

Appendix 3. Table of model estimates for the 40 by 40 km grid used as a random effect in the models, where the estimate is of the standard deviation for the grouping factor, rhat is the scale reduction factor, and ngrid is the number of grid cells included.

Species	Season	Estimate	Est.Error	Rhat	ngrid
American Tree Sparrow	fall	1.830	0.034	1.014	1596
	spring	1.717	0.033	1.112	1863
	winter	2.084	0.041	1.012	1839
Bald Eagle	fall	1.317	0.018	1.004	3583
	spring	1.303	0.016	1.018	4052
	winter	1.429	0.021	1.008	3215
Bay-breasted Warbler	fall	1.455	0.035	1.021	1263
	spring	0.949	0.022	1.000	1375
Blackpoll Warbler	fall	1.448	0.035	1.023	1319
	spring	1.166	0.022	1.016	2024
Black-throated Blue Warbler	fall	1.327	0.029	1.011	1271
	spring	1.559	0.033	1.003	1341
Blue-winged Warbler	fall	1.136	0.032	1.001	990
	spring	1.454	0.031	1.009	1386
Canada Warbler	fall	1.025	0.026	1.003	1276
	spring	1.127	0.025	1.008	1426
Cape May Warbler	fall	1.123	0.027	1.005	1180
	spring	1.101	0.025	1.006	1456
Connecticut Warbler	fall	0.850	0.051	1.000	330
	spring	0.876	0.048	1.001	365
Common Redpoll	fall	1.452	0.039	1.016	930
	spring	1.710	0.037	1.001	1250
	winter	1.757	0.033	1.000	1483
Evening Grosbeak	fall	1.616	0.034	1.013	1397
	spring	1.635	0.033	1.004	1546
	winter	1.908	0.044	1.004	1058
Gray-cheeked Thrush	fall	1.011	0.031	1.004	893
	spring	1.045	0.026	1.009	1227
Golden-winged Warbler	fall	1.161	0.045	1.000	542
	spring	1.400	0.036	1.004	1015
Harris's Sparrow	fall	2.197	0.071	1.017	658
	spring	1.753	0.054	1.019	825
	winter	2.074	0.055	1.012	824
Lapland Longspur	fall	1.460	0.037	1.010	1056
	spring	1.474	0.044	1.004	738
	winter	1.336	0.031	1.001	1168
Le Conte's Sparrow	fall	1.770	0.078	1.008	464
	spring	1.304	0.059	0.999	396

Species	Season	Estimate	Est.Error	Rhat	ngrid
Le Conte's Sparrow	winter	1.228	0.055	1.000	346
Least Flycatcher	fall	1.107	0.024	1.013	1834
	spring	1.241	0.021	1.055	2380
Magnolia Warbler	fall	1.565	0.028	1.003	1959
	spring	1.213	0.021	1.016	2050
Northern Parula	fall	1.359	0.024	1.009	1882
	spring	1.734	0.026	1.012	2661
Olive-sided Flycatcher	fall	1.099	0.022	1.001	1891
	spring	1.332	0.024	1.005	2258
Peregrine Falcon	fall	1.034	0.017	1.024	2516
	spring	1.093	0.018	1.003	2521
	winter	1.081	0.023	1.001	1346
Pine Siskin	fall	1.314	0.018	1.038	3243
	spring	1.452	0.020	1.050	3905
	winter	1.298	0.020	1.009	2896
Rusty Blackbird	fall	1.243	0.030	1.022	1496
	spring	1.327	0.026	1.009	1791
	winter	1.254	0.029	1.003	1324
Smith's Longspur	fall	1.570	0.272	1.001	31
	spring	2.099	0.225	1.004	65
	winter	1.701	0.215	1.001	43
Tennessee Warbler	fall	1.496	0.026	1.018	2018
	spring	1.400	0.025	1.005	2099
White-crowned Sparrow	fall	1.618	0.021	1.015	3458
	spring	1.493	0.017	1.038	4137
	winter	1.963	0.028	1.110	2506
Wilson's Warbler	fall	1.398	0.020	1.009	2810
	spring	1.570	0.025	1.012	2973
Yellow-bellied Flycatcher	fall	0.928	0.028	1.002	1058
	spring	1.071	0.031	1.003	894