

What they do in the shadows: partial nocturnality in a large forest parrot

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SUPPLEMENTARY MATERIAL

**Table S1** Summary of results of the Generalized Mixed-effects Logistic Regression for *ad libitum* sampling observations in Zealandia ecosanctuary between February 2024 and October 2024. Significant results are indicated in bold ( $\alpha = 0.05$ ).

(Fixed effects: Time of Day; Random effects: sampling date)

Family: Binomial (logistic regression)

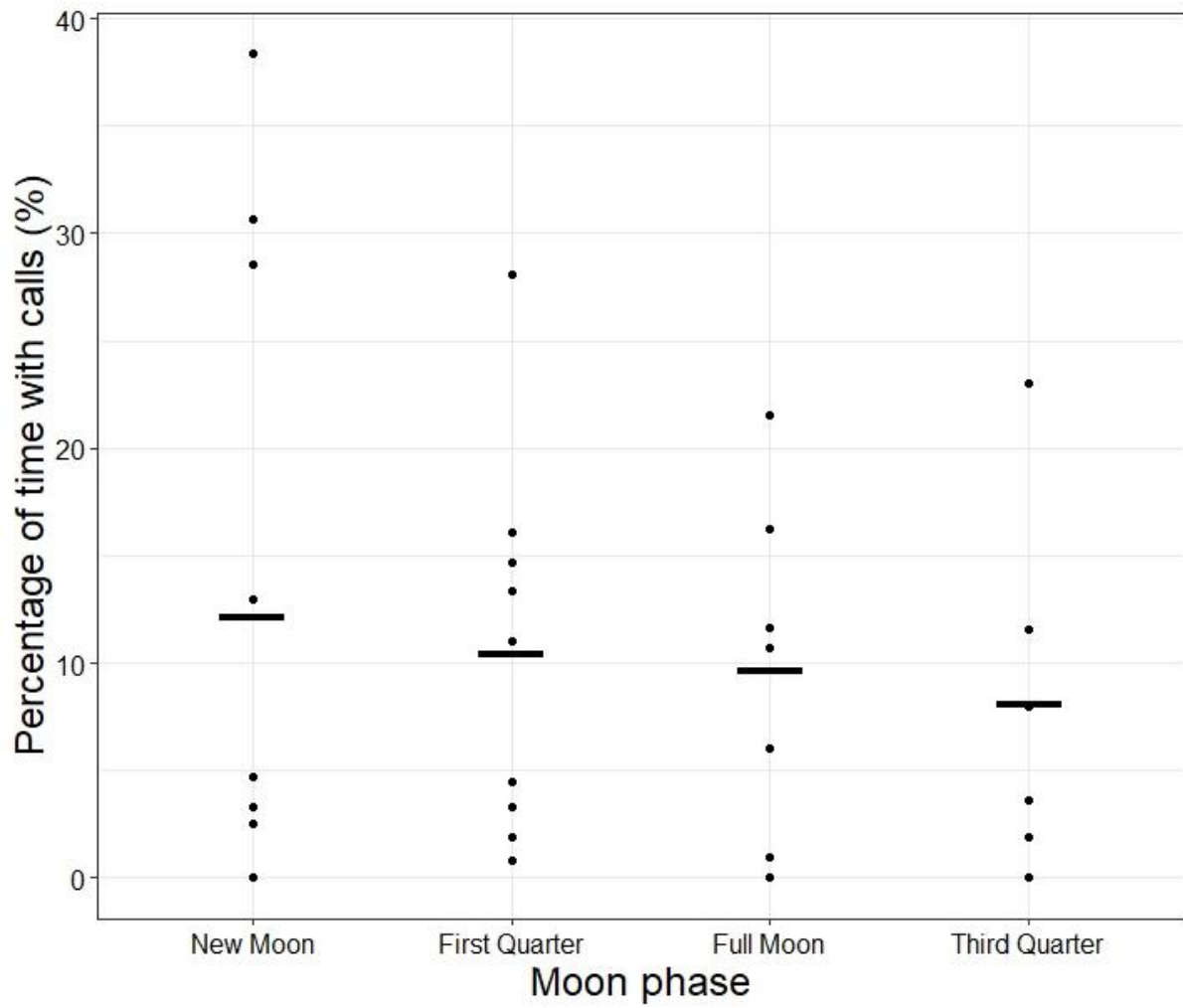
Behaviour	Intercept	Time of Day Effect (Night vs. Day)	p-value	Random Effect Variance (Date) (SD)
Flying	-1.472 (p = 2.59e-10)	+0.962 (p = 0.00727)	0.00727	0.401 (SD = 0.634)
Foraging	-0.275 (p = 0.119)	-2.316 (p = 3.61e-05)	3.61e-05	0.386 (SD = 0.621)
Moving	-1.667 (p < 2e-16)	+1.333 (p = 5.5e-05)	5.5e-05	0.115 (SD = 0.339)
Resting	-2.761 (p < 2e-16)	-0.553 (p = 0.469)	0.469	0.000 (SD = 0.000)
Grooming	-2.577 (p < 2e-16)	-0.007 (p = 0.99)	0.99	0.000 (SD = 0.000)

**Table S2** Summary of results of the Generalized Mixed-effects Logistic Regression for instantaneous sampling observations in Zealandia ecosanctuary between February 2024 and October 2024. Significant results are indicated in bold ( $\alpha = 0.05$ ).

(Fixed effects: Time of Day; Random effects: Bird ID)

Family: Binomial (logistic regression)

Behaviour	Intercept	Time of Day Effect (Night vs. Day)	p-value	Random Effect Variance (Bird ID) (SD)
Foraging	-3.899 (p = 0.00288)	-0.038 (p = 0.980)	0.980	7.969 (SD = 2.823)
Moving	-3.142 (p = 1.21e-06)	+2.808 (p = 0.00045)	0.00045	2.176 (SD = 1.475)
Resting	+0.028 (p = 0.971)	-1.576 (p = 0.119)	0.119	4.339 (SD = 2.083)
Grooming	-1.623 (p = 1.11e-06)	-0.420 (p = 0.351)	0.351	0.585 (SD = 0.765)
Social	-3.566 (p = 1.12e-05)	-2.053 (p = 0.075)	0.075	2.366 (SD = 1.538)



**Figure S1** Percentage of sampling time at night when calls were detected for each moon phase. Solid lines represent mean value.