

Species	Distance moved to N over 40 years (miles)	Guild class (6 guilds)	Guild class (3 guilds)	Feeder use	Audubon urban
American Bittern	36.8	wetland/aquatic	wetland/aquatic	rarely/never	
American Black Duck	182.0	wetland/aquatic	wetland/aquatic	rarely/never	
American Crow	88.8	generalist	land-based	regularly	2
American Dipper	37.2	wetland/aquatic	wetland/aquatic	rarely/never	
American Goldfinch	219.1	generalist	land-based	regularly	
American Kestrel	54.5	grassland	land-based	rarely/never	2
American Robin	206.0	woodland	land-based	occasionally	2
American Three-toed Woodpecker	203.1	woodland	land-based	rarely/never	
American Tree Sparrow	54.3	shrubland	land-based	regularly	
American Woodcock	52.7	wetland/aquatic	wetland/aquatic	rarely/never	
Bachman's Sparrow	15.6	woodland	land-based	rarely/never	
Band-tailed Pigeon	69.5	woodland	land-based	regularly	
Barn Owl	107.1	grassland	land-based	rarely/never	
Barred Owl	103.8	woodland	land-based	rarely/never	
Belted Kingfisher	98.2	wetland/aquatic	wetland/aquatic	rarely/never	
Bewick's Wren	54.8	shrubland	land-based	regularly	
Black Phoebe	40.6	wetland/aquatic	wetland/aquatic	rarely/never	
Black Rail*	64.3	wetland/aquatic	wetland/aquatic	rarely/never	
Black Turnstone	177.7	coastal	coastal	rarely/never	
Black Vulture	51.9	generalist	land-based	rarely/never	
Black-and-white Warbler	22.7	woodland	land-based	occasionally	
Black-backed Woodpecker	100.9	woodland	land-based	rarely/never	
Black-bellied Plover	114.2	coastal	coastal	rarely/never	
Black-billed Magpie	85.6	woodland	land-based	regularly	2
Black-capped Chickadee	90.3	woodland	land-based	regularly	
Black-headed Gull	33.4	coastal	coastal	rarely/never	
Blue Jay	89.1	woodland	land-based	regularly	
Bohemian Waxwing	111.2	woodland	land-based	occasionally	2
Boreal Chickadee	279.4	woodland	land-based	regularly	
Brant	193.4	coastal	coastal	rarely/never	
Brewer's Blackbird	13.6	generalist	land-based	regularly	2
Brown Creeper	103.8	woodland	land-based	regularly	
Brown Thrasher	34.3	shrubland	land-based	occasionally	
Brown-headed Nuthatch	23.0	woodland	land-based	regularly	

Cactus Wren	49.9	shrubland	land-based	regularly	
California Quail	117.7	shrubland	land-based	occasionally	2
Canyon Wren	94.0	generalist	land-based	rarely/never	
Carolina Wren	57.0	woodland	land-based	regularly	
Cattle Egret	33.8	wetland/aquatic	wetland/aquatic	rarely/never	
Cedar Waxwing	189.2	woodland	land-based	occasionally	2
Chestnut-backed Chickadee	123.2	woodland	land-based	regularly	
Chipping Sparrow	11.4	woodland	land-based	occasionally	2
Cinnamon Teal	159.4	wetland/aquatic	wetland/aquatic	rarely/never	
Clapper Rail	27.8	wetland/aquatic	wetland/aquatic	rarely/never	
Clark's Nutcracker	123.6	woodland	land-based	occasionally	
Common Ground-Dove	89.6	shrubland	land-based	occasionally	
Common Merganser	105.6	wetland/aquatic	wetland/aquatic	rarely/never	
Common Yellowthroat	109.3	shrubland	land-based	rarely/never	
Dark-eyed Junco	116.1	woodland	land-based	regularly	
Double-crested Cormorant*	117.4	wetland/aquatic	wetland/aquatic	rarely/never	
Downy Woodpecker	29.3	woodland	land-based	regularly	
Dunlin	71.1	wetland/aquatic	wetland/aquatic	rarely/never	
Eastern Bluebird	114.5	woodland	land-based	regularly	
Eastern Phoebe	47.9	woodland	land-based	rarely/never	
European Starling*	85.6	generalist	land-based	regularly	1
Ferruginous Hawk	62.8	grassland	land-based	rarely/never	
Fish Crow	15.1	wetland/aquatic	wetland/aquatic	rarely/never	2
Forster's Tern	44.4	wetland/aquatic	wetland/aquatic	rarely/never	
Fox Sparrow	286.8	shrubland	land-based	regularly	
Gadwall	148.9	wetland/aquatic	wetland/aquatic	rarely/never	
Gambel's Quail	4.6	shrubland	land-based	occasionally	2
Golden Eagle	58.3	grassland	land-based	rarely/never	
Golden-crowned Kinglet	87.3	woodland	land-based	occasionally	
Golden-crowned Sparrow	155.0	shrubland	land-based	regularly	
Grasshopper Sparrow	23.0	grassland	land-based	rarely/never	
Gray Catbird	21.2	shrubland	land-based	occasionally	
Great Egret	109.8	wetland/aquatic	wetland/aquatic	rarely/never	
Greater Prairie-Chicken	26.6	grassland	land-based	rarely/never	
Greater Yellowlegs	124.1	wetland/aquatic	wetland/aquatic	rarely/never	
Green Heron	61.9	wetland/aquatic	wetland/aquatic	rarely/never	
Green-tailed Towhee	13.3	shrubland	land-based	occasionally	

Green-winged Teal	157.2	wetland/aquatic	wetland/aquatic	rarely/never	
Hairy Woodpecker	135.2	woodland	land-based	regularly	
Hermit Thrush	91.4	woodland	land-based	occasionally	
Herring Gull	23.8	wetland/aquatic	wetland/aquatic	rarely/never	2
Horned Grebe	50.5	wetland/aquatic	wetland/aquatic	rarely/never	
House Finch*	269.8	generalist	land-based	regularly	2
House Sparrow*	77.4	generalist	land-based	regularly	1
House Wren	34.1	woodland	land-based	occasionally	
Hutton's Vireo	44.5	woodland	land-based	rarely/never	
King Rail	14.3	wetland/aquatic	wetland/aquatic	rarely/never	
Ladder-backed Woodpecker	14.9	woodland	land-based	occasionally	
Lark Sparrow	44.5	generalist	land-based	occasionally	
Laughing Gull	69.0	coastal	coastal	rarely/never	2
Least Bittern	179.5	wetland/aquatic	wetland/aquatic	rarely/never	
Least Sandpiper	57.4	wetland/aquatic	wetland/aquatic	rarely/never	
Lesser Yellowlegs	45.0	wetland/aquatic	wetland/aquatic	rarely/never	
Lincoln's Sparrow	165.3	shrubland	land-based	occasionally	
Marbled Murrelet*	361.9	coastal	coastal	rarely/never	
Marsh Wren	25.2	wetland/aquatic	wetland/aquatic	rarely/never	
Mountain Chickadee	67.0	woodland	land-based	regularly	
Mourning Dove	147.3	generalist	land-based	regularly	2
Nashville Warbler	79.3	woodland	land-based	rarely/never	
Northern Bobwhite	85.7	shrubland	land-based	occasionally	
Northern Cardinal	58.9	shrubland	land-based	regularly	2
Northern Flicker	192.5	woodland	land-based	regularly	
Northern Gannet	83.3	coastal	coastal	rarely/never	
Northern Goshawk	71.9	woodland	land-based	occasionally	
Northern Harrier	76.8	grassland	land-based	rarely/never	
Northern Mockingbird	13.5	shrubland	land-based	occasionally	2
Northern Pintail	91.0	wetland/aquatic	wetland/aquatic	rarely/never	
Northern Pygmy-Owl	163.6	woodland	land-based	rarely/never	
Northern Saw-whet Owl*	168.3	woodland	land-based	rarely/never	
Northern Shoveler	78.5	wetland/aquatic	wetland/aquatic	rarely/never	
Orange-crowned Warbler	32.2	generalist	land-based	occasionally	
Osprey	10.7	wetland/aquatic	wetland/aquatic	rarely/never	
Ovenbird	23.6	woodland	land-based	rarely/never	
Pied-billed Grebe	63.6	wetland/aquatic	wetland/aquatic	rarely/never	

Pileated Woodpecker	125.3	woodland	land-based	regularly	
Pine Grosbeak	148.3	woodland	land-based	regularly	
Pine Siskin	288.2	woodland	land-based	regularly	
Pinyon Jay	41.6	woodland	land-based	regularly	
Prairie Warbler	17.3	shrubland	land-based	rarely/never	
Purple Finch	433.0	woodland	land-based	regularly	
Pygmy Nuthatch	265.5	woodland	land-based	regularly	
Red Knot	97.2	coastal	coastal	rarely/never	
Red-bellied Woodpecker	59.7	woodland	land-based	regularly	
Red-breasted Merganser	316.9	wetland/aquatic	wetland/aquatic	rarely/never	
Red-breasted Nuthatch	244.4	woodland	land-based	regularly	
Red-cockaded Woodpecker	78.2	woodland	land-based	rarely/never	
Redhead	68.1	wetland/aquatic	wetland/aquatic	rarely/never	
Red-shouldered Hawk	76.2	woodland	land-based	rarely/never	
Red-tailed Hawk	82.4	woodland	land-based	rarely/never	2
Red-winged Blackbird	99.3	generalist	land-based	regularly	
Ring-billed Gull*	355.8	wetland/aquatic	wetland/aquatic	rarely/never	2
Ring-necked Duck	219.2	wetland/aquatic	wetland/aquatic	rarely/never	
Ring-necked Pheasant*	110.8	grassland	land-based	occasionally	
Rock Sandpiper	93.9	coastal	coastal	rarely/never	
Rock Wren	10.6	generalist	land-based	rarely/never	
Rough-legged Hawk	178.7	grassland	land-based	rarely/never	
Ruby-crowned Kinglet	45.0	woodland	land-based	regularly	
Ruddy Duck	13.5	wetland/aquatic	wetland/aquatic	rarely/never	
Ruddy Turnstone	17.1	coastal	coastal	rarely/never	
Rufous-crowned Sparrow	63.8	shrubland	land-based	occasionally	
Rusty Blackbird*	100.9	wetland/aquatic	wetland/aquatic	rarely/never	
Sage Thrasher	67.7	shrubland	land-based	occasionally	
Sandhill Crane	37.8	wetland/aquatic	wetland/aquatic	rarely/never	
Say's Phoebe	29.9	generalist	land-based	rarely/never	
Seaside Sparrow	43.0	coastal	coastal	rarely/never	
Semipalmated Plover	90.1	coastal	coastal	rarely/never	
Sharp-shinned Hawk	37.6	woodland	land-based	regularly	2
Short-billed Dowitcher	147.7	coastal	coastal	rarely/never	
Snow Goose	217.1	wetland/aquatic	wetland/aquatic	rarely/never	
Snowy Egret	43.3	wetland/aquatic	wetland/aquatic	rarely/never	
Song Sparrow	74.5	shrubland	land-based	regularly	

Sora	130.7	wetland/aquatic	wetland/aquatic	rarely/never	
Sprague's Pipit	7.8	grassland	land-based	rarely/never	
Spruce Grouse	316.1	woodland	land-based	rarely/never	
Steller's Jay	264.4	woodland	land-based	regularly	
Surfbird	61.1	coastal	coastal	rarely/never	
Townsend's Solitaire	99.2	woodland	land-based	occasionally	
Tree Swallow	59.1	generalist	land-based	rarely/never	
Tundra Swan	129.1	wetland/aquatic	wetland/aquatic	rarely/never	
Turkey Vulture	53.2	generalist	land-based	rarely/never	
Varied Thrush	229.9	woodland	land-based	regularly	
Verdin	12.8	shrubland	land-based	occasionally	
Virginia Rail	231.6	wetland/aquatic	wetland/aquatic	rarely/never	
White Ibis	99.8	wetland/aquatic	wetland/aquatic	rarely/never	
White-crowned Sparrow	21.7	shrubland	land-based	regularly	
White-eyed Vireo	67.6	shrubland	land-based	rarely/never	
White-throated Sparrow	109.1	woodland	land-based	regularly	
White-winged Scoter	130.3	wetland/aquatic	wetland/aquatic	rarely/never	
Wild Turkey*	407.6	woodland	land-based	occasionally	
Williamson's Sapsucker	50.5	woodland	land-based	rarely/never	
Winter Wren	138.8	woodland	land-based	occasionally	
Wood Duck	37.1	wetland/aquatic	wetland/aquatic	rarely/never	
Yellow-crowned Night-Heron	35.8	wetland/aquatic	wetland/aquatic	rarely/never	
"Brown" Towhee (lumped)*	15.0	shrubland	land-based	occasionally	2
"Canada" Goose (lumped)*	119.9	wetland/aquatic	wetland/aquatic	occasionally	2
"Northern" Oriole (lumped)*	21.1	woodland	land-based	occasionally	
"Rufous-sided" Towhee (lumped)*	215.0	shrubland	land-based	occasionally	
"Screech" Owl (lumped)*	75.2	woodland	land-based	rarely/never	
"Scrub" Jay (lumped)*	45.8	shrubland	land-based	regularly	
"Sharp-tailed" Sparrow (lumped)*	37.3	coastal	coastal	rarely/never	
"Solitary" Vireo (lumped)*	19.4	woodland	land-based	rarely/never	
"Tufted" Titmouse (lumped)*	27.0	woodland	land-based	regularly	
"Yellow-bellied" Sapsucker (lumped)*	50.1	woodland	land-based	occasionally	