

On the right track: placement of camera traps on roads improves detection of predators and shows non-target impacts of feral cat baiting

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Table S1. Relative Activity Indices (RAI) for 25 mammalian and avian species from cameras placed in open woodlands and grasslands, pre- and post-baiting recorded at Matuwa IPA

RAI was calculated from independent photo events (separated by at least 30 min for each species at each site) per 100 camera trap-nights. Mean distances between cameras were 2.73 km \pm 1.03 (s.d.)

		Woodland			Grassland			Total Captures	
		pre-baiting	post-baiting	total	pre-baiting	post-baiting	total	pre-baiting	post-baiting
<i>Mammals</i>									
<i>Osphranter robustus</i> & <i>O. rufus</i>	Macropod	12.01	16.10	14.71	0.80	1.05	0.96	7.56	10.18
<i>Canis dingo</i>	Dingo	5.67	1.49	2.91	1.20	0.42	0.69	3.90	1.07
<i>Felis catus</i>	Cat	1.98	1.36	1.57	2.41	1.99	2.13	2.15	1.61
<i>Camelus dromedarius</i>	Camel	3.69	4.21	4.04	1.00	2.09	1.72	2.63	3.38
<i>Bos taurus</i>	Cattle	1.58	0.41	0.81	0.80	0.31	0.48	1.27	0.37
<i>Oryctolagus cuniculus</i>	Rabbit	0.26	0.48	0.40	0.20	0.31	0.28	0.24	0.41
<i>Macrotis lagotis</i>	Bilby	0.13	0.07	0.09	-	-	-	0.08	0.04
<i>Tachyglossus aculeatus</i>	Echidna	0.13	-	0.04	-	-	-	0.08	-
<i>Birds</i>									
<i>Eolophus roseicapillus</i>	Galah	1.85	-	0.63	0.60	-	0.21	1.35	-
<i>Dromaius novaehollandiae</i>	Emu	1.19	2.11	1.79	0.20	2.09	1.45	0.80	2.10
<i>Ardeotis australis</i>	Bustard	0.79	0.07	0.31	0.20	0.31	0.28	0.56	0.16
<i>Circus assimilis</i>	Spotted harrier	0.40	-	0.13	0.40	-	0.14	0.40	-
<i>Falco berigora</i>	Brown falcon	0.13	-	0.04	0.60	0.10	0.28	0.32	0.04
<i>Accipiter fasciatus</i>	Brown goshawk	0.26	-	0.09	0.60	-	0.21	0.40	-
<i>Phaps chalcoptera</i>	Common bronzewing	0.26	-	0.09	-	-	-	0.16	-
<i>Accipiter cirrocephalus</i>	Collared sparrowhawk	0.26	-	0.09	-	-	-	0.16	-
<i>Ocyphaps lophotes</i>	Crested pigeon	0.26	-	0.09	-	-	-	0.16	-
<i>Cracticus tibicen</i>	Magpie	0.13	-	0.04	0.20	0.42	0.34	0.16	0.16
<i>Manorina flavigula</i>	Yellow-throated miner	-	-	0.00	0.20	-	0.07	0.08	-
<i>Tyto alba</i>	Barn owl	0.13	-	0.04	-	-	-	0.08	-
<i>Corvus sp.</i>	Crow	0.13	0.07	0.09	-	0.21	0.14	0.08	0.12
<i>Cracticus nigrogularis</i>	Pied butcherbird	-	-	-	0.20	0.10	0.14	0.08	0.04
<i>Aquila audax</i>	Wedge-tailed eagle	-	-	-	0.20	-	0.07	0.08	-
<i>Cinclosoma marginatum</i>	Western quail-thrush	0.13	-	0.04	-	-	-	0.08	-
<i>Unknown</i>		0.66	0.41	0.49	0.60	0.31	0.41	0.64	0.37
No. of sites		47	47	47	31	31	31	78	78
No. of trap nights		758	1472	2230	498	955	1453	1256	2456

Table S2. Probability of detection estimates for feral cats, dingoes, and macropods derived from camera trap data at Matuwa Indigenous Protected Area

Cameras are placed either adjacent to (on-road) or approximately 125 m away from (off-road) minor vehicle tracks and baited with or without an audio lure. Estimates provided with 95% confidence intervals.

species	cameras on roads		cameras off roads	
	with lure	no lure	with lure	no lure
dingo	$6.40 \pm 1.6 *10^{-2}$	$5.49 \pm 0.98 *10^{-2}$	$1.02 \pm 1.1 *10^{-3}$	$8.66 \pm 8.8 *10^{-4}$
feral cat	$8.16 \pm 2.1 *10^{-2}$	$5.03 \pm 0.96 *10^{-2}$	$4.08 \pm 2.6 *10^{-3}$	$2.43 \pm 1.5 *10^{-3}$
macropodid	$1.51 \pm 0.2 *10^{-1}$	$1.18 \pm 0.11 *10^{-1}$	$1.58 \pm 0.22 *10^{-1}$	$1.23 \pm 0.14 *10^{-1}$

Table S3. Occupancy estimates for feral cats, dingoes, and macropods as derived from camera trap data at Matuwa Indigenous Protected Area

Cameras are placed either in grassland or woodland habitats and deployed before and after an annual poison bait application targeted to reduce feral cats. Estimates provided with 95% confidence intervals.

species	grassland		woodland	
	pre-bait	post-bait	pre-bait	post-bait
dingo	0.602 ± 0.203	0.133 ± 0.089	0.955 ± 0.048	0.683 ± 0.127
feral cat	0.654 ± 0.167	0.591 ± 0.142	0.596 ± 0.148	0.529 ± 0.119
macropodid	0.119 ± 0.046	0.233 ± 0.068	0.561 ± 0.076	0.742 ± 0.060

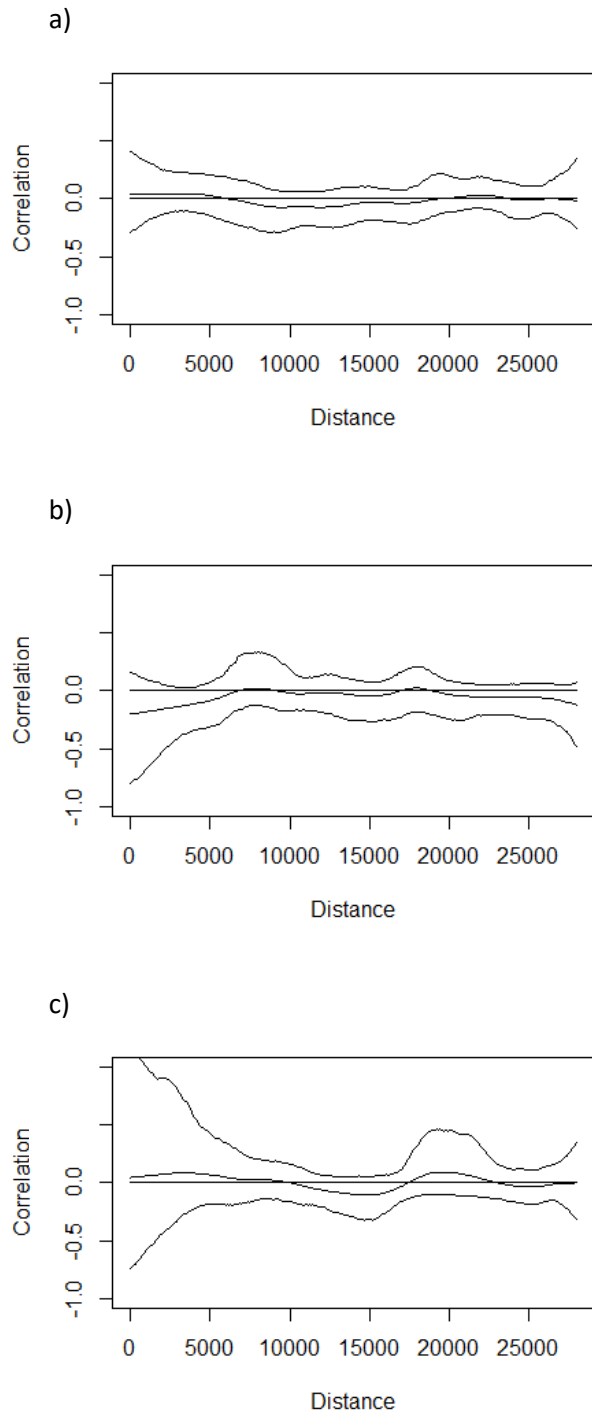


Figure S1. Spline correlograms constructed from the residuals of GLM for a) dingo, b) feral cat, and c) macropodids with maximum observed distance set to 28,000 m or half the maximum distance of the furthest spaced camera pair. Plots show no skewing above or below the zero axes therefore we conclude that spatial autocorrelation is not present in the data and the camera spacing is sufficient.