

Appendix 4. Correlations.

Correlations between bird abundances and land cover proportions at various buffer distances, along with species classifications based on those correlations are given in Table A4.1.

Correlations between bird abundances and vegetation characteristics for early successional bird species are shown in Figure A4.1, while those for forest bird species are shown in Figure A4.2.

Table A4.1. Correlations between bird abundance and the proportion of shrubland and forest land cover classes within 200, 400, and 1200 m buffers of points. Bird abundance was calculated as the maximum number of individuals detected at a point across four visits over two years. Land cover was calculated as the proportion of area of a given land cover type, forest or shrubland, within the buffer distance. Land cover data from our land cover mapping. We considered a correlation statistically significant if its 95% confidence interval did not overlap 0 and denote them in blue font. The strongest significant correlation with each land cover type is indicated with bold font. Birds were classified as early successional (ES) associates if they showed a positive significant correlation with shrubland land cover and early successional specialists if they also showed a large significant negative correlation with forest land cover. Birds were classified as forest (F) associates if they showed a positive significant correlation with forest land cover and forest specialists if they also showed a large significant negative correlation with shrubland land cover.

Species	Forest 200 m	Forest 400 m	Forest 1200 m	Shrub 200 m	Shrub 400 m	Shrub 1200 m	Landscape Classification
American Goldfinch	-0.34	-0.23	0.01	0.44	0.36	0.33	ES Associate
American Redstart	0.06	0.03	0.09	0.14	0.22	0.13	ES Associate
American Robin	0.05	-0.01	-0.01	-0.20	-0.14	-0.18	Generalist
Baltimore Oriole	0.18	0.11	-0.08	-0.15	-0.11	-0.02	F Associate
Bell's Vireo	-0.58	-0.50	-0.23	0.63	0.54	0.40	ES Specialist
Black-capped Chickadee	0.34	0.32	0.16	-0.41	-0.44	-0.48	F Specialist
Blue Jay	0.22	0.15	0.05	-0.19	-0.17	-0.06	F Associate
Brown Thrasher	-0.08	-0.08	-0.03	0.26	0.29	0.29	ES Associate
Brown-headed Cowbird	-0.44	-0.39	-0.21	0.48	0.45	0.37	ES Specialist
Cedar Waxwing	0.01	0.04	0.01	0.10	0.03	0.05	Generalist
Chipping Sparrow	0.00	0.01	0.06	-0.09	-0.14	-0.09	Generalist
Common Grackle	-0.05	-0.07	-0.12	0.10	0.09	0.08	Generalist
Common Yellowthroat	-0.39	-0.30	-0.12	0.34	0.32	0.29	ES Associate
Downy Woodpecker	0.36	0.33	0.18	-0.30	-0.22	-0.11	F Associate
Eastern Bluebird	0.19	0.18	0.20	-0.01	0.01	0.08	F Associate

Eastern Kingbird	-0.44	-0.42	-0.20	0.51	0.43	0.37	ES Specialist
Eastern Wood-Pewee	0.46	0.37	0.08	-0.49	-0.41	-0.22	F Specialist
European Starling	0.03	0.03	0.07	-0.08	-0.04	0.03	Generalist
Field Sparrow	-0.48	-0.43	-0.12	0.61	0.55	0.37	ES Specialist
Gray Catbird	-0.03	-0.03	0.03	0.10	0.07	0.06	Generalist
Great Crested Flycatcher	0.26	0.26	0.19	-0.31	-0.34	-0.28	F Associate
Hairy Woodpecker	0.18	0.19	0.05	-0.24	-0.25	-0.11	F Associate
House Wren	0.39	0.36	0.16	-0.30	-0.25	-0.12	F Associate
Indigo Bunting	0.00	0.01	0.05	-0.02	0.01	-0.11	Generalist
Lark Sparrow	-0.27	-0.27	-0.19	0.30	0.27	0.17	ES Associate
Mourning Dove	-0.13	-0.09	0.07	0.33	0.27	0.27	ES Associate
Northern Cardinal	0.38	0.34	0.10	-0.33	-0.30	-0.10	F Associate
Northern Flicker	0.25	0.26	0.24	-0.29	-0.25	-0.10	F Associate
Orchard Oriole	-0.52	-0.42	-0.05	0.56	0.54	0.37	ES Specialist
Ovenbird	0.23	0.18	0.28	-0.32	-0.33	-0.29	F Associate
Red-bellied Woodpecker	0.33	0.34	0.17	-0.25	-0.22	-0.27	F Associate
Red-eyed Vireo	0.52	0.45	0.20	-0.57	-0.50	-0.46	F Specialist
Red-headed Woodpecker	0.46	0.44	0.21	-0.54	-0.50	-0.36	F Specialist
Red-winged Blackbird	-0.52	-0.42	-0.23	0.46	0.41	0.29	ES Specialist
Rose-breasted Grosbeak	0.44	0.35	0.09	-0.56	-0.46	-0.29	F Specialist
Rufous-sided Towhee	0.29	0.31	0.22	-0.22	-0.17	-0.10	F Associate
Scarlet Tanager	0.19	0.18	0.11	-0.19	-0.19	-0.13	F Associate
Song Sparrow	-0.50	-0.40	-0.17	0.42	0.38	0.32	ES Specialist
Warbling Vireo	0.19	0.15	0.07	-0.32	-0.25	-0.24	F Associate
White-breasted Nuthatch	0.36	0.31	0.15	-0.57	-0.51	-0.38	F Specialist
Wild Turkey	0.11	0.09	0.03	-0.06	-0.08	-0.22	Generalist
Willow Flycatcher	-0.48	-0.40	-0.06	0.52	0.44	0.36	ES Specialist
Wood Thrush	0.29	0.24	0.05	-0.33	-0.33	-0.31	F Associate
Yellow Warbler	-0.29	-0.22	-0.15	0.41	0.38	0.44	ES Associate
Yellow-billed Cuckoo	0.04	0.07	0.07	0.02	0.04	-0.09	Generalist
Yellow-throated Vireo	0.04	0.05	0.11	-0.01	-0.04	-0.13	Generalist

Fig A4.2. Forest bird–vegetation correlations. Spearman’s rank correlation coefficient between bird abundances and selected vegetation measurements of interest. Point estimates and 95% confidence intervals are shown, with the vertical reference lines indicating zero correlation. Yellow confidence intervals overlap zero. Vegetation measurements include total tree density (Total dTr), total shrub cover (Total covSh), the 98th percentile of tree diameter at breast height (DBH) (Total dbh98), cottonwood (Cowo) tree importance value, late successional (Pcwo) tree importance value, eastern red cedar (Juni) tree importance value, and common buckthorn (Rham) shrub importance value. Bird species names are provided in Appendix 1.

