

# *Lion predation on buffalo around Satara*

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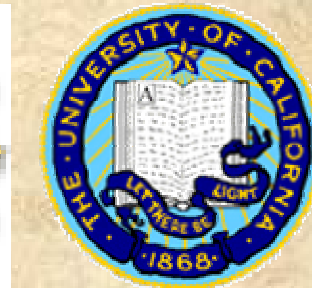
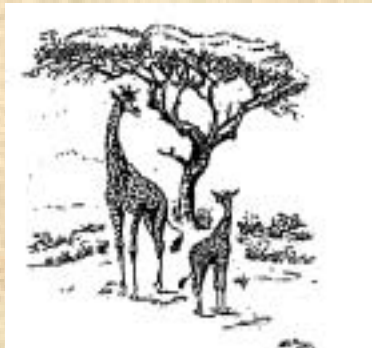
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# *Lion predation on buffalo*

- Central Kruger
  - Mills et al. 1995 – 18%
  - Bryden 1976 – 0%
  - Smuts 1979 – 2%
- Southern Kruger
  - Funston 1999
    - Pride Females = 18%
    - Males = 59%
  - Bryden 1976 – 43%

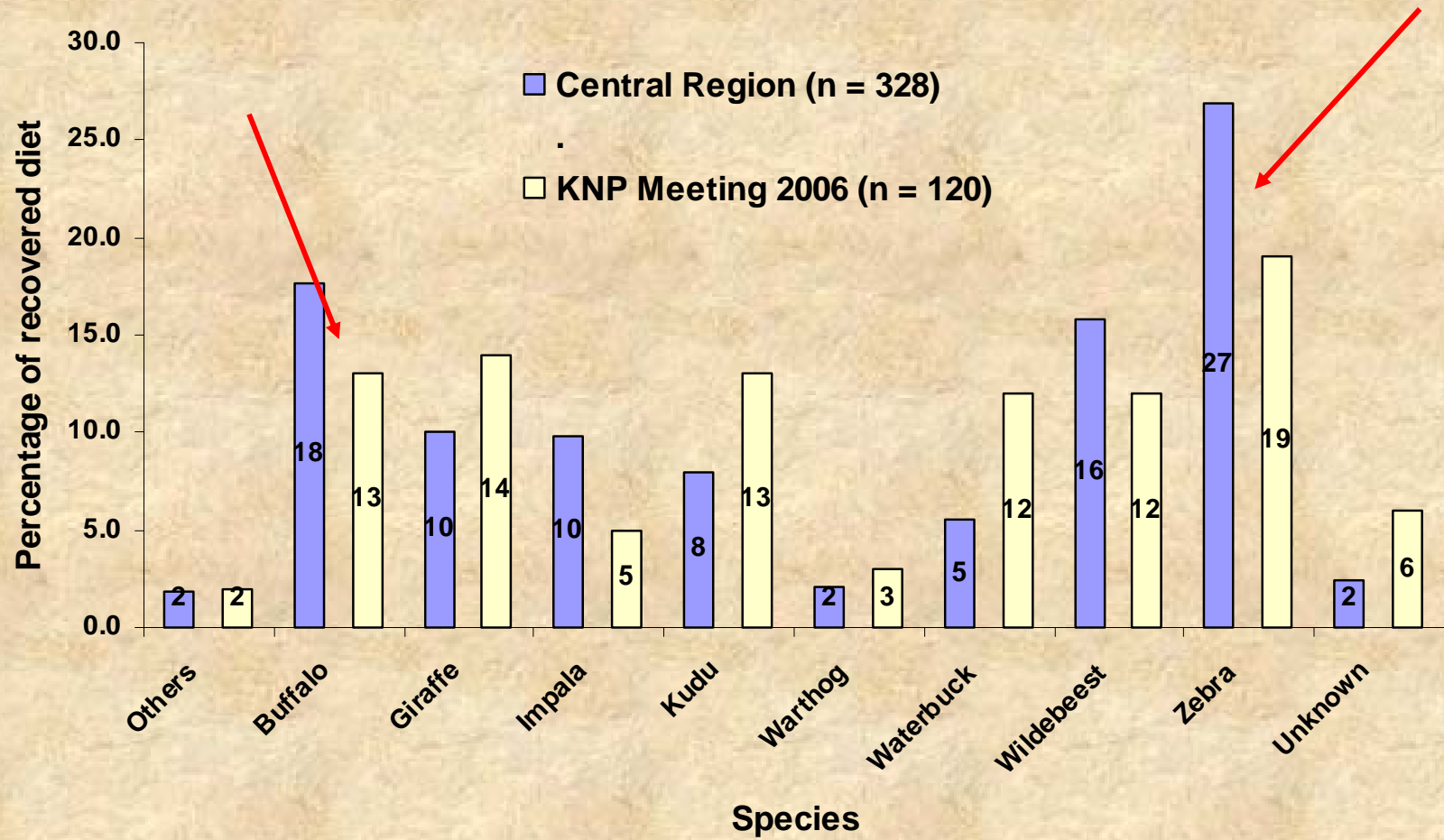


# *Factors affecting lion predation*

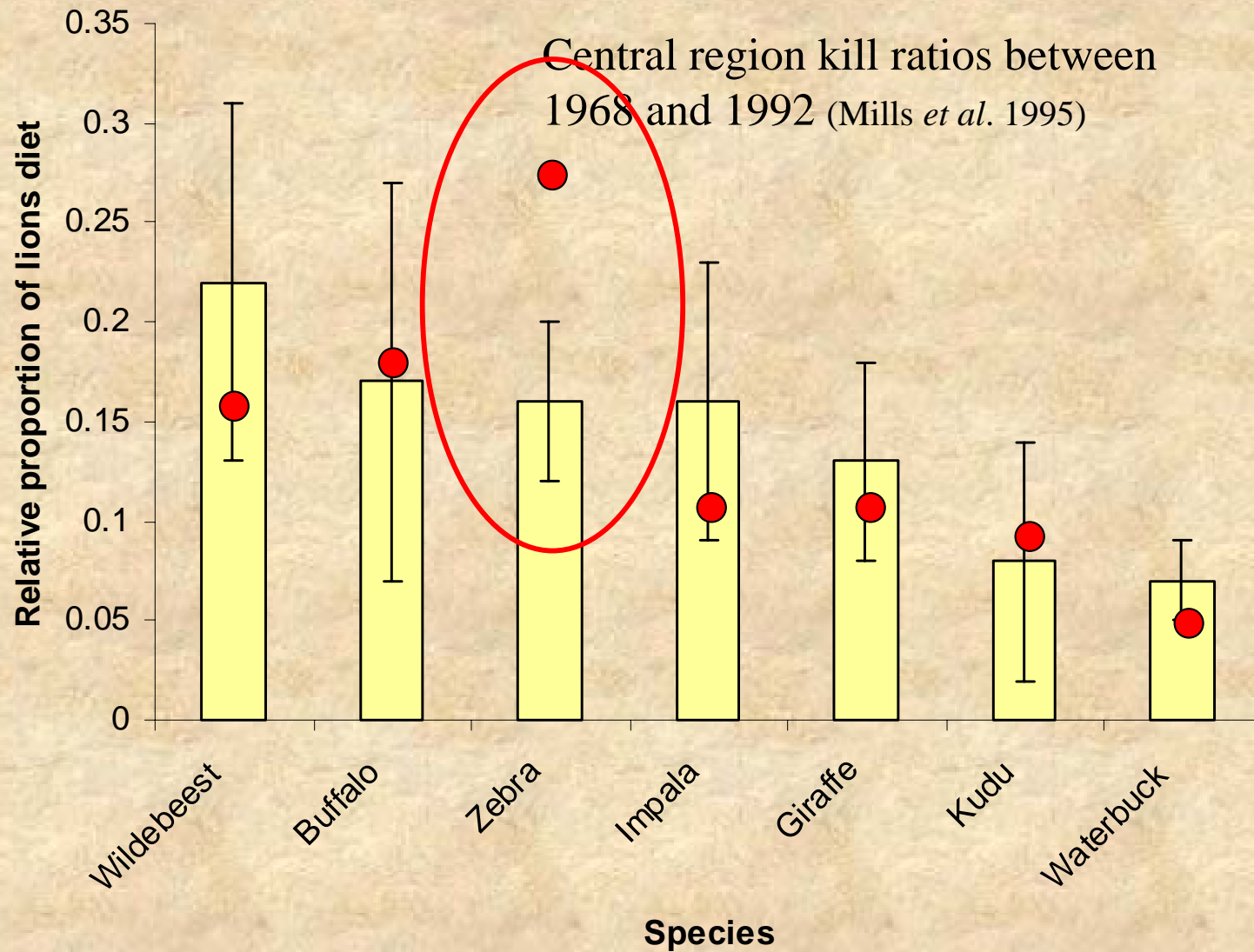
- Factors that affect the numbers and predation
  - Rainfall
    - long term cycles
  - Disease
    - Anthrax
    - BTB?



# *Total diet*

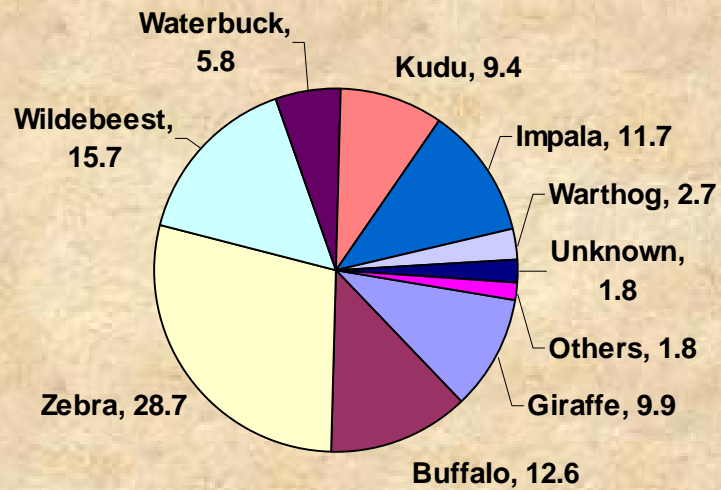


# *vs. Long term trends*

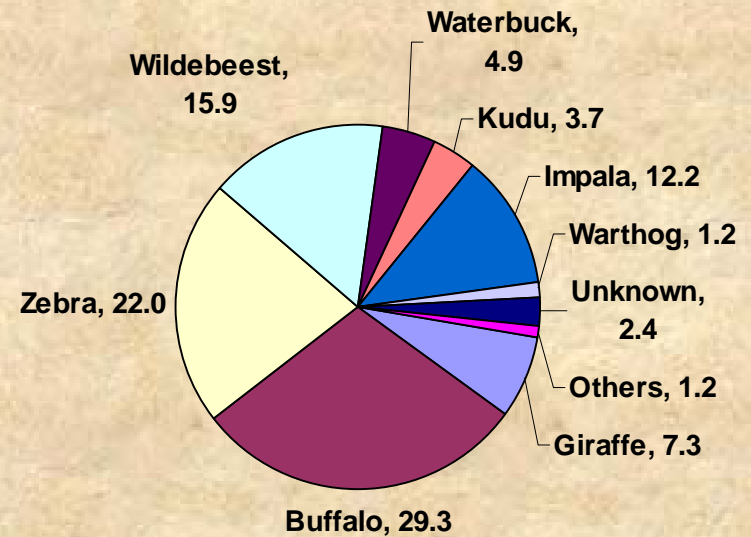


# *Males vs. females*

**Females**



**Males**

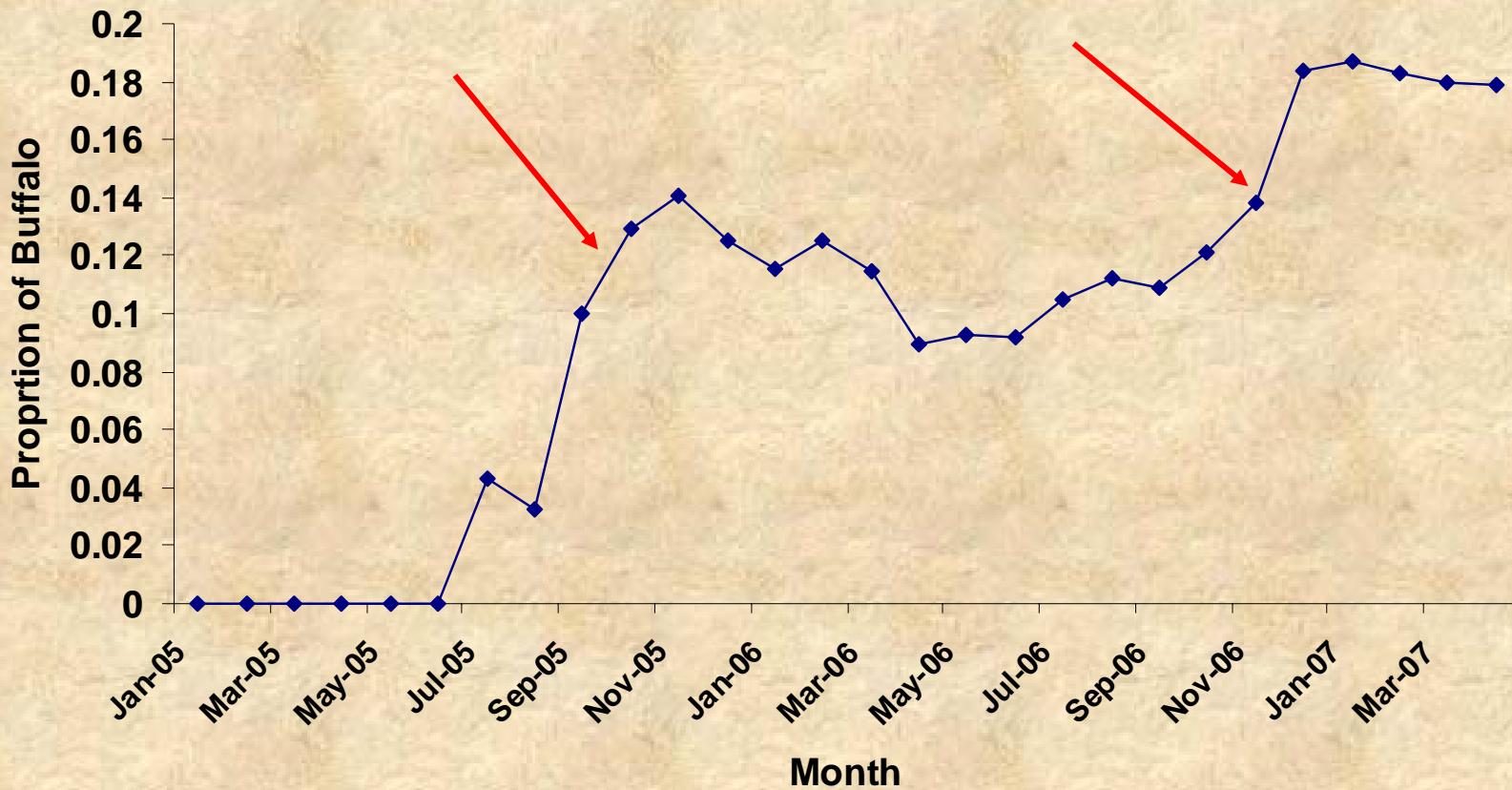


# *Preferred prey size class*

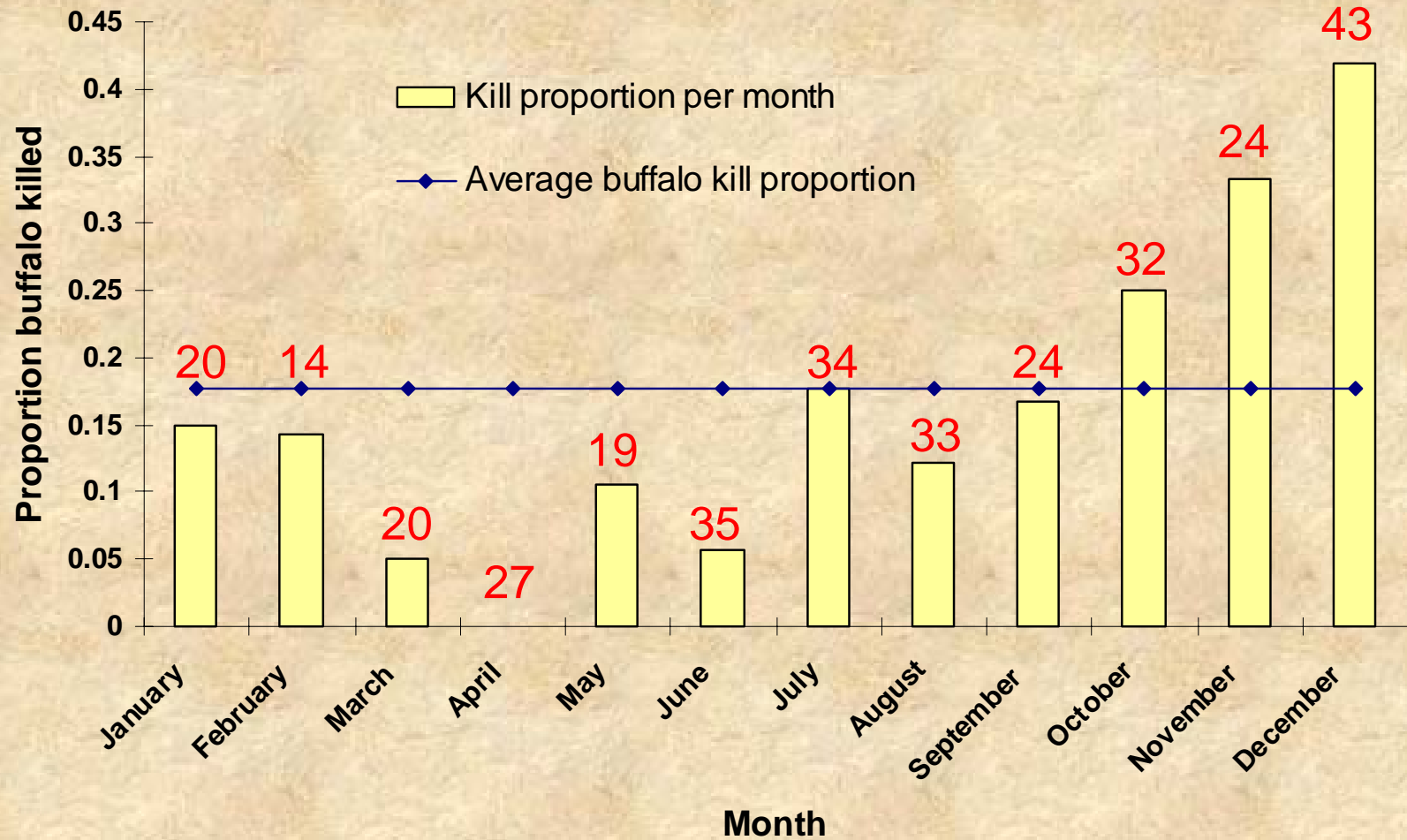


# *Proportion of buffalo killed*

Proportion of Buffalo (n = 58) found out of the entire diet (n = 325)



# Monthly buffalo kill proportion

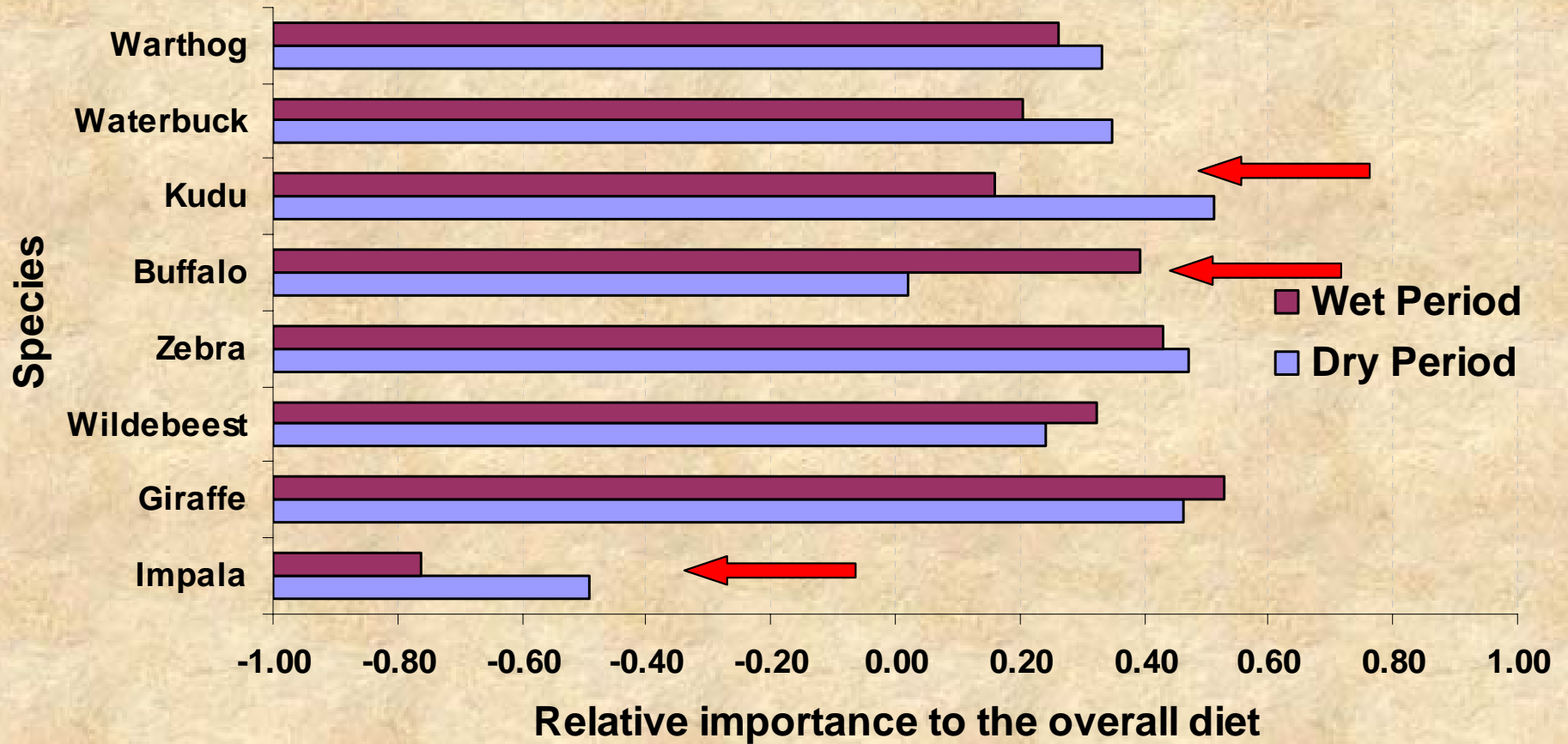


# *Delineation of seasons*

- Conventional
  - Wet = October – March
  - Dry = April - September



# *Conventional selection*

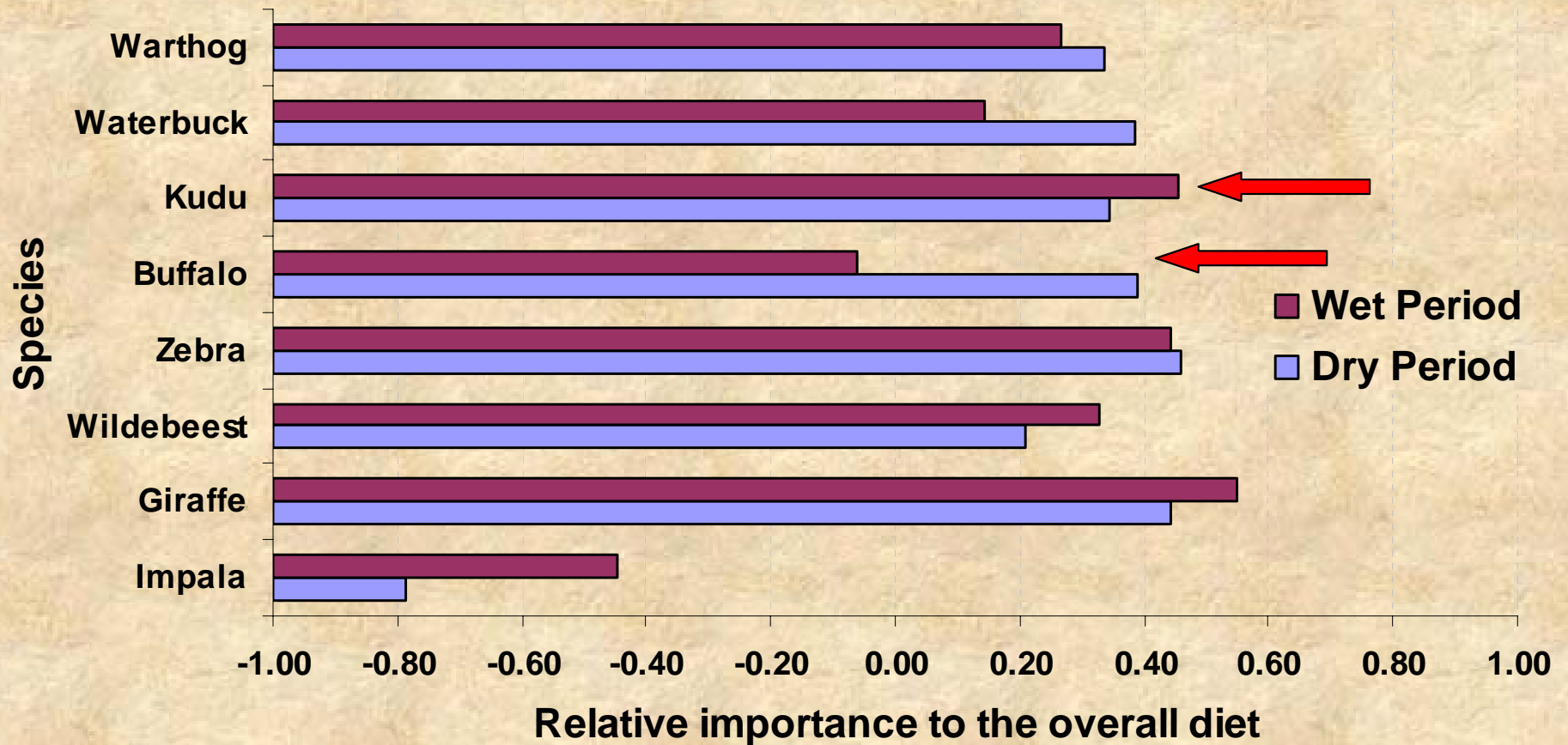


# *Delineation of seasons*

- Conventional
  - Wet = October – March
  - Dry = April - September
- Buffalo seasons
  - Wet = February - July
  - Dry = August - January



# *Buffalo season selection*



# Buffalo data sets

Adults vs. non-adult	NS	P = 0.2689
Juveniles vs. non-juveniles	NS	P = 0.2061
Sub adults vs. non		P = 1
Adult males vs. adult females		P = 0.0820
		P = 0.3949

**Adult males vs. adult females**

42	16	← BTB data
18	16	← Current data

Proportionally more adult females killed in current data set

Buffalo orientated search vs. lion orientated search

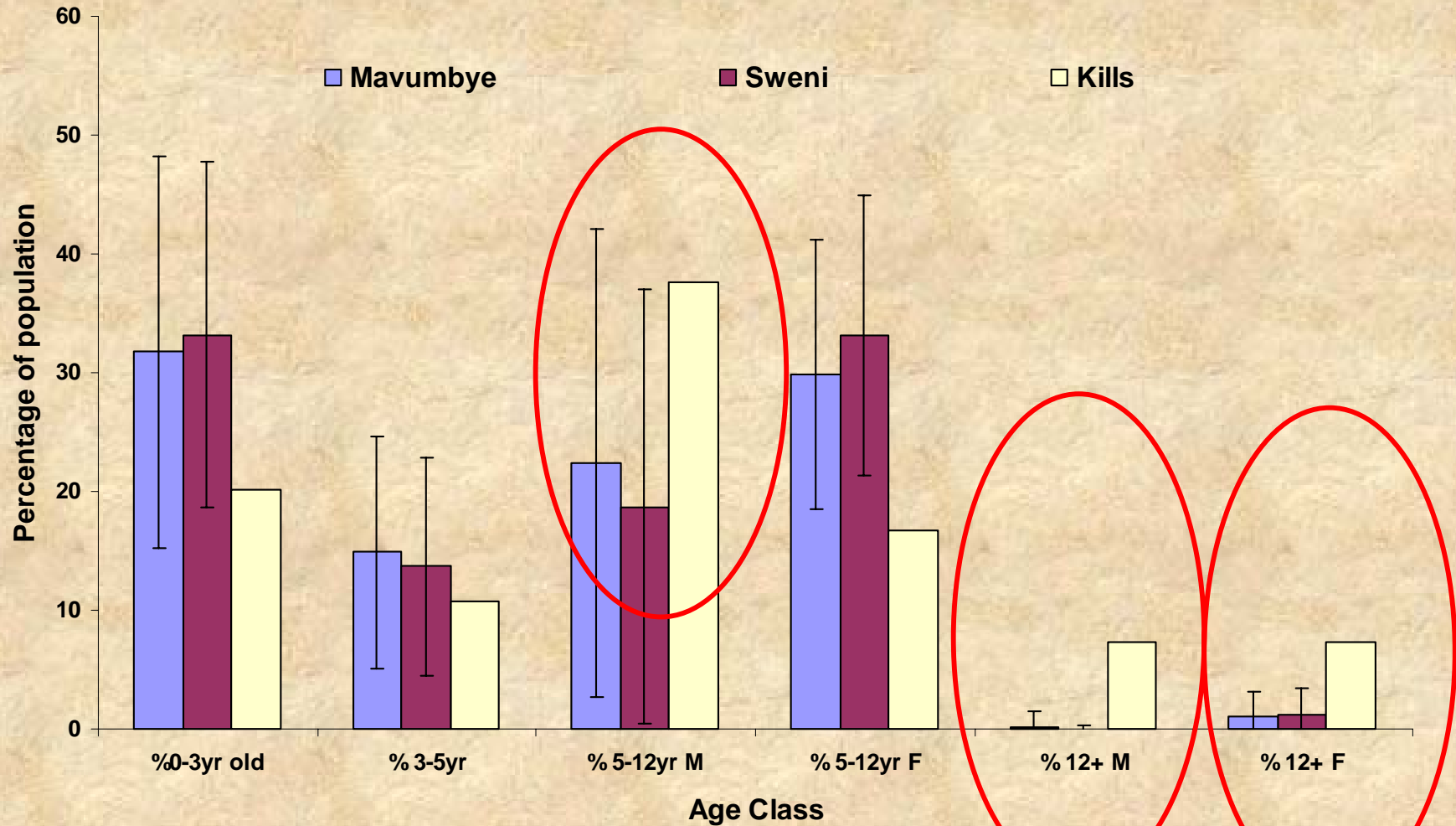
BTB project = 95 kills

Current project = 54 kills

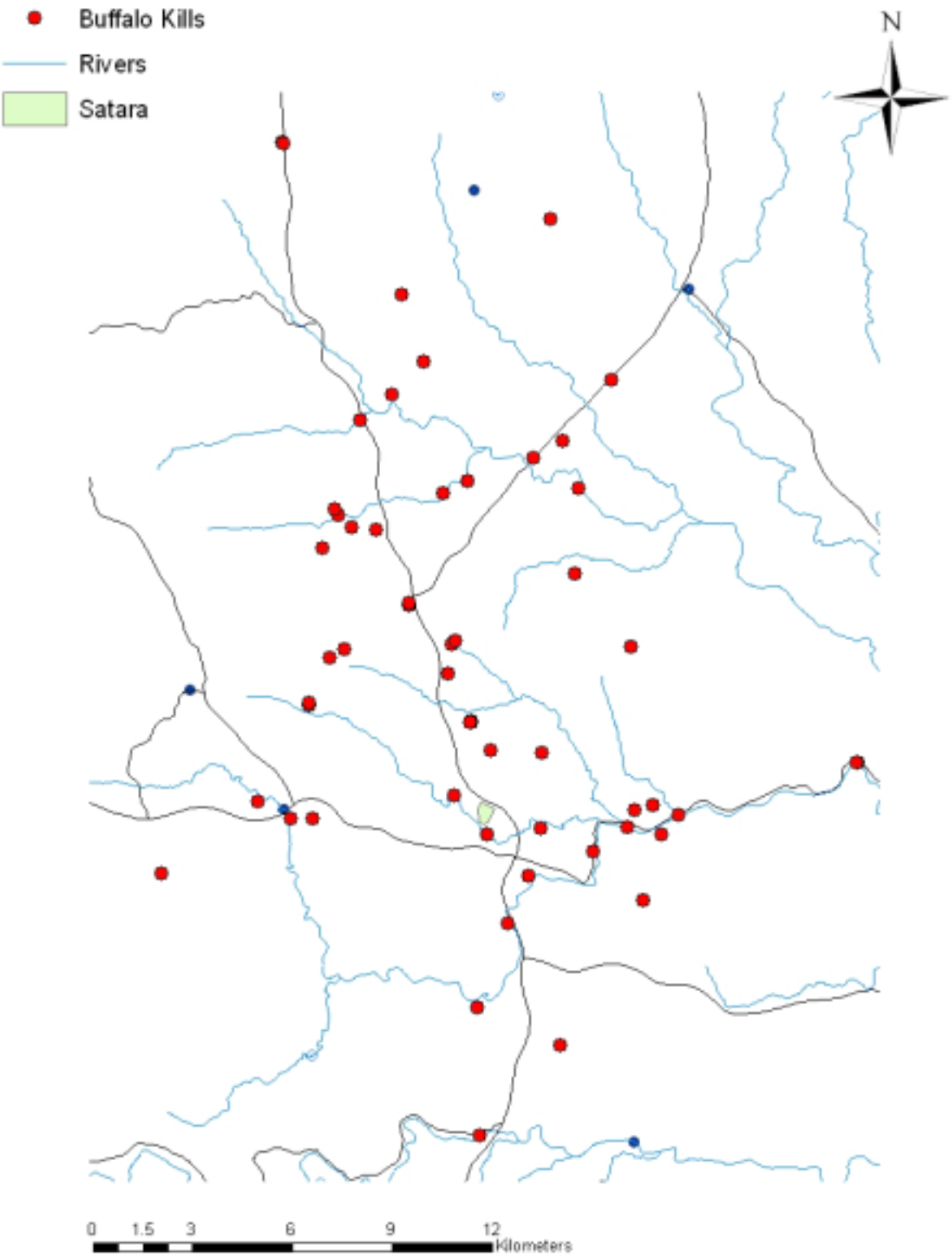


Fishers 2 tailed exact test, significance at  $p < 0.05$

# *Selection within herds*



Sweni: Chi-Square = 47.15209 df = 5 p < .000000,  
Mavumbye: Chi-Square = 37.36464 df = 5 p < .000001



# *Spatial relationships*

- No differences between age classes and the distance to water
- Significantly closer to water than random points

Mann Whitney U test  
significance at  $p < 0.05$

# *Conclusions*

- Lagged effect of predation
- Selecting adult males
  - May have a role to play in TB transmission to lions
- Killed close to water



# *Acknowledgements*

- Augusto Mabunda
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Getz
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