Supplemental material for:

Fidino, M, Lehrer, E. W., Kay, C. A. M., Yarmey, N., Murray, M. H., Fake, K., Adams, H. C., & Magle, S. B. Combining nuisance wildlife reports with wildlife monitoring data to estimate the probability of human-wildlife conflict relative to a species' underlying distribution.

Camera trap settings

Table S1.1. Camera trap settings for this study

Settings	Values
Models	Bushnell Trophy Cam Standard Edition and HD models
Mode	Camera
Image size	5M pixel
Capture number	1 photo
Video size	NA
Video length	NA
Interval between captures	30 seconds
Sensor level	Normal
Format	Execute (format memory card every time before deploying cameras or replacing memory cards)
TV out	NTSC
Time stamp	On
Set clock	24 hour, year-month-day America/Chicago timezone
Field scan	Off
Video sound	NA
Default set	Cancel

Parameter definitions

Table S1.2. Definitions for all of the parameters estimated by the dynamic integrated occupancy model.

Parameter	Scale	Description
b[1,1] to b[10,12]	cloglog	The smoothing spline parameters. The first dimension represents the knots (i.e., there were 10 knots used in this analysis) and the second dimension represents the time period (i.e., there were 12 sampling periods of data).
beta_occ[1:3]	cloglog	The slope terms from the occupancy analysis. The three elements are respectively the response to URB1, income, and vacancy.
rho	log	The logged smoothing penalty term for the smoothing basis function during the first time step. More positive means more smoothing.
gam_sd	cloglog	Assuming random normal variation in occupancy on the cloglog scale, this is the estimated standard devation in occupancy from one time step to the next.
po_mu	logit	The presence-only intercept for the nuisance wildlife data. Given the mean-centered covariates, this essentially represents the relative proportion (on average) of conflict data to camera trap data across the landscape. As the nuisance wildlife complaint data was more abundant than the camera trap data these are all very high. Do not interpret this as 'conflict' being high. The spatial variation in conflict (i.e., the slope terms) are more important.
beta_po_det[1:3]	logit	The slope terms from the presence-only conflict model. The three elements are respectively the response to URB2, income, and vacancy.
po_season[1:12]	logit	The random effect term for variation in conflict among sampling periods. There is one for each sampling period.
po_sd_season	logit	Assuming random normal variation in conflict on the logit scale, this is the estimated standard deviation in conflict among sampling periods from the average.
pa_mu	logit	The camera trap data model intercept
beta_pa_det[1:2]	logit	The slope terms from the camera trap data model. The first element is the response to URB1 and the second element is the response to URB2.
pa_season[1:12]	logit	The random effect term for variation in detectibility on camera traps among sampling periods. There is one for each sampling period.
pa_sd_season	logit	Assuming random normal variation in camera trap detectibility on the logit scale, this is the estimated standard deviation in detectability among sampling periods from the average.

Coyote results

Table S1.3. All estimated regression coefficients from the dynamic integrated occupancy model for coyote (Canis latrans).

	Lower95	Median	Upper95	Effective sample size	Gelman-Rubin diagnostic
beta_occ[1]	-0.03	0.00	0.04	12942	1.00
beta_occ[2]	0.09	0.14	0.19	4349	1.01
beta_occ[3]	-0.23	-0.16	-0.10	8939	1.00
beta_pa_det[1]	-0.52	-0.41	-0.29	6995	1.00
beta_pa_det[2]	-0.60	-0.40	-0.21	10084	1.00
beta_po_det[1]	2.09	2.86	3.63	2755	1.00
beta_po_det[2]	-0.27	0.03	0.34	9054	1.00
beta_po_det[3]	-0.34	0.53	1.52	13332	1.00
pa_mu	-3.64	-3.10	-2.56	2647	1.00
po_mu	2.88	3.97	5.15	2686	1.00
pa_season[1]	-1.26	-0.43	0.35	6300	1.00
pa_season[2]	-1.51	-0.67	0.10	6326	1.00
pa_season[3]	-1.33	-0.51	0.23	6068	1.00
pa_season[4]	-1.44	-0.64	0.11	6391	1.00
pa_season[5]	-0.68	0.06	0.76	6559	1.00
pa_season[6]	-1.28	-0.47	0.28	7148	1.00
pa_season[7]	-0.58	0.24	1.00	8167	1.00
pa_season[8]	0.17	0.77	1.38	3594	1.00
pa_season[9]	0.06	0.80	1.56	5582	1.00
pa_season[10]	-0.77	0.01	0.72	6127	1.00
pa_season[11]	-1.76	-0.96	-0.18	7002	1.00
pa_season[12]	-0.20	0.38	0.96	3728	1.00
po_season[1]	-0.72	0.19	1.23	14990	1.00
po_season[2]	-0.73	0.14	1.05	20104	1.00
po_season[3]	-0.99	-0.04	0.96	22301	1.00
po_season[4]	-0.77	0.08	1.02	21572	1.00
po_season[5]	-0.79	0.00	0.87	19890	1.00
po_season[6]	-0.64	0.22	1.18	20673	1.00
po_season[7]	-1.07	-0.14	0.82	22209	1.00
po_season[8]	-0.83	0.00	0.85	19293	1.00
po_season[9]	-0.82	0.00	0.81	19874	1.00
po_season[10]	-0.60	0.28	1.25	20210	1.00
po_season[11]	-0.55	0.35	1.39	19019	1.00
po_season[12]	-0.83	-0.05	0.73	15766	1.00
b[1,1]	-4.77	-3.78	-2.57	2726	1.00
b[2,1]	0.23	0.48	0.74	1625	1.01
b[3,1]	0.01	0.55	1.07	582	1.01
b[4,1]	-1.46	-0.84	-0.31	498	1.01
b[5,1]	-1.31	-0.63	0.02	352	1.00
b[6,1]	1.17	1.97	2.84	253	1.01
b[7,1]	-0.53	0.44	1.42	189	1.03
b[8,1]	1.76	2.98	4.28	118	1.04
b[9,1]	0.00	0.08	0.15	804	1.00
b[10,1]	-0.86	-0.31	0.25	431	1.01
b[1,2]	-4.72	-3.79	-2.69	2433	1.00
b[2,2]	0.15	0.37	0.60	11109	1.00
b[3,2]	-0.55	-0.11	0.33	2104	1.00

Table S1.3. All estimated regression coefficients from the dynamic integrated occupancy model for coyote (Canis latrans). *(continued)*

	Lower95	Median	Upper95	Effective sample size	Gelman-Rubin diagnostic
b[4,2]	-0.96	-0.46	0.03	2172	1.00
b[5,2]	-0.92	-0.32	0.26	952	1.00
b[6,2]	1.52	2.29	3.07	682	1.01
b[7,2]	-0.78	0.13	0.99	429	1.01
b[8,2]	2.26	3.34	4.55	223	1.03
b[9,2]	0.01	0.07	0.13	2186	1.00
b[10,2]	-0.80	-0.31	0.17	1054	1.00
b[1,3]	-4.67	-3.85	-2.88	2649	1.00
b[2,3]	0.05	0.30	0.56	21280	1.00
b[3,3]	-0.33	0.14	0.62	6015	1.00
b[4,3]	-1.08	-0.55	-0.03	8603	1.00
b[5,3]	-0.97	-0.37	0.22	2476	1.00
b[6,3]	1.43	2.18	2.96	1698	1.00
b[7,3]	-0.33	0.48	1.33	932	1.01
b[8,3]	2.29	3.39	4.49	420	1.02
b[9,3]	-0.03	0.04	0.11	7618	1.00
b[10,3]	-0.72	-0.23	0.28	3375	1.00
b[1,4]	-4.68	-3.90	-3.04	3186	1.00
b[2,4]	0.26	0.48	0.71	20134	1.00
b[3,4]	-0.48	-0.04	0.40	10521	1.00
b[4,4]	-0.97	-0.47	0.00	15435	1.00
b[5,4]	-0.36	0.19	0.77	5830	1.00
b[6,4]	1.18	1.91	2.63	3717	1.00
b[7,4]	0.21	0.98	1.74	2909	1.00
b[8,4]	2.20	3.23	4.32	768	1.01
b[9,4]	0.01	0.07	0.13	9368	1.00
b[10,4]	-0.70	-0.23	0.23	6171	1.00
b[1,5]	-4.79	-4.07	-3.34	4723	1.00
b[2,5]	0.45	0.66	0.87	18641	1.00
b[3,5]	-0.71	-0.30	0.12	11052	1.00
b[4,5]	-1.14	-0.67	-0.23	16689	1.00
b[5,5]	-0.33	0.23	0.77	6656	1.00
b[6,5]	0.79	1.48	2.17	10248	1.00
b[7,5]	0.69	1.43	2.20	7250	1.00
b[8,5]	1.82	2.82	3.83	1424	1.01
b[9,5]	-0.06	-0.01	0.05	8009	1.00
b[10,5]	-0.97	-0.50	-0.03	6504	1.00
b[1,6]	-4.98	-4.29	-3.56	5756	1.00
b[2,6]	0.44	0.66	0.90	19234	1.00
b[3,6]	-0.72	-0.28	0.18	11749	1.00
b[4,6]	-1.42	-0.93	-0.45	15587	1.00
b[5,6]	-0.13	0.46	1.02	7315	1.00
b[6,6]	0.77	1.49	2.21	11267	1.00
b[7,6]	1.10	1.86	2.65	8543	1.00
b[8,6]	1.56	2.54	3.55	2409	1.01
b[9,6]	-0.02	0.04	0.10	8988	1.00
b[10,6]	-0.93	-0.45	0.03	7249	1.00
b[1,7]	-5.24	-4.60	-3.96	8982	1.00

Table S1.3. All estimated regression coefficients from the dynamic integrated occupancy model for coyote (Canis latrans). *(continued)*

	Lower95	Median	Upper95	Effective sample size	Gelman-Rubin diagnostic
b[2,7]	0.53	0.79	1.05	18815	1.00
b[3,7]	-0.64	-0.16	0.32	11093	1.00
b[4,7]	-1.44	-0.94	-0.45	18645	1.00
b[5,7]	-0.27	0.31	0.90	7960	1.00
b[6,7]	0.49	1.22	1.93	12690	1.00
b[7,7]	1.24	2.03	2.82	8628	1.00
b[8,7]	1.26	2.23	3.21	4150	1.00
b[9,7]	-0.12	-0.05	0.02	9976	1.00
b[10,7]	-1.34	-0.82	-0.31	7464	1.00
b[1,8]	-5.08	-4.55	-4.01	13393	1.00
b[2,8]	0.14	0.33	0.51	19426	1.00
b[3,8]	-0.70	-0.30	0.09	12111	1.00
b[4,8]	-1.26	-0.83	-0.41	18391	1.00
b[5,8]	0.18	0.71	1.23	7027	1.00
b[6,8]	0.12	0.74	1.40	13559	1.00
b[7,8]	1.04	1.77	2.50	9377	1.00
b[8,8]	1.03	1.99	2.91	4309	1.00
b[9,8]	-0.06	-0.01	0.04	8552	1.00
b[10,8]	-1.14	-0.70	-0.27	7200	1.00
b[1,9]	-5.40	-4.85	-4.29	13049	1.00
b[2,9]	0.19	0.37	0.54	18423	1.00
b[3,9]	-0.61	-0.23	0.16	13291	1.00
b[4,9]	-1.34	-0.95	-0.54	16369	1.00
b[5,9]	0.12	0.62	1.13	7423	1.00
b[6,9]	-0.50	0.13	0.76	13111	1.00
b[7,9]	1.12	1.82	2.53	9435	1.00
b[8,9]	0.68	1.61	2.54	4626	1.00
b[9,9]	0.04	0.09	0.14	8990	1.00
b[10,9]	-1.11	-0.68	-0.27	7173	1.00
b[1,10]	-5.42	-4.81	-4.20	10354	1.00
b[2,10]	0.29	0.50	0.71	19127	1.00
b[3,10]	-0.35	0.09	0.53	13820	1.00
b[4,10]	-1.66	-1.19	-0.74	17114	1.00
b[5,10]	0.01	0.58	1.11	7808	1.00
b[6,10]	-0.84	-0.14	0.55	12903	1.00
b[7,10]	1.00	1.78	2.52	9849	1.00
b[8,10]	0.34	1.35	2.34	5079	1.00
b[9,10]	0.01	0.07	0.13	10342	1.00
b[10,10]	-0.89	-0.42	0.04	8030	1.00
b[1,11]	-5.09	-4.43	-3.74	8686	1.00
b[2,11]	0.23	0.48	0.72	19767	1.00
b[3,11]	-0.39	0.10	0.57	17083	1.00
b[4,11]	-1.55	-1.03	-0.55	15837	1.00
b[5,11]	0.10	0.71	1.29	7881	1.00
b[6,11]	-0.81	-0.07	0.67	13201	1.00
b[7,11]	1.01	1.80	2.65	10886	1.00
b[8,11]	0.33	1.39	2.48	5897	1.00
b[9,11]	0.07	0.14	0.20	11929	1.00

Table S1.3. All estimated regression coefficients from the dynamic integrated occupancy model for coyote (Canis latrans). *(continued)*

	Lower95	Median	Upper95	Effective sample size	Gelman-Rubin diagnostic
b[10,11]	-0.53	-0.05	0.46	8315	1.00
b[1,12]	-4.73	-4.11	-3.46	10342	1.00
b[2,12]	0.08	0.25	0.42	20081	1.00
b[3,12]	-0.12	0.29	0.72	18029	1.00
b[4,12]	-1.20	-0.75	-0.30	16306	1.00
b[5,12]	0.21	0.82	1.40	7512	1.00
b[6,12]	-0.68	0.04	0.79	15815	1.00
b[7,12]	1.12	1.95	2.84	12454	1.00
b[8,12]	0.28	1.44	2.58	6573	1.00
b[9,12]	0.00	0.05	0.11	8016	1.00
b[10,12]	-0.49	-0.01	0.44	7598	1.00
rho	-2.51	-1.43	-0.38	1707	1.01
gam_sd	0.29	0.38	0.48	4450	1.00
pa_sd_season	0.46	0.75	1.17	10778	1.00
po_sd_season	0.35	0.59	0.95	17740	1.00

Virginia opossum results

Table S1.4. All estimated regression coefficients from the dynamic integrated occupancy model for Virginia opossum (Didelphis virginiana).

	Lower95	Median	Upper95	Effective sample size	Gelman-Rubin diagnostic
beta_occ[1]	0.17	0.22	0.27	9334	1.00
beta_occ[2]	-0.27	-0.17	-0.07	3240	1.00
beta_occ[3]	-0.07	-0.01	0.05	9127	1.00
beta_pa_det[1]	-0.37	-0.25	-0.12	13776	1.00
beta_pa_det[2]	-0.31	-0.18	-0.05	14914	1.00
beta_po_det[1]	1.48	2.03	2.57	8331	1.00
beta_po_det[2]	0.97	1.47	1.96	12626	1.00
beta_po_det[3]	1.08	2.06	3.14	7571	1.00
pa_mu	-2.38	-1.87	-1.39	1869	1.00
po_mu	1.19	1.92	2.70	4868	1.00
pa_season[1]	-1.81	-0.86	-0.01	7208	1.00
pa_season[2]	-0.69	0.09	0.82	4954	1.00
pa_season[3]	-1.49	-0.46	0.44	8961	1.00
pa_season[4]	0.11	0.64	1.19	2269	1.00
pa_season[5]	-1.49	-0.43	0.51	9545	1.00
pa_season[6]	0.09	0.65	1.22	2630	1.00
pa_season[7]	-0.09	0.47	1.04	2529	1.00
pa_season[8]	-0.11	0.49	1.06	2668	1.00
pa_season[9]	-2.11	-1.17	-0.30	7665	1.00
pa_season[10]	-0.81	-0.14	0.55	3987	1.00
pa_season[11]	-0.78	-0.14	0.51	3384	1.00
pa_season[12]	-0.54	0.00	0.55	2297	1.00
po_season[1]	-1.38	-0.49	0.39	17292	1.00
po_season[2]	-0.97	-0.18	0.63	19411	1.00
po_season[3]	-0.53	0.20	0.94	16990	1.00
po_season[4]	-0.79	-0.02	0.78	19905	1.00
po_season[5]	-0.39	0.45	1.32	18923	1.00
po_season[6]	-0.46	0.31	1.14	19518	1.00
po_season[7]	-0.64	0.08	0.86	18256	1.00
po_season[8]	-0.27	0.49	1.37	18416	1.00
po_season[9]	-0.96	-0.10	0.78	22986	1.00
po_season[10]	-0.65	0.13	0.94	19753	1.00
po_season[11]	-0.88	-0.11	0.67	19611	1.00
po_season[12]	-1.08	-0.27	0.51	20584	1.00
b[1,1]	-5.31	-4.66	-4.02	13857	1.00
b[2,1]	-0.63	-0.33	-0.03	1959	1.00
b[3,1]	-0.16	0.37	0.94	712	1.01
b[4,1]	-1.82	-1.14	-0.51	463	1.01
b[5,1]	0.34	1.17	2.00	388	1.00
b[6,1]	-0.55	0.29	1.10	325	1.01
b[7,1]	-1.00	-0.08	0.83	512	1.01
b[8,1]	-1.35	-0.10	1.13	199	1.07
b[9,1]	-0.21	-0.12	-0.03	803	1.00
b[10,1]	-1.16	-0.53	0.09	488	1.01
b[1,2]	-5.25	-4.68	-4.16	12375	1.00
b[2,2]	-0.40	-0.16	0.09	7138	1.00
b[3,2]	-0.20	0.27	0.76	1163	1.00

Table S1.4. All estimated regression coefficients from the dynamic integrated occupancy model for Virginia opossum (Didelphis virginiana). *(continued)*

	Lower95	Median	Upper95	Effective sample size	Gelman-Rubin diagnostic
b[4,2]	-1.70	-1.20	-0.69	1139	1.00
b[5,2]	0.66	1.38	2.09	611	1.00
b[6,2]	-0.50	0.24	0.95	594	1.00
b[7,2]	-0.82	0.04	0.88	788	1.00
b[8,2]	-1.21	-0.05	1.12	232	1.05
b[9,2]	-0.17	-0.10	-0.02	1119	1.00
b[10,2]	-1.17	-0.60	-0.03	649	1.00
b[1,3]	-5.17	-4.64	-4.13	12023	1.00
b[2,3]	-0.49	-0.25	-0.03	8937	1.00
b[3,3]	-0.35	0.12	0.57	1757	1.00
b[4,3]	-1.59	-1.14	-0.67	3053	1.00
b[5,3]	1.07	1.74	2.39	981	1.00
b[6,3]	-0.58	0.09	0.76	1235	1.00
b[7,3]	-0.66	0.20	0.99	1065	1.00
b[8,3]	-1.12	0.04	1.11	347	1.04
b[9,3]	-0.18	-0.11	-0.04	1585	1.00
b[10,3]	-1.04	-0.52	0.01	1086	1.00
b[1,4]	-4.79	-4.30	-3.84	13622	1.00
b[2,4]	-0.36	-0.12	0.13	10334	1.00
b[3,4]	-0.43	0.03	0.49	3345	1.00
b[4,4]	-1.69	-1.21	-0.74	9451	1.00
b[5,4]	1.17	1.83	2.46	1586	1.00
b[6,4]	-0.62	0.06	0.71	2517	1.00
b[7,4]	-0.50	0.31	1.12	1662	1.00
b[8,4]	-1.08	0.01	1.12	458	1.03
b[9,4]	-0.17	-0.10	-0.03	2555	1.00
b[10,4]	-1.08	-0.56	-0.03	1863	1.00
b[1,5]	-4.95	-4.45	-3.96	14226	1.00
b[2,5]	-0.22	0.04	0.32	16535	1.00
b[3,5]	-0.55	-0.05	0.42	4723	1.00
b[4,5]	-1.84	-1.36	-0.87	12783	1.00
b[5,5]	1.21	1.84	2.49	2365	1.00
b[6,5]	-0.86	-0.19	0.49	3887	1.00
b[7,5]	-0.35	0.44	1.27	2050	1.00
b[8,5]	-1.11	-0.03	1.09	655	1.02
b[9,5]	-0.20	-0.12	-0.05	3816	1.00
b[10,5]	-1.03	-0.49	0.05	2775	1.00
b[1,6]	-4.88	-4.42	-3.95	15603	1.00
b[2,6]	-0.44	-0.19	0.04	15744	1.00
b[3,6]	-0.27	0.18	0.65	5484	1.00
b[4,6]	-1.78	-1.33	-0.86	14995	1.00
b[5,6]	1.28	1.92	2.53	2691	1.00
b[6,6]	-0.71	-0.07	0.57	5900	1.00
b[7,6]	-0.27	0.54	1.34	2968	1.00
b[8,6]	-1.13	-0.05	1.05	762	1.01
b[9,6]	-0.20	-0.13	-0.06	3796	1.00
b[10,6]	-1.05	-0.54	-0.02	2847	1.00
b[1,7]	-4.82	-4.35	-3.88	16104	1.00

Table S1.4. All estimated regression coefficients from the dynamic integrated occupancy model for Virginia opossum (Didelphis virginiana). *(continued)*

	Lower95	Median	Upper95	Effective sample size	Gelman-Rubin diagnostic
b[2,7]	-0.31	-0.08	0.15	12785	1.00
b[3,7]	-0.26	0.19	0.63	5022	1.00
b[4,7]	-1.74	-1.30	-0.85	14127	1.00
b[5,7]	1.55	2.20	2.80	3000	1.00
b[6,7]	-0.72	-0.08	0.57	5967	1.00
b[7,7]	-0.26	0.52	1.35	3089	1.00
b[8,7]	-1.15	-0.03	1.03	1005	1.01
b[9,7]	-0.23	-0.16	-0.10	3205	1.00
b[10,7]	-0.85	-0.33	0.15	2966	1.00
b[1,8]	-4.90	-4.44	-3.96	15630	1.00
b[2,8]	-0.25	-0.02	0.21	13820	1.00
b[3,8]	-0.38	0.07	0.53	5466	1.00
b[4,8]	-1.69	-1.22	-0.78	13040	1.00
b[5,8]	1.68	2.29	2.93	2920	1.00
b[6,8]	-0.96	-0.30	0.34	6345	1.00
b[7,8]	-0.46	0.37	1.18	3121	1.00
b[8,8]	-1.19	-0.09	1.03	1152	1.01
b[9,8]	-0.18	-0.11	-0.04	3456	1.00
b[10,8]	-0.92	-0.40	0.09	3204	1.00
b[1,9]	-5.00	-4.48	-3.98	13712	1.00
b[2,9]	-0.47	-0.18	0.09	15787	1.00
b[3,9]	-0.39	0.10	0.59	6555	1.00
b[4,9]	-1.44	-0.95	-0.45	14715	1.00
b[5,9]	1.63	2.26	2.95	3160	1.00
b[6,9]	-0.95	-0.28	0.39	6272	1.00
b[7,9]	-0.61	0.19	1.08	2882	1.00
b[8,9]	-1.25	-0.11	1.03	1186	1.01
b[9,9]	-0.20	-0.12	-0.05	4167	1.00
b[10,9]	-1.05	-0.51	0.02	3368	1.00
b[1,10]	-4.95	-4.48	-4.03	14418	1.00
b[2,10]	-0.49	-0.25	0.00	15982	1.00
b[3,10]	-0.28	0.17	0.68	5180	1.00
b[4,10]	-1.50	-1.02	-0.55	15281	1.00
b[5,10]	1.49	2.16	2.82	2662	1.00
b[6,10]	-0.87	-0.20	0.51	6185	1.00
b[7,10]	-0.88	-0.01	0.87	2781	1.00
b[8,10]	-1.30	-0.15	1.05	1262	1.01
b[9,10]	-0.24	-0.17	-0.10	3555	1.00
b[10,10]	-1.12	-0.57	-0.04	3205	1.00
b[1,11]	-4.74	-4.28	-3.82	15939	1.00
b[2,11]	-0.32	-0.08	0.16	12745	1.00
b[3,11]	-0.40	0.09	0.57	4611	1.00
b[4,11]	-1.38	-0.92	-0.43	14699	1.00
b[5,11]	1.59	2.29	3.00	2830	1.00
b[6,11]	-0.83	-0.13	0.63	6665	1.00
b[7,11]	-0.95	-0.06	0.90	3059	1.00
b[8,11]	-1.33	-0.14	1.11	1361	1.00
b[9,11]	-0.26	-0.18	-0.11	3086	1.00

Table S1.4. All estimated regression coefficients from the dynamic integrated occupancy model for Virginia opossum (Didelphis virginiana). *(continued)*

	Lower95	Median	Upper95	Effective sample size	Gelman-Rubin diagnostic
b[10,11]	-1.23	-0.65	-0.11	2969	1.00
b[1,12]	-4.39	-3.89	-3.40	17194	1.00
b[2,12]	-0.41	-0.13	0.14	15155	1.00
b[3,12]	-0.42	0.13	0.72	5916	1.00
b[4,12]	-1.43	-0.85	-0.28	16842	1.00
b[5,12]	1.41	2.21	2.98	3246	1.00
b[6,12]	-0.84	-0.02	0.83	8834	1.00
b[7,12]	-1.05	-0.02	1.00	3711	1.00
b[8,12]	-1.40	-0.11	1.21	1864	1.00
b[9,12]	-0.23	-0.15	-0.07	3983	1.00
b[10,12]	-1.57	-0.90	-0.27	3712	1.00
rho	-1.92	-0.60	0.66	835	1.00
gam_sd	0.23	0.29	0.37	5479	1.00
pa_sd_season	0.45	0.74	1.16	11663	1.00
po_sd_season	0.35	0.60	0.94	20424	1.00

Raccoon results

Table S1.5. All estimated regression coefficients from the dynamic integrated occupancy model for raccoon (Procyon lotor).

	Lower95	Median	Upper95	Effective sample size	Gelman-Rubin diagnostic
beta_occ[1]	0.05	0.09	0.13	8747	1.00
beta_occ[2]	-0.16	-0.08	-0.01	6950	1.00
beta_occ[3]	-0.06	-0.01	0.04	5567	1.00
beta_pa_det[1]	-0.47	-0.34	-0.21	7239	1.00
beta_pa_det[2]	0.39	0.49	0.59	13260	1.00
beta_po_det[1]	1.51	1.83	2.18	9094	1.00
beta_po_det[2]	0.20	0.52	0.85	9650	1.00
beta_po_det[3]	0.91	1.66	2.54	2314	1.00
pa_mu	-3.34	-2.75	-2.16	1503	1.00
po_mu	0.50	1.07	1.71	3460	1.00
pa_season[1]	-1.54	-0.74	-0.03	3594	1.00
pa_season[2]	-2.34	-1.38	-0.53	4637	1.00
pa_season[3]	-0.87	-0.06	0.73	3938	1.00
pa_season[4]	-1.07	-0.30	0.40	3093	1.00
pa_season[5]	-0.88	-0.12	0.57	2911	1.00
pa_season[6]	-0.20	0.47	1.11	2098	1.00
pa_season[7]	-0.74	0.02	0.73	3252	1.00
pa_season[8]	-1.03	-0.26	0.43	3257	1.00
pa_season[9]	-2.08	-1.18	-0.36	4038	1.00
pa_season[10]	-0.24	0.38	0.99	1917	1.00
pa_season[11]	0.44	1.04	1.63	1870	1.00
pa_season[12]	-0.06	0.52	1.10	1728	1.00
po_season[1]	-1.24	-0.53	0.11	13323	1.00
po_season[2]	-0.24	0.32	0.91	13804	1.00
po_season[3]	-0.74	-0.16	0.41	13785	1.00
po_season[4]	-0.50	0.09	0.75	14409	1.00
po_season[5]	-0.70	-0.02	0.67	16085	1.00
po_season[6]	-0.70	-0.05	0.57	15996	1.00
po_season[7]	-0.98	-0.35	0.26	14925	1.00
po_season[8]	-0.47	0.19	0.84	14336	1.00
po_season[9]	-0.83	-0.09	0.66	18940	1.00
po_season[10]	-0.26	0.40	1.11	17243	1.00
po_season[11]	-0.33	0.27	0.90	15136	1.00
po_season[12]	-0.54	0.15	0.84	15463	1.00
b[1,1]	-4.81	-4.11	-3.46	7848	1.00
b[2,1]	-0.43	-0.19	0.04	2228	1.00
b[3,1]	-0.07	0.36	0.78	795	1.01
b[4,1]	-1.09	-0.65	-0.16	710	1.01
b[5,1]	0.07	0.70	1.36	329	1.01
b[6,1]	0.11	0.75	1.38	404	1.01
b[7,1]	-1.04	-0.24	0.42	297	1.01
b[8,1]	-1.74	-0.83	0.10	253	1.02
b[9,1]	-0.23	-0.16	-0.09	626	1.00
b[10,1]	-1.01	-0.49	0.00	425	1.00
b[1,2]	-4.80	-4.16	-3.57	7036	1.00
b[2,2]	-0.34	-0.18	0.00	8429	1.00
b[3,2]	-0.10	0.24	0.61	1516	1.01

Table S1.5. All estimated regression coefficients from the dynamic integrated occupancy model for raccoon (Procyon lotor). *(continued)*

	Lower95	Median	Upper95	Effective sample size	Gelman-Rubin diagnostic
b[4,2]	-1.13	-0.76	-0.42	2556	1.00
b[5,2]	0.18	0.71	1.27	508	1.01
b[6,2]	0.18	0.74	1.28	871	1.00
b[7,2]	-0.99	-0.32	0.31	552	1.01
b[8,2]	-1.70	-0.85	0.05	321	1.02
b[9,2]	-0.17	-0.11	-0.06	723	1.00
b[10,2]	-1.13	-0.68	-0.27	482	1.00
b[1,3]	-4.81	-4.28	-3.74	7117	1.00
b[2,3]	-0.41	-0.23	-0.05	13389	1.00
b[3,3]	-0.20	0.15	0.50	2534	1.00
b[4,3]	-1.17	-0.82	-0.46	8749	1.00
b[5,3]	0.32	0.86	1.36	884	1.00
b[6,3]	0.26	0.77	1.34	1854	1.00
b[7,3]	-0.85	-0.23	0.42	1061	1.00
b[8,3]	-1.59	-0.77	0.14	477	1.01
b[9,3]	-0.17	-0.12	-0.07	1444	1.00
b[10,3]	-1.05	-0.61	-0.21	954	1.00
b[1,4]	-4.78	-4.26	-3.76	7780	1.00
b[2,4]	-0.24	-0.03	0.17	15812	1.00
b[3,4]	-0.20	0.17	0.56	4524	1.00
b[4,4]	-1.21	-0.81	-0.44	15766	1.00
b[5,4]	0.44	0.96	1.50	1686	1.00
b[6,4]	0.16	0.71	1.26	3717	1.00
b[7,4]	-0.76	-0.12	0.54	1927	1.00
b[8,4]	-1.61	-0.73	0.15	709	1.01
b[9,4]	-0.18	-0.12	-0.06	2569	1.00
b[10,4]	-1.10	-0.65	-0.23	1544	1.00
b[1,5]	-4.70	-4.20	-3.73	9434	1.00
b[2,5]	-0.39	-0.15	0.09	19312	1.00
b[3,5]	-0.02	0.39	0.79	5903	1.00
b[4,5]	-1.28	-0.86	-0.46	16090	1.00
b[5,5]	0.54	1.10	1.65	2449	1.00
b[6,5]	0.06	0.64	1.21	5735	1.00
b[7,5]	-0.73	-0.06	0.60	2881	1.00
b[8,5]	-1.54	-0.66	0.25	982	1.01
b[9,5]	-0.20	-0.14	-0.07	4077	1.00
b[10,5]	-0.87	-0.43	0.02	2788	1.00
b[1,6]	-4.73	-4.27	-3.83	10647	1.00
b[2,6]	-0.46	-0.26	-0.05	19549	1.00
b[3,6]	0.18	0.58	0.95	6224	1.00
b[4,6]	-1.36	-0.96	-0.58	16524	1.00
b[5,6]	0.52	1.05	1.60	2746	1.00
b[6,6]	-0.01	0.54	1.11	7046	1.00
b[7,6]	-0.74	-0.05	0.61	3909	1.00
b[8,6]	-1.53	-0.66	0.28	988	1.01
b[9,6]	-0.16	-0.10	-0.04	3484	1.00
b[10,6]	-0.78	-0.35	0.07	2954	1.00
b[1,7]	-4.81	-4.34	-3.89	11273	1.00

Table S1.5. All estimated regression coefficients from the dynamic integrated occupancy model for raccoon (Procyon lotor). *(continued)*

	Lower95	Median	Upper95	Effective sample size	Gelman-Rubin diagnostic
b[2,7]	-0.54	-0.35	-0.15	18430	1.00
b[3,7]	0.13	0.52	0.88	7204	1.00
b[4,7]	-1.38	-1.01	-0.62	14834	1.00
b[5,7]	0.44	0.96	1.52	2918	1.00
b[6,7]	-0.19	0.36	0.92	7608	1.00
b[7,7]	-0.78	-0.10	0.57	4124	1.00
b[8,7]	-1.67	-0.75	0.15	1270	1.01
b[9,7]	-0.14	-0.09	-0.03	3506	1.00
b[10,7]	-0.85	-0.42	-0.02	3095	1.00
b[1,8]	-4.78	-4.30	-3.82	10836	1.00
b[2,8]	-0.46	-0.25	-0.03	16764	1.00
b[3,8]	0.15	0.56	0.96	7172	1.00
b[4,8]	-1.29	-0.87	-0.48	16581	1.00
b[5,8]	0.55	1.10	1.66	3444	1.00
b[6,8]	-0.23	0.33	0.92	7207	1.00
b[7,8]	-0.70	0.00	0.67	4644	1.00
b[8,8]	-1.72	-0.82	0.12	1439	1.01
b[9,8]	-0.19	-0.12	-0.06	4847	1.00
b[10,8]	-0.93	-0.48	-0.05	3744	1.00
b[1,9]	-4.60	-4.10	-3.62	11037	1.00
b[2,9]	-0.48	-0.23	0.03	21031	1.00
b[3,9]	0.16	0.59	1.02	7203	1.00
b[4,9]	-1.27	-0.84	-0.41	15882	1.00
b[5,9]	0.62	1.18	1.78	3464	1.00
b[6,9]	-0.26	0.32	0.91	7358	1.00
b[7,9]	-0.69	0.03	0.72	4531	1.00
b[8,9]	-1.82	-0.85	0.11	1805	1.01
b[9,9]	-0.23	-0.15	-0.08	5992	1.00
b[10,9]	-0.83	-0.37	0.11	4139	1.00
b[1,10]	-4.35	-3.93	-3.53	13014	1.00
b[2,10]	-0.27	-0.07	0.12	17322	1.00
b[3,10]	0.08	0.49	0.87	6081	1.00
b[4,10]	-1.29	-0.89	-0.51	15101	1.00
b[5,10]	0.65	1.23	1.78	3348	1.00
b[6,10]	-0.35	0.24	0.82	7477	1.00
b[7,10]	-0.68	0.05	0.75	4358	1.00
b[8,10]	-1.88	-0.88	0.09	1970	1.01
b[9,10]	-0.16	-0.10	-0.05	4059	1.00
b[10,10]	-0.69	-0.24	0.21	3478	1.00
b[1,11]	-4.20	-3.81	-3.42	16128	1.00
b[2,11]	-0.22	-0.03	0.15	14499	1.00
b[3,11]	0.22	0.61	1.01	5866	1.00
b[4,11]	-1.15	-0.78	-0.39	15857	1.00
b[5,11]	0.50	1.07	1.66	3395	1.00
b[6,11]	-0.28	0.31	0.92	8051	1.00
b[7,11]	-0.61	0.14	0.87	4700	1.00
b[8,11]	-1.93	-0.92	0.09	2089	1.01
b[9,11]	-0.18	-0.13	-0.07	3632	1.00

Table S1.5. All estimated regression coefficients from the dynamic integrated occupancy model for raccoon (Procyon lotor). *(continued)*

	Lower95	Median	Upper95	Effective sample size	Gelman-Rubin diagnostic
b[10,11]	-0.74	-0.28	0.17	3263	1.00
b[1,12]	-3.94	-3.48	-3.03	18643	1.00
b[2,12]	-0.12	0.10	0.34	16136	1.00
b[3,12]	0.07	0.53	1.02	6915	1.00
b[4,12]	-1.33	-0.87	-0.39	18265	1.00
b[5,12]	0.31	0.98	1.63	4296	1.00
b[6,12]	-0.44	0.26	0.96	10129	1.00
b[7,12]	-0.66	0.20	1.01	5717	1.00
b[8,12]	-2.00	-0.89	0.18	2435	1.00
b[9,12]	-0.23	-0.16	-0.10	4699	1.00
b[10,12]	-0.79	-0.25	0.27	4207	1.00
rho	-1.36	-0.09	1.12	775	1.00
gam_sd	0.21	0.26	0.32	10825	1.00
pa_sd_season	0.51	0.83	1.29	10837	1.00
po_sd_season	0.34	0.55	0.85	21936	1.00