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Urban landscape attributes affect occupancy patterns of the San Joaquin kit fox during an epizootic

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Supplementary Material

1. **Candidate model classifications in a priori covariate categories and their resulting model selection results from occupancy modeling of San Joaquin kit foxes (*Vulpes macrotis mutica*) from 2015–2019 in Bakersfield, California, USA**

Category	Model name	*K*	AICc	ΔAICc	*w*	-2*LogLike
High density of paved roads	ψ(road+camp),γ(),ε(mange),p()	7	2634.38	0.00	0.0698	2619.29
Individual	ψ(road),γ(),ε(mange),p()	6	2634.68	0.30	0.0601	2621.87
Individual	ψ(camp),γ(),ε(mange),p()	6	2634.88	0.50	0.0543	2622.07
Vegetative	psi(KRC+camp),gamma(mange),eps(),p()	7	2635.12	0.74	0.0482	2620.03
High density of paved roads	ψ(road+LMDR),γ(),ε(mange),p()	7	2635.44	1.06	0.0411	2620.35
Vegetative	psi(water+camp),gamma(mange),eps(),p()	7	2635.76	1.38	0.0350	2620.67
Null	psi(),gamma(),eps(),p()	4	2635.85	1.47	0.0335	2627.47
Individual	psi(PGS),gamma(mange),eps(),p()	6	2636.19	1.81	0.0282	2623.38
Vegetative	psi(tree+camp),gamma(mange),eps(),p()	7	2636.33	1.95	0.0263	2621.24
Individual	psi(KRC),gamma(mange),eps(),p()	6	2636.38	2.00	0.0257	2623.57
Individual	psi(water),gamma(mange),eps(),p()	6	2636.41	2.03	0.0253	2623.60
High density of paved roads	psi(roads+com),gamma(mange),eps(),p()	7	2636.47	2.09	0.0245	2621.38
High density of paved roads	psi(camp+MSR),gamma(mange),eps(),p()	7	2636.51	2.13	0.0241	2621.42
High density of paved roads	psi(com+camp),gamma(mange),eps(),p()	7	2636.57	2.19	0.0233	2621.48
Individual	psi(tree),gamma(mange),eps(),p()	6	2636.57	2.19	0.0233	2623.76
Vegetative	psi(ag+camp),gamma(mange),eps(),p()	7	2636.67	2.29	0.0222	2621.58
Individual	psi(com),gamma(mange),eps(),p()	6	2636.86	2.48	0.0202	2624.05
Individual	psi(LMDR),gamma(mange),eps(),p()	6	2636.86	2.48	0.0202	2624.05

Vegetative	psi(camp+OC),gamma(mange),eps(),p()	7	2637.08	2.70	0.0181	2621.99
High density of paved roads	psi(HDR+camp),gamma(mange),eps(),p()	7	2637.12	2.74	0.0177	2622.03
Individual	psi(MSR),gamma(mange),eps(),p()	6	2637.13	2.75	0.0176	2624.32
Vegetative	psi(KRC+PGS),gamma(mange),eps(),p()	7	2637.31	2.93	0.0161	2622.22
Vegetative	psi(tree+KRC),gamma(mange),eps(),p()	7	2637.34	2.96	0.0159	2622.25
Vegetative	psi(KRC+camp+OC),gamma(mange),eps(),p()	8	2637.42	3.04	0.0152	2620.01
Vegetative	psi(water+PGS),gamma(mange),eps(),p()	7	2637.50	3.12	0.0147	2622.41
Individual	psi(ind),gamma(mange),eps(),p()	6	2637.63	3.25	0.0137	2624.82
Individual	psi(ag),gamma(mange),eps(),p()	6	2637.67	3.29	0.0135	2624.86
Individual	psi(OC),gamma(mange),eps(),p()	6	2637.73	3.35	0.0131	2624.92
Individual	psi(OOS),gamma(mange),eps(),p()	6	2637.74	3.36	0.0130	2624.93
Vegetative	psi(tree+water+camp),gamma(mange),eps(),p()	8	2637.78	3.40	0.0127	2620.37
Heavily developed	psi(LMDR+com),gamma(mange),eps(),p()	7	2637.84	3.46	0.0124	2622.75
Individual	psi(HDR),gamma(mange),eps(),p()	6	2637.93	3.55	0.0118	2625.12
Individual	psi(UL),gamma(mange),eps(),p()	6	2637.97	3.59	0.0116	2625.16
Vegetative	psi(water+camp+OC),gamma(mange),eps(),p()	8	2638.02	3.64	0.0113	2620.61
Vegetative	psi(water+tree),gamma(mange),eps(),p()	7	2638.03	3.65	0.0113	2622.94
Vegetative	psi(ag+PGS),gamma(mange),eps(),p()	7	2638.13	3.75	0.0107	2623.04
Vegetative	psi(PGS+OC),gamma(mange),eps(),p()	7	2638.34	3.96	0.0096	2623.25
High density of paved roads	psi(LMDR+MSR),gamma(mange),eps(),p()	7	2638.36	3.98	0.0095	2623.27
Vegetative	psi(ag+KRC),gamma(mange),eps(),p()	7	2638.38	4.00	0.0094	2623.29
Vegetative	psi(water+OC),gamma(mange),eps(),p()	7	2638.47	4.09	0.0090	2623.38

Vegetative	psi(KRC+OC),gamma(mange),eps(),p()	7	2638.51	4.13	0.0089	2623.42
High density of paved roads	psi(com+MSR),gamma(mange),eps(),p()	7	2638.55	4.17	0.0087	2623.46
Vegetative	psi(tree+OC),gamma(mange),eps(),p()	7	2638.66	4.28	0.0082	2623.57
Vegetative	psi(ag+camp+OC),gamma(mange),eps(),p()	8	2638.89	4.51	0.0073	2621.48
Heavily developed	psi(LMDR+ind),gamma(mange),eps(),p()	7	2638.96	4.58	0.0071	2623.87
Heavily developed	psi(com+ind),gamma(mange),eps(),p()	7	2638.98	4.60	0.0070	2623.89
Vegetative	psi(tree+water+KRC),gamma(mange),eps(),p()	8	2639.09	4.71	0.0066	2621.68
Heavily developed	psi(HDR+LMDR),gamma(mange),eps(),p()	7	2639.10	4.72	0.0066	2624.01
High density of paved roads	psi(HDR+MSR),gamma(mange),eps(),p()	7	2639.32	4.94	0.0059	2624.23
Vegetative	psi(KRC+PGS+OC),gamma(mange),eps(),p()	8	2639.54	5.16	0.0053	2622.13
Vegetative	psi(ag+OC),gamma(mange),eps(),p()	7	2639.66	5.28	0.0050	2624.57
Vegetative	psi(water+PGS+OC),gamma(mange),eps(),p()	8	2639.69	5.31	0.0049	2622.28
Less developed	psi(OOS+OC),gamma(mange),eps(),p()	7	2639.80	5.42	0.0046	2624.71
Less developed	psi(UL+OC),gamma(mange),eps(),p()	7	2640.01	5.63	0.0042	2624.92
Less developed	psi(UL+OOS),gamma(mange),eps(),p()	7	2640.01	5.63	0.0042	2624.92
Vegetative	psi(water+tree+OC),gamma(mange),eps(),p()	8	2640.17	5.79	0.0039	2622.76
Vegetative	psi(ag+PGS+OC),gamma(mange),eps(),p()	8	2640.30	5.92	0.0036	2622.89
Vegetative	psi(ag+KRC+OC),gamma(mange),eps(),p()	8	2640.52	6.14	0.0032	2623.11
Less developed	psi(UL+OOS+OC),gamma(mange),eps(),p()	8	2642.10	7.72	0.0015	2624.69