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Jesse S. Lewis, Kenneth A. Logan, Mat W. Alldredge, Larissa L. Bailey, Sue VandeWoude, and Kevin R. Crooks. 2015. The effects of urbanization on population density, occupancy, and detection probability of wild felids. *Ecological Applications* 25:18801895.

Appendix B. Results of mark-resight models (Tables B1 – B12) and occupancy models (Tables B13 – B16) for bobcats and pumas on the Western Slope and Front Range, Colorado, USA.

TABLE B1. Mark-resight population size models and covariate estimates for bobcats on the Western Slope (WS), CO, exurban grid.

							Covariates[a]							
							α				σ			
							TSOG		Weight		TSOG		Weight	
Model #	Model[a, b]	K	AICc	ΔAICc	w_i	Deviance	β	se	β	se	β	se	β	se
15	α(TSOG + Weight) σ(= 0)	4	56.87	0.00	0.60	43.16	2.56	0.52	0.22	0.09	-	-	-	-
10	α(TSOG) σ(= 0)	3	58.10	1.23	0.33	49.10	2.29	0.52	-	-	-	-	-	-
6	α(TSOG) σ(.)	4	62.26	5.39	0.04	48.55	2.26	0.56	-	-	-	-	-	-
11	α(TSOG + Weight) σ(.)	5	63.16	6.29	0.03	43.16	2.56	0.52	0.22	0.09	-	-	-	-
7	α(TSOG) σ(TSOG)	5	67.09	10.22	0.00	47.09	2.06	0.60	-	-	206.70	0.00	-	-
9	α(TSOG) σ(Weight)	5	67.90	11.02	0.00	47.90	2.16	0.60	-	-	-	-	0.38	0.45
1	α(.) σ(.)	3	69.70	12.83	0.00	60.70	-	-	-	-	-	-	-	-
2	α(.) σ(TSOG)	4	71.10	14.22	0.00	57.38	-	-	-	-	6.76	27.82	-	-
12	α(TSOG + Weight) σ(TSOG)	6	71.96	15.09	0.00	43.16	2.56	0.52	0.22	0.09	7.80	3743.43	-	-
14	α(TSOG + Weight) σ(Weight)	6	71.96	15.09	0.00	43.16	2.56	0.52	0.22	0.09	-	-	0.05	505.50
4	α(.) σ(Weight)	4	72.95	16.08	0.00	59.24	-	-	-	-	-	-	0.20	0.17
16	α(Weight) σ(.)	4	74.36	17.48	0.00	60.64	-	-	0.04	0.14	-	-	-	-
8	α(TSOG) σ(TSOG + Weight)	6	75.89	19.02	0.00	47.09	2.06	0.60	-	-	93.71	0.00	93.45	0.00
3	α(.) σ(TSOG + Weight)	5	76.03	19.16	0.00	56.03	-	-	-	-	3.27	3.67	0.28	0.32
5	α(.) σ(= 0)	2	78.87	21.99	0.00	73.53	-	-	-	-	-	-	-	-
17	α(Weight) σ(TSOG)	5	78.90	22.03	0.00	58.90	-	-	-0.03	0.11	24.59	0.00	-	-
19	α(Weight) σ(Weight)	5	79.22	22.35	0.00	59.22	-	-	0.03	0.14	-	-	0.19	0.16
20	α(Weight) σ(= 0)	3	81.46	24.59	0.00	72.46	-	-	0.08	0.08	-	-	-	-
18	α(Weight) σ(TSOG + Weight)	6	84.57	27.70	0.00	55.77	-	-	-0.07	0.14	2.64	3.01	0.36	0.37
13	α(TSOG + Weight) σ(TSOG + Weight)	7	85.16	28.29	0.00	43.16	2.56	0.52	0.22	0.09	25.97	0.00	1.84	0.00
						Model Averaged	2.45	0.52	0.14	0.07	na	na	na	na
						Variable Importance Values	1.00		0.63		0.00		0.00	

[a] α = alpha (intercept for mean resighting rate); σ = sigma (individual heterogeneity level); Weight = weight (kg) of animal; TSOG = time spent on grid for individual animal based on telemetry locations. See text for futher description of parameters.

[b](.) denotes intercept only model; (= 0) indicates that parameter was fixed to zero.

TABLE B2. Mark-resight population size models and covariate estimates for bobcats on the Western Slope (WS), CO, wildland grid.

							Covariates[a]							
							α				σ			
							TSOG		Weight		TSOG		Weight	
Model #	Model[a, b]	K	AICc	ΔAICc	w_i	Deviance	β	se	β	se	β	se	β	se
5	α(.) σ(= 0)	2	55.15	0.00	0.42	49.65	-	-	-	-	-	-	-	-
10	α(TSOG) σ(= 0)	3	56.41	1.26	0.22	46.98	1.16	0.73	-	-	-	-	-	-
1	α(.) σ(.)	3	56.72	1.57	0.19	47.29	-	-	-	-	-	-	-	-
20	α(Weight) σ(= 0)	3	58.97	3.82	0.06	49.54	-	-	0.07	0.20	-	-	-	-
6	α(TSOG) σ(.)	4	60.46	5.31	0.03	45.80	1.12	0.89	-	-	-	-	-	-
2	α(.) σ(TSOG)	4	61.24	6.09	0.02	46.58	-	-	-	-	6.45	13.19	-	-
4	α(.) σ(Weight)	4	61.40	6.24	0.02	46.73	-	-	-	-	-	-	-0.31	0.40
15	α(TSOG + Weight) σ(= 0)	4	61.50	6.35	0.02	46.83	1.18	0.74	0.08	0.20	-	-	-	-
16	α(Weight) σ(.)	4	61.82	6.66	0.01	47.15	-	-	0.11	0.30	-	-	-	-
9	α(TSOG) σ(Weight)	5	67.04	11.89	0.00	45.04	1.19	0.88	-	-	-	-	-0.47	0.58
11	α(TSOG + Weight) σ(.)	5	67.66	12.51	0.00	45.66	1.13	0.90	0.10	0.27	-	-	-	-
7	α(TSOG) σ(TSOG)	5	67.78	12.63	0.00	45.78	1.21	1.17	-	-	-0.31	2.43	-	-
3	α(.) σ(TSOG + Weight)	5	67.94	12.79	0.00	45.94	-	-	-	-	37.13	30.96	-1.74	1.54
17	α(Weight) σ(TSOG)	5	68.35	13.20	0.00	46.35	-	-	0.12	0.25	7.24	17.62	-	-
19	α(Weight) σ(Weight)	5	68.63	13.48	0.00	46.63	-	-	0.10	0.30	-	-	-0.29	0.39
14	α(TSOG + Weight) σ(Weight)	6	78.00	22.85	0.00	45.00	1.19	0.89	0.06	0.29	-	-	-0.43	0.57
12	α(TSOG + Weight) σ(TSOG)	6	78.63	23.48	0.00	45.63	1.29	1.26	0.11	0.27	-0.45	2.54	-	-
18	α(Weight) σ(TSOG + Weight)	6	78.77	23.62	0.00	45.77	-	-	0.10	0.25	38.29	29.37	-1.76	1.51
8	α(TSOG) σ(TSOG + Weight)	6	78.78	23.63	0.00	45.78	1.21	1.17	-	-	-0.16	1690.68	-0.15	1690.68
13	α(TSOG + Weight) σ(TSOG + Weight)	7	96.33	41.18	0.00	45.00	1.21	1.07	0.06	0.30	-0.06	1.78	-0.43	0.57
						Model Averaged	0.32	0.41	0.01	0.07	na	na	na	na
						Variable Importance Values	0.27		0.10		0.02		0.02	

[a] α = alpha (intercept for mean resighting rate); σ = sigma (individual heterogeneity level); Weight = weight (kg) of animal; TSOG = time spent on grid for individual animal based on telemetry locations. See text for futher description of parameters.

[b](.) denotes intercept only model; (= 0) indicates that parameter was fixed to zero.

TABLE B3. Mark-resight population size models and covariate estimates for bobcats on the Western Slope (WS), CO, exurban grid and wildland grid combined.

							Covariates[a]							
							α				σ			
							TSOG		Weight		TSOG		Weight	
Model #	Model[a, b]	K	AICc	ΔAICc	w_i	Deviance	β	se	β	se	β	se	β	se
10	α(TSOG + Weight) σ(= 0)	4	100.65	0.00	0.37	90.15	2.01	0.45	0.21	0.08	-	-	-	-
11	α(TSOG) σ(.)	4	102.03	1.38	0.18	91.53	1.63	0.55	-	-	-	-	-	-
6	α(TSOG + Weight) σ(.)	5	102.93	2.28	0.12	88.93	1.85	0.52	0.18	0.10	-	-	-	-
15	α(TSOG) σ(= 0)	3	104.03	3.38	0.07	96.62	1.75	0.43	-	-	-	-	-	-
12	α(TSOG) σ(TSOG)	5	104.32	3.67	0.06	90.32	1.28	0.59	-	-	3.31	4.70	-	-
14	α(TSOG) σ(Weight)	5	104.40	3.75	0.06	90.40	1.50	0.53	-	-	-	-	0.28	0.28
2	α(.) σ(TSOG)	4	104.80	4.15	0.05	94.30	-	-	-	-	4.55	4.17	-	-
1	α(.) σ(.)	3	106.46	5.81	0.02	99.05	-	-	-	-	-	-	-	-
7	α(TSOG + Weight) σ(TSOG)	6	106.75	6.10	0.02	88.75	1.61	0.65	0.14	0.11	2.33	5.92	-	-
9	α(TSOG + Weight) σ(Weight)	6	106.81	6.16	0.02	88.81	1.76	0.58	0.16	0.12	-	-	0.14	0.41
3	α(.) σ(TSOG + Weight)	5	107.28	6.63	0.01	93.28	-	-	-	-	3.00	2.42	0.16	0.18
17	α(Weight) σ(TSOG)	5	108.19	7.54	0.01	94.19	-	-	0.04	0.10	-	-	4.08	3.36
4	α(.) σ(Weight)	4	108.28	7.63	0.01	97.78	-	-	-	-	-	-	0.17	0.16
13	α(TSOG) σ(TSOG + Weight)	6	108.32	7.67	0.01	90.32	1.28	0.59	-	-	0.21	0.00	3.10	0.00
16	α(Weight) σ(.)	4	109.26	8.61	0.00	98.76	-	-	0.07	0.12	-	-	-	-
8	α(TSOG + Weight) σ(TSOG + Weight)	7	110.40	9.75	0.00	87.79	1.47	0.58	0.11	0.11	3.23	4.94	0.44	0.72
18	α(Weight) σ(TSOG + Weight)	6	111.20	10.55	0.00	93.20	-	-	0.00	0.11	3.40	2.95	0.18	0.20
19	α(Weight) σ(Weight)	5	111.69	11.04	0.00	97.69	-	-	0.04	0.14	-	-	0.17	0.16
5	α(.) σ(= 0)	2	113.23	12.58	0.00	108.57	-	-	-	-	-	-	-	-
20	α(Weight) σ(= 0)	3	120.62	19.97	0.00	113.21	-	-	0.10	0.07	-	-	-	-
						Model Averaged	1.60	0.48	0.10	0.07	0.50	1.71	0.08	0.34
						Variable Importance Values	0.90		0.54		0.15		0.12	

[a] α = alpha (intercept for mean resighting rate); σ = sigma (individual heterogeneity level); Weight = weight (kg) of animal; TSOG = time spent on grid for individual animal based on telemetry locations. See text for futher description of parameters.

[b](.) denotes intercept only model; (= 0) indicates that parameter was fixed to zero.

TABLE B4. Mark-resight population size models and covariate estimates for pumas on the Western Slope (WS), CO, exurban grid.

							Covariates[a]							
							α				σ			
							TSOG		Weight		TSOG		Weight	
Model #	Model[a, b]	K	AICc	ΔAICc	w_i	Deviance	β	se	β	se	β	se	β	se
2	α(.) σ(= 0)	2	36.29	0.00	1.00	26.29	-	-	-	-	-	-	-	-
4	α(Weight) σ(= 0)	3	52.61	16.33	0.00	22.61	-	-	0.04	0.02	-	-	-	-
3	α(TSOG) σ(= 0)	3	55.39	19.10	0.00	25.39	-8.42	9.03	-	-	-	-	-	-
1	α(.) σ(.)	3	56.01	19.72	0.00	26.01	-	-	-	-	-	-	-	-
						Model Averaged	0.00	0.00	0.00	0.00	na	na	na	na
						Variable Importance Values	0.00		0.00		0.00		0.00	

[a] α = alpha (intercept for mean resighting rate); σ = sigma (individual heterogeneity level); Weight = weight (kg) of animal; TSOG = time spent on grid for individual animal based on telemetry locations. See text for futher description of parameters.

[b](.) denotes intercept only model; (= 0) indicates that parameter was fixed to zero.

TABLE B5. Mark-resight population size models and covariate estimates for pumas on the Western Slope (WS), CO, wildland grid.

							Covariates[a]							
							α				σ			
							TSOG		Weight		TSOG		Weight	
Model #	Model[a, b]	K	AICc	ΔAICc	w_i	Deviance	β	se	β	se	β	se	β	se
15	α(Weight) σ(= 0)	3	51.02	0.00	0.47	37.02	-	-	0.06	0.02	-	-	-	-
1	α(.) σ(.)	3	51.12	0.11	0.44	37.12	-	-	-	-	-	-	-	-
7	α(TSOG + Weight) σ(= 0)	4	54.82	3.81	0.07	26.82	2.72	0.87	0.06	0.01	-	-	-	-
5	α(.) σ(= 0)	2	59.92	8.90	0.01	52.92	-	-	-	-	-	-	-	-
4	α(.) σ(Weight)	4	60.20	9.18	0.00	32.20	-	-	-	-	-	-	0.06	0.05
11	α(TSOG) σ(= 0)	3	61.81	10.79	0.00	47.81	1.56	0.68	-	-	-	-	-	-
12	α(Weight) σ(.)	4	62.00	10.98	0.00	34.00	-	-	0.05	0.02	-	-	-	-
2	α(.) σ(TSOG)	4	62.46	11.44	0.00	34.46	-	-	-	-	4.10	3.57	-	-
8	α(TSOG) σ(.)	4	63.70	12.68	0.00	35.70	1.68	1.47	-	-	-	-	-	-
6	α(TSOG + Weight) σ(.)	5	96.82	45.81	0.00	26.82	2.72	0.87	0.06	0.01	-	-	-	-
3	α(.) σ(TSOG + Weight)	5	101.26	50.25	0.00	31.26	-	-	-	-	2.60	3.72	0.06	0.05
10	α(TSOG) σ(Weight)	5	101.27	50.26	0.00	31.27	0.77	1.05	-	-	-	-	0.08	0.07
14	α(Weight) σ(Weight)	5	101.80	50.79	0.00	31.80	-	-	0.01	0.03	-	-	0.07	0.07
13	α(Weight) σ(TSOG)	5	103.78	52.76	0.00	33.78	-	-	0.04	0.02	1.46	2.56	-	-
9	α(TSOG) σ(TSOG)	5	104.00	52.98	0.00	34.00	0.71	1.06	-	-	4.02	5.90	-	-
						Model Averaged	0.19	0.35	0.03	0.01	0.00	0.00	0.00	0.00
						Variable Importance Values	0.07		0.54		0.00		0.00	

[a] α = alpha (intercept for mean resighting rate); σ = sigma (individual heterogeneity level); Weight = weight (kg) of animal; TSOG = time spent on grid for individual animal based on telemetry locations. See text for futher description of parameters.

[b](.) denotes intercept only model; (= 0) indicates that parameter was fixed to zero.

TABLE B6. Mark-resight population size models and covariate estimates for pumas on the Western Slope (WS), CO, exurban grid and wildland grid combined.

							Covariates[a]							
							α				σ			
							TSOG		Weight		TSOG		Weight	
Model #	Model[a, b]	K	AICc	ΔAICc	w_i	Deviance	β	se	β	se	β	se	β	se
10	α(TSOG + Weight) σ(= 0)	4	60.33	0.00	0.81	44.33	2.48	0.62	0.06	0.01	-	-	-	-
1	α(.) σ(.)	3	65.37	5.04	0.07	55.37	-	-	-	-	-	-	-	-
4	α(.) σ(Weight)	4	65.76	5.43	0.05	49.76	-	-	-	-	-	-	0.06	0.05
16	α(Weight) σ(.)	4	67.63	7.29	0.02	51.63	-	-	0.05	0.02	-	-	-	-
2	α(.) σ(TSOG)	4	68.31	7.97	0.02	52.31	-	-	-	-	2.91	1.91	-	-
11	α(TSOG) σ(.)	4	69.04	8.71	0.01	53.04	2.23	1.08	-	-	-	-	-	-
6	α(TSOG + Weight) σ(.)	5	69.33	9.00	0.01	44.33	2.48	0.62	0.06	0.01	-	-	-	-
20	α(Weight) σ(= 0)	3	69.52	9.18	0.01	59.52	-	-	0.07	0.01	-	-	-	-
3	α(.) σ(TSOG + Weight)	5	74.31	13.98	0.00	49.31	-	-	-	-	1.88	2.20	0.04	0.04
14	α(TSOG) σ(Weight)	5	74.38	14.04	0.00	49.38	0.94	0.99	-	-	-	-	0.05	0.04
19	α(Weight) σ(Weight)	5	74.42	14.09	0.00	49.42	-	-	0.02	0.03	-	-	0.05	0.06
17	α(Weight) σ(TSOG)	5	75.39	15.06	0.00	50.39	-	-	0.04	0.02	1.89	1.55	-	-
12	α(TSOG) σ(TSOG)	5	76.44	16.11	0.00	51.44	3.07	0.73	-	-	2.67	1.77	-	-
7	α(TSOG + Weight) σ(TSOG)	6	83.51	23.18	0.00	43.51	2.53	0.74	0.06	0.01	-13.58	25.52	-	-
15	α(TSOG) σ(= 0)	3	83.78	23.45	0.00	73.78	2.37	0.52	-	-	-	-	-	-
9	α(TSOG + Weight) σ(Weight)	6	84.33	24.00	0.00	44.33	2.48	0.62	0.06	0.01	-	-	-0.17	0.00
18	α(Weight) σ(TSOG + Weight)	6	88.63	28.30	0.00	48.63	-	-	0.02	0.02	2.05	2.66	0.04	0.04
13	α(TSOG) σ(TSOG + Weight)	6	91.87	31.54	0.00	51.87	0.45	0.88	-	-	6.04	0.00	-1.35	0.00
5	α(.) σ(= 0)	2	98.37	38.04	0.00	92.66	-	-	-	-	-	-	-	-
8	α(TSOG + Weight) σ(TSOG + Weight)	7	112.81	52.47	0.00	42.81	2.71	0.69	0.06	0.01	-15.84	68.05	-0.12	0.26
						Model Averaged	2.07	0.58	0.05	0.01	0.05	0.28	0.00	0.01
						Variable Importance Values	0.83		0.85		0.02		0.06	

[a] α = alpha (intercept for mean resighting rate); σ = sigma (individual heterogeneity level); Weight = weight (kg) of animal; TSOG = time spent on grid for individual animal based on telemetry locations. See text for futher description of parameters.

[b](.) denotes intercept only model; (= 0) indicates that parameter was fixed to zero.

TABLE B7. Mark-resight population size models and covariate estimates for bobcats on the Front Range (FR), CO, wildland-urban interface grid.

							Covariates[a]							
							α				σ			
							TSOG		Weight		TSOG		Weight	
Model #	Model[a, b]	K	AICc	ΔAICc	w_i	Deviance	β	se	β	se	β	se	β	se
1	α(.) σ(.)	3	55.13	0.00	0.84	44.33	-	-	-	-	-	-	-	-
6	α(TSOG) σ(.)	4	60.26	5.13	0.06	42.26	2.46	1.58	-	-	-	-	-	-
16	α(Weight) σ(.)	4	61.99	6.86	0.03	43.99	-	-	-0.30	0.47	-	-	-	-
2	α(.) σ(TSOG)	4	62.24	7.11	0.02	44.24	-	-	-	-	0.26	0.84	-	-
4	α(.) σ(Weight)	4	62.29	7.16	0.02	44.29	-	-	-	-	-	-	0.05	0.23
10	α(TSOG) σ(= 0)	3	63.53	8.40	0.01	52.73	1.97	0.82	-	-	-	-	-	-
5	α(.) σ(= 0)	2	64.90	9.77	0.01	58.90	-	-	-	-	-	-	-	-
20	α(Weight) σ(= 0)	3	68.96	13.84	0.00	58.16	-	-	-0.18	0.21	-	-	-	-
15	α(TSOG + Weight) σ(= 0)	4	70.34	15.21	0.00	52.34	1.89	0.81	-0.14	0.22	-	-	-	-
9	α(TSOG) σ(Weight)	5	71.96	16.83	0.00	41.96	2.54	1.56	-	-	-	-	0.18	0.31
11	α(TSOG + Weight) σ(.)	5	72.00	16.88	0.00	42.00	2.34	1.57	-0.24	0.44	-	-	-	-
7	α(TSOG) σ(TSOG)	5	72.25	17.12	0.00	42.25	2.49	1.62	-	-	-0.12	1.38	-	-
19	α(Weight) σ(Weight)	5	73.59	18.46	0.00	43.59	-	-	-0.41	0.47	-	-	0.16	0.23
17	α(Weight) σ(TSOG)	5	73.97	18.84	0.00	43.97	-	-	-0.24	0.51	0.15	0.91	-	-
3	α(.) σ(TSOG + Weight)	5	74.17	19.04	0.00	44.17	-	-	-	-	0.36	1.09	0.07	0.29
14	α(TSOG + Weight) σ(Weight)	6	95.31	40.18	0.00	41.31	2.55	1.62	-0.34	0.43	-	-	0.28	0.28
12	α(TSOG + Weight) σ(TSOG)	6	96.00	40.87	0.00	42.00	2.38	1.60	-0.22	0.44	-0.10	1.35	-	-
8	α(TSOG) σ(TSOG + Weight)	6	96.25	41.12	0.00	42.25	2.49	1.62	-	-	0.94	433.23	-1.06	433.23
18	α(Weight) σ(TSOG + Weight)	6	97.52	42.39	0.00	43.52	-	-	-0.38	0.47	0.29	1.17	0.17	0.28
13	α(TSOG + Weight) σ(TSOG + Weight)	7	167.25	112.12	0.00	41.25	2.50	1.59	-0.33	0.43	0.30	1.72	0.30	0.40
						Model Averaged	0.19	0.47	-0.01	0.08	0.01	0.13	0.00	0.04
						Variable Importance Values	0.08		0.03		0.02		0.02	

[a] α = alpha (intercept for mean resighting rate); σ = sigma (individual heterogeneity level); Weight = weight (kg) of animal;

TSOG = time spent on grid for individual animal based on telemetry locations. See text for futher description of parameters.

[b](.) denotes intercept only model; (= 0) indicates that parameter was fixed to zero.

TABLE B8. Mark-resight population size models and covariate estimates for bobcats on the Front Range (FR), CO, wildland grid.

							Covariates[a]							
							α				σ			
							TSOG		Weight		TSOG		Weight	
Model #	Model[a, b]	K	AICc	ΔAICc	w_i	Deviance	β	se	β	se	β	se	β	se
5	α(.) σ(= 0)	2	46.18	0.00	0.69	40.47	-	-	-	-	-	-	-	-
1	α(.) σ(.)	3	50.05	3.87	0.10	40.05	-	-	-	-	-	-	-	-
15	α(TSOG) σ(= 0)	3	50.07	3.89	0.10	40.07	0.47	0.74	-	-	-	-	-	-
20	α(Weight) σ(= 0)	3	50.46	4.28	0.08	40.46	-	-	0.01	0.13	-	-	-	-
4	α(.) σ(Weight)	4	55.35	9.17	0.01	39.35	-	-	-	-	-	-	-0.29	0.43
11	α(TSOG) σ(.)	4	55.73	9.54	0.01	39.73	0.48	0.84	-	-	-	-	-	-
2	α(.) σ(TSOG)	4	56.00	9.82	0.01	40.00	-	-	-	-	-0.47	2.40	-	-
16	α(Weight) σ(.)	4	56.03	9.85	0.01	40.03	-	-	0.02	0.15	-	-	-	-
10	α(TSOG + Weight) σ(= 0)	4	56.05	9.87	0.00	40.05	0.47	0.74	0.01	0.13	-	-	-	-
14	α(TSOG) σ(Weight)	5	63.51	17.33	0.00	38.51	0.77	0.84	-	-	-	-	-0.35	0.38
3	α(.) σ(TSOG + Weight)	5	63.81	17.63	0.00	38.81	-	-	-	-	-4.86	12.73	-1.48	3.95
19	α(Weight) σ(Weight)	5	63.90	17.71	0.00	38.90	-	-	0.12	0.22	-	-	-0.35	0.36
12	α(TSOG) σ(TSOG)	5	64.53	18.35	0.00	39.53	0.62	0.91	-	-	-0.94	2.18	-	-
6	α(TSOG + Weight) σ(.)	5	64.72	18.54	0.00	39.72	0.47	0.84	0.01	0.15	-	-	-	-
17	α(Weight) σ(TSOG)	5	64.94	18.76	0.00	39.94	-	-	0.04	0.17	-0.71	2.44	-	-
18	α(Weight) σ(TSOG + Weight)	6	77.36	31.18	0.00	37.36	-	-	0.22	0.24	-4.76	7.81	-1.50	2.47
9	α(TSOG + Weight) σ(Weight)	6	78.11	31.93	0.00	38.11	0.73	0.83	0.13	0.22	-	-	-0.38	0.31
7	α(TSOG + Weight) σ(TSOG)	6	79.45	33.27	0.00	39.45	0.63	0.92	0.04	0.16	-1.10	2.08	-	-
13	α(TSOG) σ(TSOG + Weight)	6	79.53	33.35	0.00	39.53	0.62	0.91	-	-	-8.89	0.00	7.94	0.00
8	α(TSOG + Weight) σ(TSOG + Weight)	7	106.43	60.25	0.00	36.43	0.96	0.89	0.19	0.24	-2.89	4.87	-0.81	1.33
						Model Averaged	0.05	0.25	0.00	0.04	0.00	0.22	0.00	0.05
						Variable Importance Values	0.11		0.09		0.01		0.01	

[a] α = alpha (intercept for mean resighting rate); σ = sigma (individual heterogeneity level); Weight = weight (kg) of animal;

TSOG = time spent on grid for individual animal based on telemetry locations. See text for futher description of parameters.

[b](.) denotes intercept only model; (= 0) indicates that parameter was fixed to zero.

TABLE B9. Mark-resight population size models and covariate estimates for bobcats on the Front Range (FR), CO, wildland-urban interface grid and wildland grid combined.

							Covariates[a]							
							α				σ			
							TSOG		Weight		TSOG		Weight	
Model #	Model[a, b]	K	AICc	ΔAICc	w_i	Deviance	β	se	β	se	β	se	β	se
1	α(.) σ(.)	3	84.83	0.00	0.43	76.98	-	-	-	-	-	-	-	-
11	α(TSOG) σ(.)	4	87.00	2.18	0.15	75.67	1.04	0.90	-	-	-	-	-	-
4	α(.) σ(Weight)	4	87.16	2.34	0.13	75.83	-	-	-	-	-	-	-0.18	0.17
16	α(Weight) σ(.)	4	88.24	3.41	0.08	76.90	-	-	-0.04	0.13	-	-	-	-
2	α(.) σ(TSOG)	4	88.31	3.48	0.08	76.98	-	-	-	-	0.07	1.19	-	-
14	α(TSOG) σ(Weight)	5	89.66	4.83	0.04	74.21	1.06	0.83	-	-	-	-	-0.21	0.18
6	α(TSOG + Weight) σ(.)	5	91.04	6.21	0.02	75.59	1.04	0.90	-0.04	0.13	-	-	-	-
12	α(TSOG) σ(TSOG)	5	91.05	6.22	0.02	75.59	1.12	0.95	-	-	-0.33	1.18	-	-
19	α(Weight) σ(Weight)	5	91.22	6.39	0.02	75.77	-	-	0.04	0.15	-	-	-0.19	0.18
3	α(.) σ(TSOG + Weight)	5	91.29	6.46	0.02	75.83	-	-	-	-	-0.01	1.19	-0.18	0.17
17	α(Weight) σ(TSOG)	5	92.35	7.52	0.01	76.90	-	-	-0.04	0.13	0.11	1.22	-	-
9	α(TSOG + Weight) σ(Weight)	6	94.56	9.73	0.00	74.16	1.05	0.82	0.03	0.14	-	-	-0.22	0.18
5	α(.) σ(= 0)	2	94.98	10.15	0.00	90.12	-	-	-	-	-	-	-	-
15	α(TSOG) σ(= 0)	3	95.12	10.29	0.00	87.27	0.95	0.57	-	-	-	-	-	-
7	α(TSOG + Weight) σ(TSOG)	6	95.92	11.09	0.00	75.52	1.11	0.95	-0.04	0.13	-0.32	1.21	-	-
13	α(TSOG) σ(TSOG + Weight)	6	95.99	11.16	0.00	75.59	1.12	0.95	-	-	2.02	284.44	-2.35	284.44
18	α(Weight) σ(TSOG + Weight)	6	96.17	11.34	0.00	75.77	-	-	0.04	0.15	-0.02	1.14	-0.19	0.18
20	α(Weight) σ(= 0)	3	97.10	12.28	0.00	89.26	-	-	-0.08	0.08	-	-	-	-
10	α(TSOG + Weight) σ(= 0)	4	97.84	13.01	0.00	86.50	0.94	0.58	-0.07	0.08	-	-	-	-
8	α(TSOG + Weight) σ(TSOG + Weight)	7	100.45	15.63	0.00	74.01	1.14	0.87	0.03	0.14	-0.45	1.07	-0.22	0.17
						Model Averaged	0.24	0.44	0.00	0.05	0.00	11.46	-0.04	11.45
						Variable Importance Values	0.23		0.13		0.13		0.21	

[a] α = alpha (intercept for mean resighting rate); σ = sigma (individual heterogeneity level); Weight = weight (kg) of animal; TSOG = time spent on grid for individual animal based on telemetry locations. See text for futher description of parameters.

[b](.) denotes intercept only model; (= 0) indicates that parameter was fixed to zero.

TABLE B10. Mark-resight population size models and covariate estimates for pumas on the Front Range (FR), CO, wildland-urban interface grid.

							Covariates[a]								
							α					σ			
							TSOG			Weight		TSOG		Weight	
Model #	Model[a, b]	K	AICc	ΔAICc	w_i	Deviance		β	se		β	se		β	se
2	α(.) σ(= 0)	2	41.15	0.00	1.00	31.15	-	-		-	-	-	-	-	-
4	α(Weight) σ(= 0)	3	55.71	14.55	0.00	25.71	-	-		0.16	0.08	-	-	-	-
1	α(.) σ(.)	3	59.35	18.20	0.00	29.35	-	-		-	-	-	-	-	-
3	α(TSOG) σ(= 0)	3	60.39	19.24	0.00	30.39		0.80	0.92	-	-	-	-	-	-
						Model Averaged		0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00
						Variable Importance Values		0.00			0.00			0.00		0.00	

[a] α = alpha (intercept for mean resighting rate); σ = sigma (individual heterogeneity level); Weight = weight (kg) of animal; TSOG = time spent on grid for individual animal based on telemetry locations. See text for futher description of parameters.

[b](.) denotes intercept only model; (= 0) indicates that parameter was fixed to zero.

TABLE B11. Mark-resight population size models and covariate estimates for pumas on the Front Range (FR), CO, wildland grid.

							Covariates[a]								
							α					σ			
							TSOG			Weight		TSOG		Weight	
Model #	Model[a, b]	K	AICc	ΔAICc	w_i	Deviance		β	se		β	se		β	se		β	se
2	α(.) σ(= 0)	2	36.19	0.00	0.97	28.19	-		-	-		-	-	-		-	-	
3	α(TSOG) σ(= 0)	3	44.84	8.65	0.01	26.84		0.91	0.80	-		-	-	-		-	-	
4	α(Weight) σ(= 0)	3	46.19	10.00	0.01	28.19	-		-		0.00	0.01	-	-		-	-	
1	α(.) σ(.)	3	46.19	10.00	0.01	28.19	-		-	-		-	-	-		-	-	
						Model Averaged		0.01	0.10		0.00	0.00		0.00	0.00		0.00	0.00
						Variable Importance Values		0.01			0.01			0.00			0.00	

[a] α = alpha (intercept for mean resighting rate); σ = sigma (individual heterogeneity level); Weight = weight (kg) of animal; TSOG = time spent on grid for individual animal based on telemetry locations. See text for futher description of parameters.

[b](.) denotes intercept only model; (= 0) indicates that parameter was fixed to zero.

TABLE B12. Mark-resight population size models and covariate estimates for pumas on the Front Range (FR), CO, wildland-urban interface grid and wildland grid combined.

							Covariates[a]							
							α				σ			
							TSOG		Weight		TSOG		Weight	
Model #	Model[a, b]	K	AICc	ΔAICc	w_i	Deviance	β	se	β	se	β	se	β	se
5	α(.) σ(= 0)	2	61.48	0.00	0.53	55.76	-	-	-	-	-	-	-	-
15	α(TSOG) σ(= 0)	3	63.62	2.15	0.18	53.62	0.86	0.60	-	-	-	-	-	-
1	α(.) σ(.)	3	64.02	2.54	0.15	54.02	-	-	-	-	-	-	-	-
20	α(Weight) σ(= 0)	3	65.74	4.26	0.06	55.74	-	-	0.00	0.01	-	-	-	-
2	α(.) σ(TSOG)	4	67.02	5.54	0.03	51.02	-	-	-	-	-3.10	1.87	-	-
11	α(TSOG) σ(.)	4	68.30	6.83	0.02	52.30	1.03	0.81	-	-	-	-	-	-
10	α(TSOG + Weight) σ(= 0)	4	69.62	8.15	0.01	53.62	0.86	0.60	0.00	0.01	-	-	-	-
4	α(.) σ(Weight)	4	69.81	8.33	0.01	53.81	-	-	-	-	-	-	-0.02	0.06
16	α(Weight) σ(.)	4	70.00	8.52	0.01	54.00	-	-	0.00	0.02	-	-	-	-
12	α(TSOG) σ(TSOG)	5	75.61	14.13	0.00	50.61	0.58	0.91	-	-	-2.72	1.92	-	-
3	α(.) σ(TSOG + Weight)	5	75.95	14.47	0.00	50.95	-	-	-	-	-2.97	1.87	-0.02	0.11
17	α(Weight) σ(TSOG)	5	76.01	14.54	0.00	51.01	-	-	0.00	0.01	-3.11	1.88	-	-
14	α(TSOG) σ(Weight)	5	77.20	15.72	0.00	52.20	1.03	0.83	-	-	-	-	-0.02	0.05
6	α(TSOG + Weight) σ(.)	5	77.30	15.83	0.00	52.30	1.03	0.82	0.00	0.02	-	-	-	-
19	α(Weight) σ(Weight)	5	78.78	17.30	0.00	53.78	-	-	0.00	0.01	-	-	-0.02	0.06
7	α(TSOG + Weight) σ(TSOG)	6	90.60	29.13	0.00	50.60	0.58	0.91	0.00	0.01	-2.73	1.93	-	-
13	α(TSOG) σ(TSOG + Weight)	6	90.61	29.13	0.00	50.61	0.58	0.91	-	-	-0.62	0.00	-2.10	0.00
18	α(Weight) σ(TSOG + Weight)	6	90.94	29.47	0.00	50.94	-	-	0.00	0.01	-2.99	1.88	-0.02	0.11
9	α(TSOG + Weight) σ(Weight)	6	92.19	30.72	0.00	52.19	1.03	0.84	0.00	0.01	-	-	-0.02	0.05
8	α(TSOG + Weight) σ(TSOG + Weight)	7	121.05	59.57	0.00	51.05	0.29	0.61	0.00	0.01	-3.08	1.07	-0.11	0.00
						Model Averaged	0.18	0.30	0.00	0.00	-0.11	0.39	0.00	0.01
						Variable Importance Values	0.21		0.08		0.03		0.01	

[a] α = alpha (intercept for mean resighting rate); σ = sigma (individual heterogeneity level); Weight = weight (kg) of animal; TSOG = time spent on grid for individual animal based on telemetry locations. See text for futher description of parameters.

[b](.) denotes intercept only model; (= 0) indicates that parameter was fixed to zero.

TABLE B13. Occupancy models and covariate estimates for bobcats on the Western Slope (WS).

							Covariates[a]							
							Ψ				p			
							Grid		HumDev		Grid		HumDev	
Model #	Model[a, b]	K	AICc	ΔAICc	w_i	Deviance	β	se	β	se	β	se	β	se
3	Ψ(.) p(Grid + HumDev)	4	273.53	0.00	0.41	264.39	-	-	-	-	-0.89	0.30	-0.37	0.17
11	Ψ(Grid) p(Grid + HumDev)	5	275.42	1.89	0.16	263.65	-22.90	0.00	-	-	-0.78	0.32	-0.38	0.17
15	Ψ(HumDev) p(Grid + HumDev)	5	276.15	2.62	0.11	264.39	-	-	1.77	933.01	-0.89	0.30	-0.37	0.17
2	Ψ(.) p(Grid)	3	276.47	2.94	0.10	65.51	-	-	-	-	-0.77	0.29	-	-
7	Ψ(Grid + HumDev) p(Grid + HumDev)	6	278.07	4.54	0.04	263.53	-29.21	0.00	3.57	822.83	-0.78	0.32	-0.38	0.17
10	Ψ(Grid) p(Grid)	4	278.48	4.95	0.03	65.04	-18.35	0.00	-	-	-0.68	0.31	-	-
4	Ψ(.) p(HumDev)	3	278.85	5.31	0.03	272.18	-	-	-	-	-	-	-0.31	0.16
14	Ψ(HumDev) p(Grid)	4	278.95	5.42	0.03	269.81	-	-	2.36	0.00	-0.77	0.29	-	-
12	Ψ(Grid) p(HumDev)	4	279.10	5.57	0.03	269.96	-16.76	0.00	-	-	-	-	-0.32	0.16
1	Ψ(.) p(.)	2	280.60	7.07	0.01	39.08	-	-	-	-	-	-	-	-
16	Ψ(HumDev) p(HumDev)	4	280.77	7.23	0.01	271.62	-	-	95.07	0.00	-	-	-0.31	0.16
9	Ψ(Grid) p(.)	3	280.96	7.43	0.01	70.00	-19.62	0.00	-	-	-	-	-	-
6	Ψ(Grid + HumDev) p(Grid)	5	281.00	7.47	0.01	269.23	-31.16	0.00	3.64	1473.96	-0.68	0.31	-	-
8	Ψ(Grid + HumDev) p(HumDev)	5	281.54	8.01	0.01	269.77	-26.00	0.00	3.50	531.82	-	-	-0.32	0.16
13	Ψ(HumDev) p(.)	3	282.47	8.94	0.00	275.81	-	-	92.03	0.00	-	-	-	-
5	Ψ(Grid + HumDev) p(.)	4	283.27	9.73	0.00	274.12	-28.72	0.00	3.94	1414.32	-	-	-	-
						Model Averaged	na	na	na	na	-0.75	0.29	-0.29	0.15
						Variable Importance Values	0.30		0.21		0.90		0.79	

[a] Ψ = occupancy (proportion of the landscape occupied by the species), p = detection probability (the probability of detecting a species given that it was present at a site); Effort = time varying survey effort covariate; Grid = covariate comparing urban (=0) and wildland (=1) grids; HumDev = kernel density human development covariate.

[b] (.) denotes intercept only model.

TABLE B14. Occupancy models and covariate estimates for pumas on the Western Slope (WS).

							Covariates[a]							
							Ψ				p			
							Grid		HumDev		Grid		HumDev	
Model #	Model[a,b]	K	AICc	ΔAICc	w_i	Deviance	β	se	β	se	β	se	β	se
4	Ψ(.) p(HumDev)	3	213.70	0.00	0.24	207.03	-	-	-	-	-	-	-0.82	0.45
13	Ψ(HumDev) p(.)	3	215.17	1.47	0.12	208.50	-	-	-0.70	0.53	-	-	-	-
3	Ψ(.) p(Grid + HumDev)	4	215.49	1.79	0.10	206.35	-	-	-	-	0.34	0.42	-0.77	0.44
1	Ψ(.) p(.)	2	215.66	1.96	0.09	33.01	-	-	-	-	-	-	-	-
12	Ψ(Grid) p(HumDev)	4	216.14	2.44	0.07	207.00	0.14	0.74	-	-	-	-	-0.82	0.45
16	Ψ(HumDev) p(HumDev)	4	216.14	2.44	0.07	207.00	-	-	-0.25	1.12	-	-	-0.73	0.64
14	Ψ(HumDev) p(Grid)	4	216.26	2.56	0.07	207.11	-	-	-0.69	0.52	0.48	0.41	-	-
2	Ψ(.) p(Grid)	3	216.52	2.82	0.06	45.79	-	-	-	-	0.50	0.41	-	-
5	Ψ(Grid + HumDev) p(.)	4	217.64	3.94	0.03	208.50	0.05	0.73	-0.69	0.53	-	-	-	-
9	Ψ(Grid) p(.)	3	217.90	4.20	0.03	47.17	0.22	0.69	-	-	-	-	-	-
15	Ψ(HumDev) p(Grid + HumDev)	5	218.04	4.34	0.03	206.28	-	-	-0.36	1.02	0.36	0.42	-0.61	0.71
11	Ψ(Grid) p(Grid + HumDev)	5	218.11	4.41	0.03	206.35	0.02	0.77	-	-	0.34	0.43	-0.77	0.44
8	Ψ(Grid + HumDev) p(HumDev)	5	218.74	5.04	0.02	206.98	0.11	0.77	-0.20	1.29	-	-	-0.75	0.67
6	Ψ(Grid + HumDev) p(Grid)	5	218.85	5.14	0.02	207.08	-0.14	0.78	-0.71	0.54	0.50	0.42	-	-
10	Ψ(Grid) p(Grid)	4	218.99	5.29	0.02	45.79	0.06	0.72	-	-	0.49	0.42	-	-
7	Ψ(Grid + HumDev) p(Grid + HumDev)	6	220.82	7.12	0.01	206.27	-0.06	0.79	-0.38	1.02	0.37	0.44	-0.60	0.72
						Model Averaged	0.02	0.35	-0.20	0.48	0.14	0.24	-0.44	0.38
						Variable Importance Values	0.22		0.36		0.32		0.57	

[a] Ψ = occupancy (proportion of the landscape occupied by the species), p = detection probability (the probability of detecting a species given that it was present at a site); Effort = time varying survey effort covariate; Grid = covariate comparing urban (=0) and wildland (=1) grids; HumDev = kernel density human development covariate.

[b] (.) denotes intercept only model.

TABLE B15. Occupancy models and covariate estimates for bobcats on the Front Range (FR).

							Covariates[a]									
							Ψ				p					
							Grid		HumDev		Effort		Grid		HumDev	
Model #	Model[a, b]	K	AICc	ΔAICc	w_i	Deviance	β	se	β	se	β	se	β	se	β	se
4	Ψ(.) p(Effort + Grid + HumDev)	5	257.91	0.00	0.33	246.14	-	-	-	-	1.97	1.05	-0.78	0.38	-0.57	0.22
5	Ψ(.) p(Effort + HumDev)	4	259.60	1.69	0.14	250.45	-	-	-	-	1.68	1.00	-	-	-0.40	0.19
12	Ψ(Grid) p(Effort + Grid + HumDev)	6	259.71	1.80	0.13	245.16	1.09	1.28	-	-	2.05	1.06	-0.84	0.39	-0.56	0.22
16	Ψ(HumDev) p(Effort + Grid + HumDev)	6	260.67	2.76	0.08	246.12	-	-	-0.08	0.53	1.98	1.05	-0.78	0.38	-0.56	0.23
2	Ψ(.) p(Effort)	3	261.76	3.85	0.05	255.09	-	-	-	-	1.64	1.00	-	-	-	-
13	Ψ(Grid) p(Effort + HumDev)	5	261.77	3.87	0.05	250.01	0.65	1.00	-	-	1.71	1.00	-	-	-0.38	0.20
17	Ψ(HumDev) p(Effort + HumDev)	5	262.22	4.31	0.04	250.45	-	-	-0.03	0.58	1.68	1.00	-	-	-0.40	0.21
1	Ψ(.) p(.)	2	262.41	4.51	0.03	30.08	-	-	-	-	-	-	-	-	-	-
8	Ψ(Grid + HumDev) p(Effort + Grid + HumDev)	7	262.64	4.73	0.03	245.14	1.13	1.30	0.08	0.58	2.04	1.06	-0.84	0.39	-0.56	0.23
3	Ψ(.) p(Effort + Grid)	4	263.09	5.18	0.02	253.95	-	-	-	-	1.76	1.03	-0.36	0.34	-	-
10	Ψ(Grid) p(Effort)	4	263.33	5.42	0.02	254.19	0.92	1.05	-	-	1.69	1.01	-	-	-	-
14	Ψ(HumDev) p(Effort)	4	263.86	5.95	0.02	254.72	-	-	-0.24	0.38	1.65	1.01	-	-	-	-
11	Ψ(Grid) p(Effort + Grid)	5	264.34	6.43	0.01	252.58	1.28	1.36	-	-	1.87	1.04	-0.44	0.35	-	-
9	Ψ(Grid + HumDev) p(Effort + HumDev)	6	264.53	6.62	0.01	249.98	0.70	1.05	0.10	0.63	1.71	1.00	-	-	-0.39	0.21
15	Ψ(HumDev) p(Effort + Grid)	5	265.25	7.34	0.01	253.48	-	-	-0.27	0.37	1.78	1.03	-0.38	0.34	-	-
6	Ψ(Grid + HumDev) p(Effort)	5	265.88	7.97	0.01	254.11	0.83	1.12	-0.11	0.42	1.69	1.01	-	-	-	-
7	Ψ(Grid + HumDev) p(Effort + Grid)	6	267.04	9.13	0.00	252.49	1.19	1.41	-0.12	0.41	1.87	1.04	-0.45	0.35	-	-
						Model Averaged	0.27	0.64	-0.01	0.24	1.81	1.04	-0.48	0.30	-0.43	0.19
						Variable Importance Values	0.27		0.20		0.97		0.63		0.82	

[a] Ψ = occupancy (proportion of the landscape occupied by the species), p = detection probability (the probability of detecting a species given that it was present at a site);

Effort = time varying survey effort covariate; Grid = covariate comparing urban (=0) and wildland (=1) grids; HumDev = kernel density human development covariate.

[b] (.) denotes intercept only model.

TABLE B16. Occupancy models and covariate estimates for pumas on the Front Range (FR).

							Covariates[a]									
							Ψ				p					
							Grid		HumDev		Effort		Grid		HumDev	
Model #	Model[a, b]	K	AICc	ΔAICc	w_i	Deviance	β	se	β	se	β	se	β	se	β	se
5	Ψ(.) p(Effort + HumDev)	4	263.15	0.00	0.20	254.00	-	-	-	-	1.89	1.09	-	-	-0.34	0.21
2	Ψ(.) p(Effort)	3	264.10	0.95	0.12	257.43	-	-	-	-	1.76	1.08	-	-	-	-
6	Ψ(Grid + HumDev) p(Effort)	5	264.29	1.14	0.11	252.53	-287.75	0.00	-37.17	0.00	1.82	1.08	-	-	-	-
1	Ψ(.) p(.)	2	264.99	1.85	0.08	32.66	-	-	-	-	-	-	-	-	-	-
4	Ψ(.) p(Effort + Grid + HumDev)	5	265.19	2.04	0.07	253.42	-	-	-	-	1.91	1.10	-0.23	0.30	-0.36	0.22
9	Ψ(Grid + HumDev) p(Effort + HumDev)	6	265.44	2.29	0.06	250.89	-457.63	1080.76	-78.27	29.04	1.90	1.08	-	-	-0.22	0.19
13	Ψ(Grid) p(Effort + HumDev)	5	265.46	2.31	0.06	253.69	-15.25	0.00	-	-	1.90	1.09	-	-	-0.33	0.22
17	Ψ(HumDev) p(Effort + HumDev)	5	265.61	2.46	0.06	253.84	-	-	154.17	0.00	1.91	1.09	-	-	-0.35	0.22
10	Ψ(Grid) p(Effort)	4	265.94	2.79	0.05	256.80	-15.56	0.00	-	-	1.78	1.08	-	-	-	-
3	Ψ(.) p(Effort + Grid)	4	266.38	3.23	0.04	257.24	-	-	-	-	1.77	1.08	-0.13	0.30	-	-
14	Ψ(HumDev) p(Effort)	4	266.53	3.39	0.04	257.39	-	-	-0.30	0.98	1.77	1.08	-	-	-	-
7	Ψ(Grid + HumDev) p(Effort + Grid)	6	267.05	3.90	0.03	252.50	-240.24	3494.39	-32.73	112.26	1.82	1.08	-0.05	0.30	-	-
16	Ψ(HumDev) p(Effort + Grid + HumDev)	6	267.84	4.69	0.02	253.30	-	-	151.44	0.00	1.93	1.10	-0.23	0.31	-0.37	0.22
12	Ψ(Grid) p(Effort + Grid + HumDev)	6	267.91	4.76	0.02	253.37	-15.22	0.00	-	-	1.92	1.10	-0.19	0.34	-0.35	0.22
8	Ψ(Grid + HumDev) p(Effort + Grid + HumDev)	7	268.17	5.02	0.02	250.67	-304.05	2793.06	-55.93	75.08	1.91	1.09	-0.15	0.31	-0.25	0.20
11	Ψ(Grid) p(Effort + Grid)	5	268.56	5.41	0.01	256.79	-14.95	0.00	-	-	1.78	1.09	-0.03	0.33	-	-
15	Ψ(HumDev) p(Effort + Grid)	5	269.00	5.85	0.01	257.23	-	-	-0.28	1.62	1.77	1.09	-0.13	0.31	-	-
						Model Averaged	na	na	na	na	1.70	1.07	-0.04	0.14	-0.17	0.15
						Variable Importance Values	0.36		0.34		0.92		0.22		0.51	

[a] Ψ = occupancy (proportion of the landscape occupied by the species), p = detection probability (the probability of detecting a species given that it was present at a site);

Effort = time varying survey effort covariate; Grid = covariate comparing urban (=0) and wildland (=1) grids; HumDev = kernel density human development covariate.

[b] (.) denotes intercept only model.