

## HOW DOES LAND USE AFFECT THE RELATIVE ABUNDANCE OF TWO MESOPREDATORS IN THE EASTERN CAPE, SOUTH AFRICA

A.D. Kok, D.M. Parker, T.W. Perry



## FISH-KOWIE CORRIDOR



## LAND USE CHANGE

- 1800's - Present: Livestock pastoralism
- Increase in the number of game farms in the last 20 years
- Hunting, game viewing, conservation
- 9.5% of the landscape is officially protected



## HUMAN-CARNIVORE CONFLICT



### BLACK-BACKED JACKAL (*Canis mesomelas*)

- Live in pairs and small groups
- Scavenger and hunter
- Diet: vertebrates, invertebrates, plant matter and seeds (Brassine and Parker 2012)



### CARACAL (*Caracal caraca*)

- Solitary
- Strictly carnivorous
- Diet: rodents and small ungulates (Braczkowski et al. 2012)

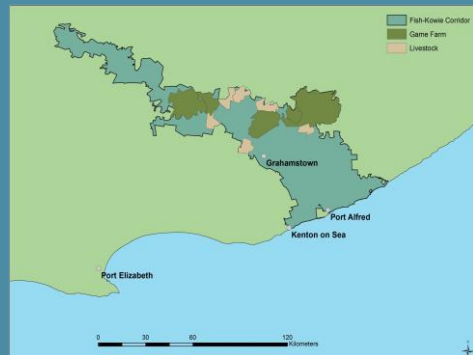


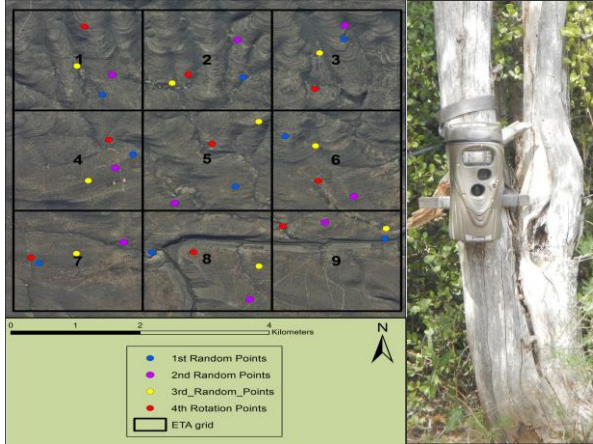
### QUESTION

Does the relative abundance of black-backed jackal and caracal differ with regards to land use type in the Fish-Kowie Corridor?



### STUDY SITES: SIX PER LAND USE





## RESULTS

Trap effort and number of photographs taken on two land use types

	GAME	LIVESTOCK	TOTAL
Trap nights	18313	18311	36634
Total photos	35446	45023	80469
Jackal photos	2456	243	2699
Caracal photos	89	55	144

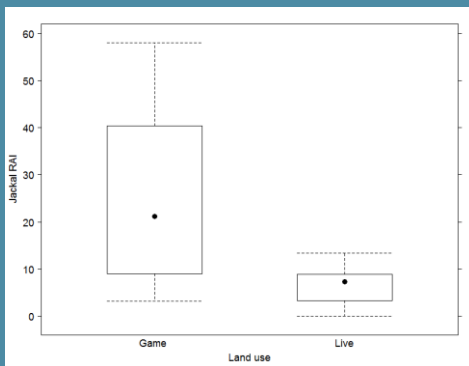


Fig. 1: Relative black-backed jackal abundance per land use type ( $H_{(1,46)} = 15.27, p < 0.01$ ).

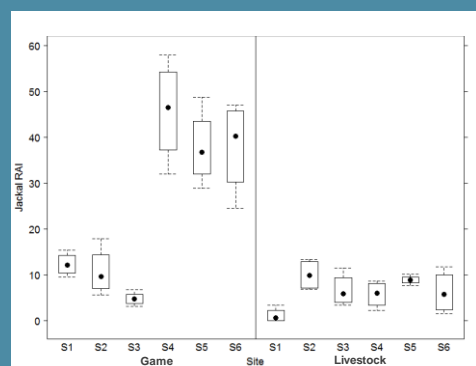


Fig. 2: Relative black-backed jackal abundance per site ( $H_{(1,11)} = 38.2, p < 0.01$ ).

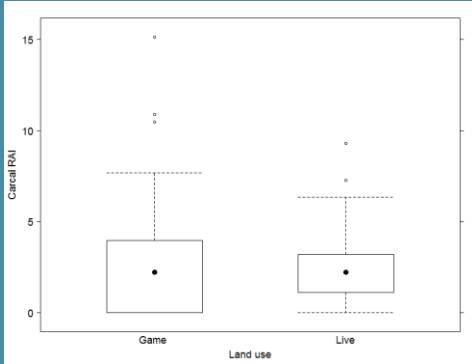


Fig. 3: Relative caracal abundance per land use type ( $H(1,46) = 0.09, p > 0.05$ ).

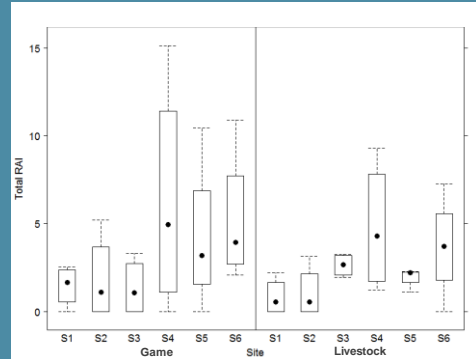


Fig. 4: Relative caracal abundance per land use type ( $H(1,11) = 14.03, p > 0.05$ ).

### CONCLUSION

- Jackal relative abundance is higher on game farms compared to livestock farms
- Localized effect = increasing sample size important
- Caracal relative abundance is similar on both land use types
- Future analysis: effects of covariates and occupancy modelling

### ACKNOWLEDGEMENTS

