Occupancy of wild southern pig-tailed macaques in intact and degraded forests in Peninsular Malaysia

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Supplemental Tables

Table S1. Candidate models for the detection of *Macaca nemestrina* in the Pasoh Forest Reserve (PFR) and Belum-Temengor Forest Complex (BTFC) with global occupancy models. Shown are Akaike's Information Criterion corrected for small samples (AIC_c), differences in AIC_c between each model and the respective best model (ΔAIC_c), the probability of each model to be the best model, i.e., the Akaike weights (wAIC), and the number of parameters (K). Top-ranked models ($\Delta AIC_c \leq 2$) are indicated in bold.

Candidate models	AIC_c	ΔAIC_c	wAIC	K
PFR, ψ (edge + elevation) γ (forest degradation) ε (forest degradation)				
***p* (effort + sampling year)**	**2069.5**	**0**	**1**	**15**
p (effort)	2092.5	22.96	0	11
p (effort + sampling year + sampling month)	2094.4	24.90	0	24
p (effort + sampling month)	2106.7	37.25	0	20
p (sampling year)	2143.5	74.01	0	14
p (.)	2162.8	93.27	0	10
p (sampling year + sampling month)	2162.9	93.42	0	23
p (sampling month)	2175.1	105.65	0	19
BTFC, ψ (habitat + NDVI + settlement + elevation)				
***p* (effort + sampling month)**	**1238.6**	**0**	**0.995**	**16**
p (effort)	1249.4	10.77	0.005	7
p (sampling month)	1270.8	32.21	0	15
p (.)	1283.0	44.38	0	6

Table S2. Effect of covariates on the detection of *Macaca nemestrina* in the Pasoh Forest Reserve (PFR) and Belum-Temengor Forest Complex (BTFC). Shown are model averaged estimates (zero method), standard errors (SE), and lower and upper 95% confidence intervals (CI). Predictors included into the respective top models ($\Delta AIC_c \leq 2$) are indicated in bold.

Site	Parameter	Covariate	Estimate	SE	lower CI	upper CI
PFR	Detection *p*	**effort[a]**	**0.51**	**0.06**	**0.39**	**0.63**
		sampling year (2013 vs. 2014)[b]	**-0.70**	**0.18**	**-1.05**	**-0.34**
		sampling year (2013 vs. 2015)[b]	**-0.96**	**0.18**	**-1.32**	**-0.61**
		sampling year (2013 vs. 2016)[b]	**-0.71**	**0.18**	**-1.05**	**-0.36**
		sampling year (2013 vs. 2017)[b]	**-0.23**	**0.19**	**-0.60**	**0.14**
		sampling month (Jan vs. Feb)[c]	0.000009	0.005	-0.29	4.64
		sampling month (Jan vs. May)[c]	0.000004	0.002	-0.03	2.23
		sampling month (Jan vs. Jun)[c]	0.000004	0.002	-0.04	2.18
		sampling month (Jan vs. Jul)[c]	0.000004	0.002	-0.23	2.02
		sampling month (Jan vs. Aug)[c]	0.000002	0.002	-0.61	1.75
		sampling month (Jan vs. Sep)[c]	0.000006	0.003	0.11	3.03
		sampling month (Jan vs. Oct)[c]	0.000005	0.003	0.08	2.45
		sampling month (Jan vs. Nov)[c]	0.000002	0.002	-0.68	1.69
		sampling month (Jan vs. Dec)[c]	0.000002	0.002	-0.61	1.86
BTFC	Detection *p*	**effort[a]**	**0.61**	**0.12**	**0.37**	**0.84**
		sampling month (Jan vs. Feb)[c]	**0.25**	**0.26**	**-0.25**	**0.76**
		sampling month (Jan vs. Mar)[c]	**0.12**	**0.27**	**-0.40**	**0.64**
		sampling month (Jan vs. Apr)[c]	**0.44**	**0.32**	**-0.19**	**1.08**
		sampling month (Jan vs. May)[c]	**0.99**	**0.54**	**-0.06**	**2.04**
		sampling month (Jan vs. Aug)[c]	**-11.12**	**314.10**	**-628.20**	**605.87**
		sampling month (Jan vs. Sep)[c]	**-2.07**	**1.05**	**-4.12**	**-0.03**
		sampling month (Jan vs. Oct)[c]	**-0.80**	**0.34**	**-1.45**	**-0.15**
		sampling month (Jan vs. Nov)[c]	**-0.46**	**0.30**	**-1.04**	**0.12**
		sampling month (Jan vs. Dec)[c]	**-0.37**	**0.30**	**-0.96**	**0.22**

[a] z-transformed to mean = 0 and SD = 1 prior to model fitting; original means ± SDs were: effort (*PFR*): 6.0 ± 1.8 days, effort (*BTFC*): 12.1 ± 3.6 days.
[b] Reference level is '2013'.
[c] Reference level is 'Jan'.

Table S3. Candidate models for *Macaca nemestrina* occupancy in the Pasoh Forest Reserve (PFR) and Belum-Temengor Forest Complex (BTFC) with best respective detection models. Shown are Akaike's Information Criterion corrected for small samples (AIC_c), differences in AIC_c between each model and the respective best model (ΔAIC_c), the probability of each model to be the best model, i.e., the Akaike weights (wAIC), and the number of parameters (K). Top-ranked models ($\Delta AIC_c \leq 2$) are indicated in bold.

Candidate models	**AIC_c**	**ΔAIC_c**	**wAIC**	**K**
PFR, *p* (effort + sampling year)				
ψ (.) γ (.) ε (forest degradation)	**2056.4**	**0**	**0.633**	**11**
ψ (elevation) γ (.) ε (forest degradation)	2059.4	3.03	0.139	12
ψ (edge) γ (.) ε (forest degradation)	2059.5	3.05	0.138	12
ψ (.) γ (forest degradation) ε (forest degradation)	2062.6	6.21	0.028	13
ψ (edge + elevation) γ (.) ε (forest degradation)	2062.7	6.30	0.027	13
ψ (.) γ (.) ε (.)	2064.0	7.60	0.014	9
ψ (elevation) γ (forest degradation) ε (forest degradation)	2065.9	9.52	0.005	14
ψ (edge) γ (forest degradation) ε (forest degradation)	2065.9	9.54	0.005	14
ψ (elevation) γ (.) ε (.)	2066.8	10.38	0.004	10
ψ (edge) γ (.) ε (.)	2066.8	10.40	0.003	10
ψ (edge + elevation) γ (forest degradation) ε (forest degradation)	2069.5	13.09	0.001	15
ψ (.) γ (forest degradation) ε (.)	2069.7	13.29	0.001	11
ψ (edge + elevation) γ (.) ε (.)	2069.8	13.39	0.001	11
ψ (elevation) γ (forest degradation) ε (.)	2072.7	16.32	0	12
ψ (edge) γ (forest degradation) ε (.)	2072.7	16.33	0	12
ψ (edge + elevation) γ (forest degradation) ε (.)	2076.0	19.59	0	13
BTFC, *p* (effort + sampling month)				
ψ (elevation)	**1232.1**	**0**	**0.415**	**13**
ψ (NDVI + elevation)	1234.2	2.04	0.149	14
ψ (settlement + elevation)	1234.3	2.19	0.139	14
ψ (habitat + elevation)	1234.4	2.24	0.135	14
ψ (NDVI + settlement + elevation)	1236.3	4.19	0.051	15
ψ (habitat + NDVI + elevation)	1236.4	4.28	0.049	15
ψ (habitat + settlement + elevation)	1236.6	4.42	0.046	15
ψ (habitat + NDVI + settlement + elevation)	1238.6	6.45	0.016	16
ψ (habitat + settlement)	1260.9	28.78	0	14
ψ (habitat + NDVI + settlement)	1261.2	29.07	0	15
ψ (habitat)	1268.8	36.66	0	13
ψ (habitat + NDVI)	1269.4	37.27	0	14
ψ (NDVI + settlement)	1271.4	39.29	0	14
ψ (NDVI)	1271.7	39.54	0	13
ψ (.)	1274.3	42.19	0	12
ψ (settlement)	1275.6	43.51	0	13