

Project Title

Survey of Bird Species Diversity Before and After the Construction of the Big Hollow Lake.

Project Description

A bird species survey to compare species diversity before and after the construction of the Big Hollow Lake at Big Hollow Recreation Area.

Project Goals

The goal of this project was to compare bird species diversity before (2004) and after (2017) the construction of the Big Hollow Lake. This was accomplished by using Iowa Ornithology Union grant funds to purchase a SM3BAT song meter from Wildlife Acoustics. This survey was conducted from 12 June to 8 August 2017. The song meter was placed at 31 of the 55 survey points of the original 2004 survey for 1 full day recording from sunrise to sunset. During the 2004 study each point was surveyed for five minutes. To help standardize the 2017 study, data from each point was randomly cut to five minutes.

The 2004 survey resulted in the identification of 53 individual species from 55 survey points. The 2017 survey resulted in the identification of 48 individual species from 31 survey points. 38 species were identified in both 2004 and 2017. Species lists can be found on page 2.

Project Impact

The species lists from this survey will be used as a birding checkoff list for Big Hollow Recreation Area. In the coming months, these lists will be used during field trips hosted by the nature center staff. This study suggests that automated recording devices such as the SM3BAT song meter can be useful monitoring tools. The 2017 survey data will also be analyzed at a later date to determine presence of additional species not found in the randomized five minute per day files.

Species found in 2004 and 2017	
American Crow (<i>Corvus brachyrhynchos</i>)	Great Crested Flycatcher (<i>Myiarchus crinitus</i>)
American Goldfinch (<i>Carduelis tristis</i>)	House Finch (<i>Carpodacus mexicanus</i>)
American Robin (<i>Turdus migratorius</i>)	House Wren (<i>Troglodytes aedon</i>)
Baltimore Oriole (<i>Icterus galbula</i>)	Indigo Bunting (<i>Passerina cyanea</i>)
Barred Owl (<i>Strix varia</i>)	Mourning Dove (<i>Zenaida macroura</i>)
Belted Kingfisher (<i>Megaceryle alcyon</i>)	Northern Cardinal (<i>Cardinalis cardinalis</i>)
Black-capped Chickadee (<i>Parus atricapillus</i>)	Purple Finch (<i>Carpodacus purpureus</i>)
Blue Jay (<i>Cyanocitta cristata</i>)	Red-bellied Woodpecker (<i>Melanerpes carolinus</i>)
Brown-headed Cowbird (<i>Molothrus ater</i>)	Red-tailed Hawk (<i>Buteo jamaicensis</i>)
Canada Goose (<i>Branta canadensis</i>)	Red-winged Blackbird (<i>Agelaius phoeniceus</i>)
Carolina Wren (<i>Thryothorus ludovicianus</i>)	Rose-breasted Grosbeak (<i>Pheucticus ludovicianus</i>)
Cedar Waxwing (<i>Bombycilla cedrorum</i>)	Rufous-sided Towhee (<i>Pipilo erythrophthalmus</i>)
Chipping Sparrow (<i>Spizella passerina</i>)	Song Sparrow (<i>Melospiza melodia</i>)
Common Grackle (<i>Quiscalus quiscula</i>)	Tree Swallow (<i>Iridoprocne bicolor</i>)
Common Yellowthroat (<i>Geothlypis trichas</i>)	Tufted Titmouse (<i>Parus bicolor</i>)
Downy Woodpecker (<i>Picoides pubescens</i>)	White-breasted Nuthatch (<i>Sitta carolinensis</i>)
Eastern Pewee (<i>Contopus virens</i>)	Wood Duck (<i>Aix sponsa</i>)
Eastern Phoebe (<i>Sayornis phoebe</i>)	Wood Thrush (<i>Hylocichla mustelina</i>)
Gray Catbird (<i>Dumetella carolinensis</i>)	
Great Blue Heron (<i>Ardea herodias</i>)	
	Species found in only 2017 survey
Species found in only 2004 survey	Northern Flicker (<i>Colaptes auratus</i>)
Black-billed Cuckoo (<i>Coccyzus erythrophthalmus</i>)	European Starling (<i>Sturnus vulgaris</i>)
Blue-winged Warbler (<i>Vermivora pinus</i>)	Hairy Woodpecker (<i>Picoides vilosus</i>)
Brown Thrasher (<i>Toxostoma rufum</i>)	House Sparrow (<i>Passer domesticus</i>)
Common Bobwhite (<i>Colinus virginianus</i>)	Mallard (<i>Anas platyrhynchos</i>)
Dickcissel (<i>Spiza Americana</i>)	Osprey (<i>Pandion haliaetus</i>)
Hermit Thrush (<i>Catharus guttatus</i>)	Pileated Woodpecker (<i>Dryocopus pileatus</i>)
Prothonotary Warbler (<i>Protonotaria citrea</i>)	Red-Headed Woodpecker (<i>Melanerpes erythrocephalus</i>)
Red-eyed Vireo (<i>Vireo olivaceus</i>)	Field Sparrow (<i>Spizella pusilla</i>)
Ring-necked Pheasant (<i>Phasianus colchicus</i>)	
Ruby-throated Hummingbird (<i>Archilochus colubris</i>)	
Savannah Sparrow (<i>Passerculus sandwichensis</i>)	
White-crowned Sparrow (<i>Zonotrichia leucophrys</i>)	
Wild Turkey (<i>Meleagris gallopavo</i>)	
Yellow-billed Cuckoo (<i>Coccyzus americanus</i>)	
Yellow-shafted Flicker (<i>Colaptes auratus</i>)	