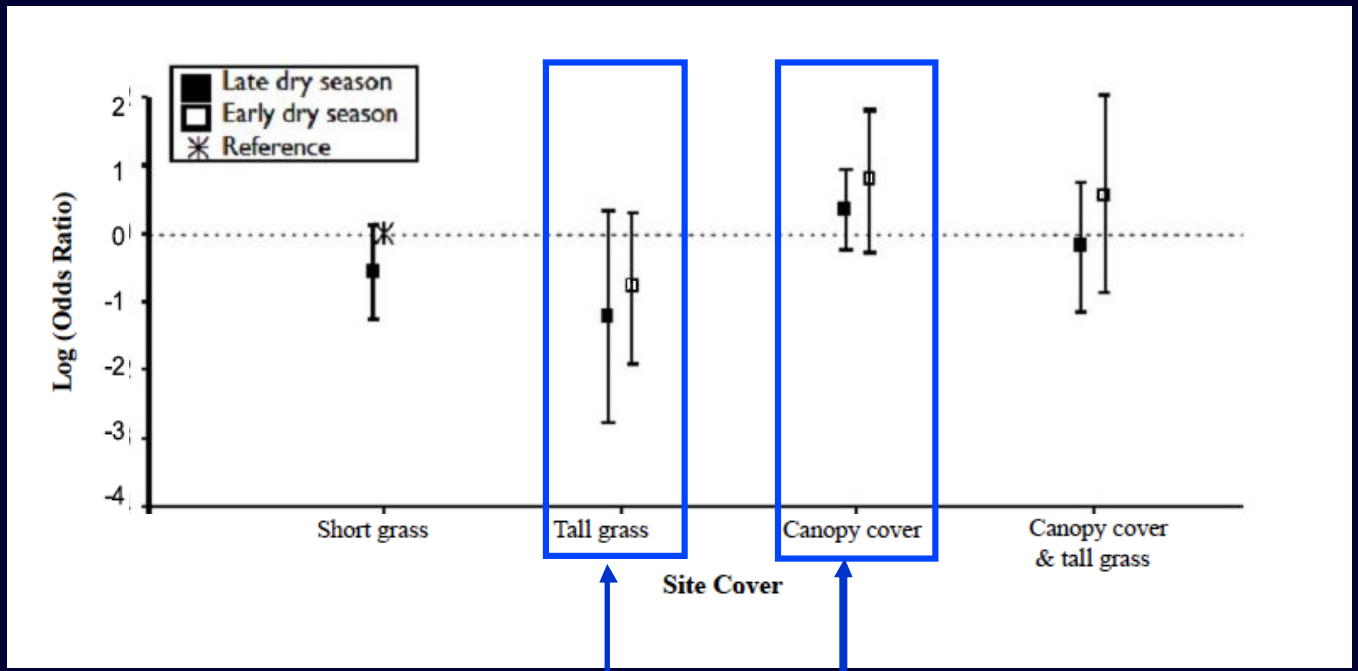
Results

Site selection based cover



Results

Site selection based cover



Tall grass = site avoidance

Canopy cover = site selection

Conclusion

- Not only the presence of a species that determines if the species, feeding station or site will be used or not;
- Various factors contribute to resource selection in impala
- SEASONAL CHANGES INFLUENCE HOW RESOURCES ARE BEING SELECTED