

The impact of the lunar cycle and season on small mammal communities near a large metropolitan area

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Supplementary Tables

Supplementary Table 1. The seasonal sampling period dates for Sites 1 and 2 on the Cradle Nature Reserve.

Seasons	Start date	End date
Autumm	10/05/2022	10/06/2022
Winter	03/08/2022	03/09/2022
Spring	11/11/2022	12/12/2022
Summer	30/01/2023	02/03/2023

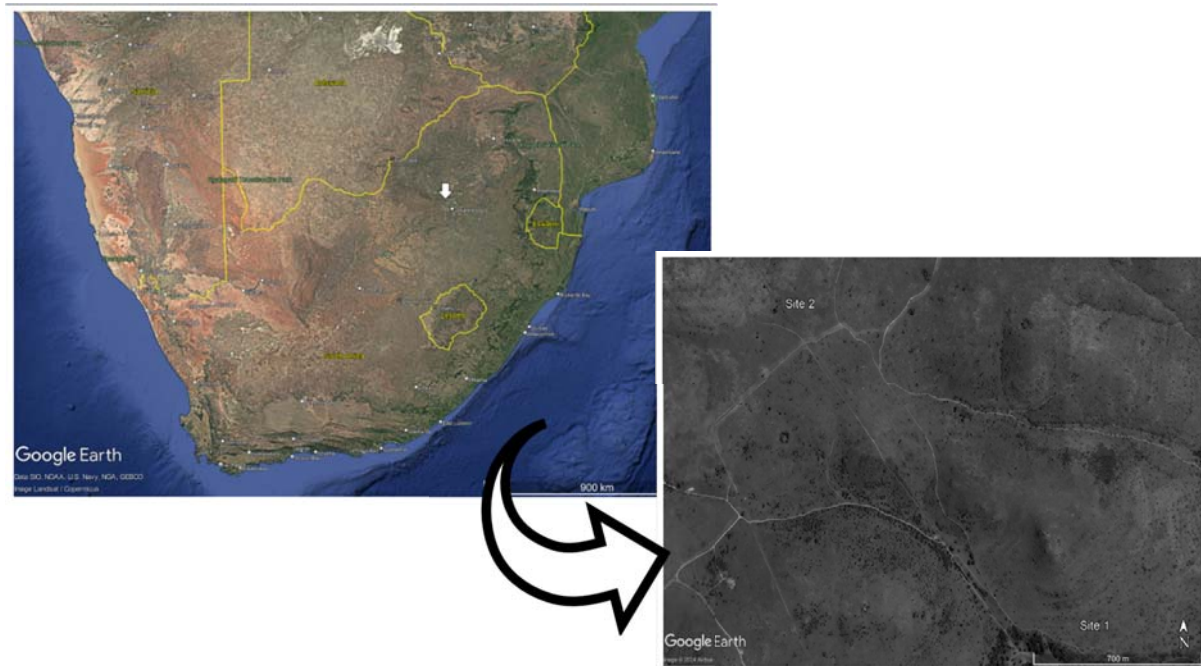
Supplementary table 2. The models considered for the number of animals and species caught. Models 1 and 2 are the saturated models for the two response variables, models 1a and 2a has Site as the random variable instead of a predictor variable and 1b and 2b contains Site as both a predictor and random variable. The parsimonious models are bolded and were chosen as the models with the lowest AICc and highest weight values.

Animal abundance (i.e., number of animals caught)					
Model	Variables	df	logLik	AICc	Weight
1	Season, Site, % Moon illumination, % Cloud cover, % Moon illumination*Cloud cover (NO random variable)	8	-326.50	669.6	0.745
1a	Season, % Moon illumination, % Cloud cover, % Moon illumination*Cloud cover (Site = random variable)	8	-332.15	680.9	0.003
1b	Season, Site, % Moon illumination, % Cloud cover, % Moon illumination*Cloud cover (Site = random variable)	9	-326.50	671.8	0.253
Species composition (i.e., number of species caught)					
2	Season, Site, % Moon illumination, Site*Season (NO random variable)	8	-326.50	669.6	0.745
2a	Season, % Moon illumination, Site*Season (Site = random variable)	8	-332.15	680.9	0.003
2b	Season, Site, % Moon illumination, Site*Season (Site = random variable)	9	-326.50	671.8	0.253

Supplementary Table 3. The contributions of each weather variable to four separate principal components (PCs). The eigenvalue, variance percentage and cumulative variance percentage of each PC is included, with the most representative PC (explaining the highest percentage of the variance and an eigenvalue larger than 1) indicated with an asterisk.

	PC1*	PC2	PC3	PC4
Minimum temperature	0.580	-0.031	0.581	-0.570
Wind speed	0.157	0.950	0.127	0.237
Humidity	0.613	-0.295	0.086	0.728
Precipitation	0.513	0.096	-0.799	-0.299
Eigenvalue	1.923	1.021	0.711	0.346
Variance %	48.077	25.514	17.763	8.645
Cumulative variance %	48.077	73.592	91.355	100

Supplementary Figures



Supplementary Figure 1. The locations of Site 1 and Site 2 on the Cradle Nature Reserve property. The Site 1 faced Johannesburg and Site 2 faced the opposite direction.



Supplementary Figure 2: Pictures of the PVC live traps used to capture small mammals. Left – front view of the trap, showing the door at the top of the trap that is kept open by a little steel arm on the lefthand side and the metal plate at the bottom of the trap that triggers the door. Right – top view of a trap.