

# A review of the diet of the cusimanse (*Crossarchus obscurus*) at Newquay Zoo



Megan Heppenstall<sup>1,2</sup>, Dr Kathy Baker<sup>1</sup>, Dr Amy Plowman<sup>1</sup>

<sup>1</sup>Whitley Wildlife Conservation Trust, Newquay Zoo

<sup>2</sup>School of Biosciences, Cardiff University

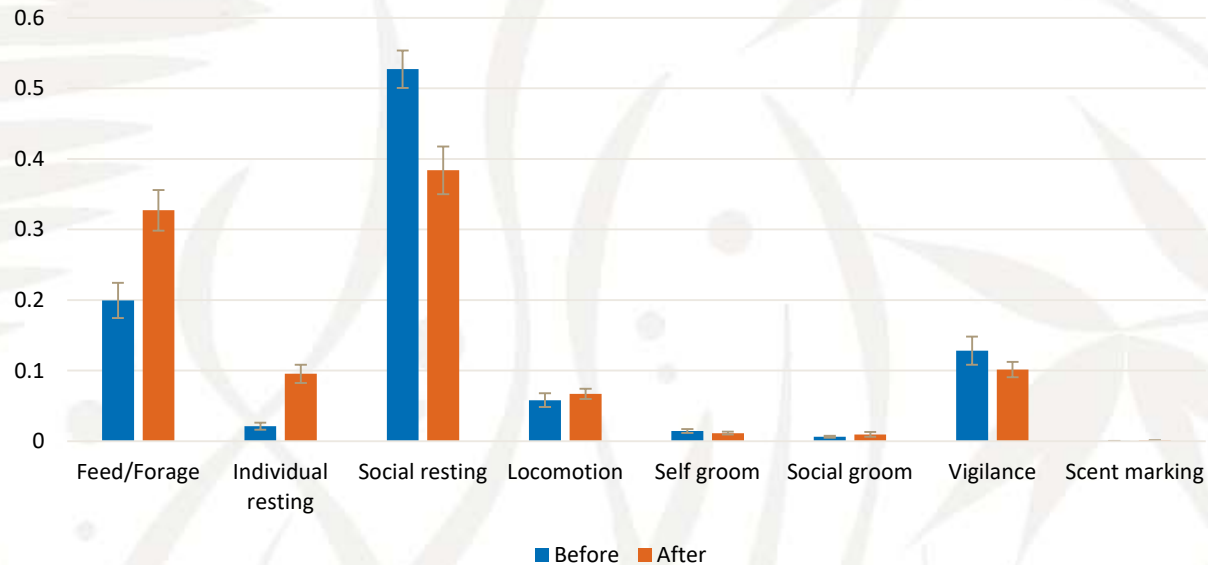
# Aims and objectives

- High cholesterol levels found in the meerkats (*Suricatta suricatta*) – 12.4 mmol/L
- Successful diet change – 3.3 mmol/L
- Male cusimanse – 18.5 mmol/L
- Post mortem of dead cusimanse showed fat around organs
- Analysis of the original diet using Zootrition highlighted high levels of saturated fats and crude protein
- Reduction in fattier meat feed items and introduction of white bait

Nutrient	Previous diet		Reviewed diet		Nutrient requirements
	From diet sheet	Actual amount consumed	From diet sheet	Actual amount consumed	
Dry matter (g)	70.8	77.75	71.17	67.98	
Digestible energy (kcal/g)	0.51	0.40	1.67	1.66	
Gross energy (kcal/g)	1.90	1.69	0.04	0.04	
ADF (%)	1.18	1.17	5.28	4.38	
NDF (%)	3.63	4.05	8.67	6.92	
Crude fat (%)	21.02	19.79	12.66	10.18	9.0-30
Linoleic acid (%)	1.23	1.21	0.72	0.61	0.5-0.55
Linolenic acid (%)	0.06	0.05	0.13	0.09	
Monounsaturated fats (%)	2.30	2.02	0.79	0.41	
Saturated fats (%)	2.03	1.80	0.29	0.17	
Crude protein (%)	42.67	40.68	28.78	24.41	19.7-32.5
Taurine (%)	0	0.03	0	0	
Calcium (%)	4.31	3.88	0.83	0.70	0.29-1.0
Phosphorous (%)	0.63	0.59	0.42	0.39	0.26-0.8
Calcium: phosphorous ratio	6.85: 1	6.55: 1	1.96: 1	1.78:1	

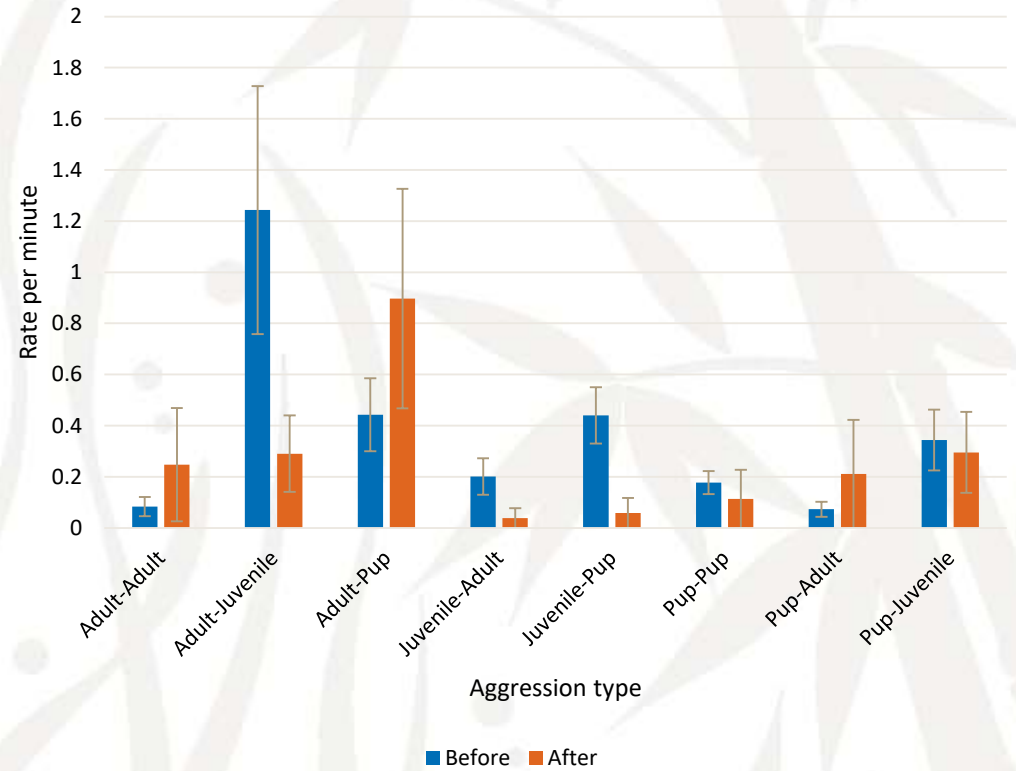
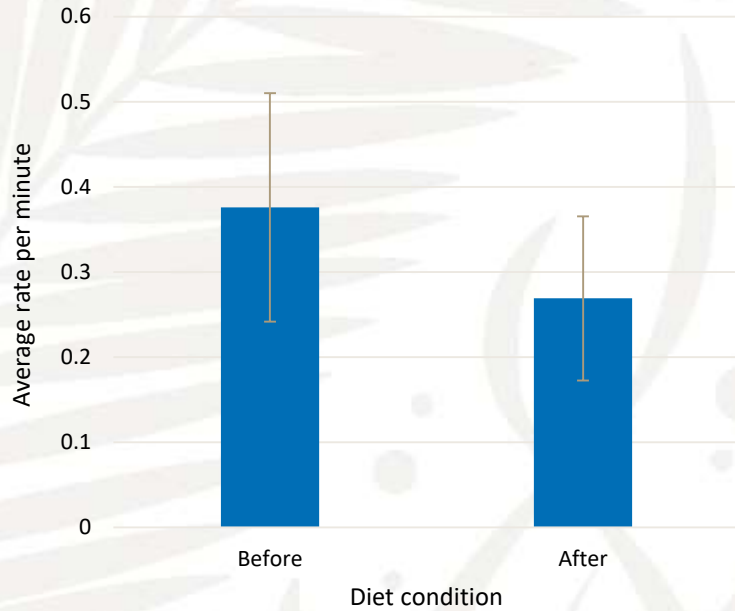
# Results

- General behavioural observations – no adverse effects on behaviour
- Binomial GLM (main effects and interactions of individual + condition) – all behaviour changes non-significant



- Faecal scoring – score of 2 (ideal) before and after diet change
- No weight change in dominant adult female
- Cholesterol – tbc

# Results – aggression during feeds



# Summary

## Successful diet change:

- Better nutritional quality
- Palatability
- No adverse effects on behaviour



## Other parameters to be investigated (cholesterol)



## Otters

- Similar dietary analysis
- Change from less fatty feed items to more fish etc.
- In progress