

Preserve Breeding Bird Study Summary 2013-2014

by Roma Lenehan

Introduction

The purpose of the Lakeshore Nature Preserve Breeding Bird and Habitat Study is to identify the birds likely to breed and their habitat preferences in the Preserve from 2013 to 2015. The results will be compared with the baseline 2000 to 2002 results from the Breeding Bird and Habitat Study (Fall 2001 Newsletter at friendsslakeshorepreserve.com) to see if there have been shifts in breeding birds over the last decade due to habitat change or bird population changes. The project will determine the bird species in the various areas of the Preserve, their approximate numbers, and confirm the breeding of each species. The Breeding Bird Project tries to confirm nesting birds using the methods of the Wisconsin Breeding Bird Atlas. The Breeding Bird Atlas identifies the birds as possible (i.e. appearing during the breeding season), probable (i.e. singing multiple weeks or multiple males defending territories), and confirmed (i.e. carrying nest material, nest building, mating, or feeding young in a nest). Volunteer participation was promoted through the Friends newsletter, PRESERVE!, the Friends and Preserve websites, and Mara McDonald's bird banding email list.

Bird surveys were conducted throughout the Preserve between May 24 and July 1. Breeding bird confirmation occurred throughout the Preserve from May 15 to August 15. Although few people submitted records, the birding listserv and Cornell Laboratory of Ornithology's ebird were also checked.

The area of the project increased. Now Big Woods is included in the Lakeshore Preserve, adding about 30 acres of forest land. In addition, it was decided that it was unreasonable to have an absolute edge to the Preserve. Some birds that spend most of their time in the Preserve nest in the adjacent campus. Examples include the Cliff Swallows (campus buildings and bridges near water), Barn Swallow (bridges), Chimney Swift (campus buildings), Eastern Phoebe (the majority nested on buildings), and House Finch. Other species have larger territories that include both campus areas and Preserve areas, such as most birds of prey and several Eastern Kingbirds. Efforts were made to eliminate species that nested primarily on campus and used the Preserve rarely such as Rock Pigeons, most Starlings (bring their young to the Class of 1918 Marsh) and House Sparrows, and many Chipping Sparrows.

Overview in 2013

In 2013 Birds were surveyed throughout the Preserve in June. Breeding bird confirmation occurred throughout the Preserve during the summer. The eastern Lakeshore Path and Muir Woods were not visited.

The 2013 study detected 84 species in the Preserve. Of these, 42 species were confirmed (C), 26 were probable (Pr), 11 were possible (Po), and 5 were unlikely to be nesting. The 2013 survey noted several species not found during the previous study:

Turkey (C), Black-billed Cuckoo (Po), Cliff Swallow (C), Sedge Wren (Po), Nashville Warbler (Pr), Orchard Oriole (Pr), and Eastern Towhee (Po).

Overview in 2014

A very late spring, when the weather remained cool and the trees failed to leaf out until it suddenly got very warm the third or fourth week in May, delayed most breeding bird activity. Even singing was subdued. Birds waited for the simultaneous leaf out and associated insect food, so that instead of dividing into early, middle and late nesting species, all the birds appeared to nest at the same time in late May. The simultaneous and hurried nesting of the birds made it hard to locate and confirm them. For instance, almost no Blue-grey Gnatcatchers were found during the counts, but there were multiple families with young later in June and July. Shortly after spring finally arrived, the weather turned very wet. A series of heavy rains raised the level in the Class of 1918 Marsh and Lake Mendota, probably flooding the nests of marsh and shorebirds. In any case, birds like Spotted Sandpiper seemed to disappear until the high water came down in August.

In 2014, 158 systematic point counts (mostly 10 minute point counts, including birds between points) were done throughout the Preserve over the course of eleven days from May 24 and June 22. After eliminating duplications, there were 133 unique points. Counts were done from trails and most points were at trail intersections or other obvious locations. The Counts identified at least 74 species and were used to estimate the number breeding pairs of each species. Due to a variety of factors these counts do not accurately reflect the total bird population. Some birds breed at different times (for instance Great Horned Owls nest in January through March). Others are hard to detect in point counts. In order to confirm birds and check for additional birds, multiple visits were made to most areas. Using this information, adjustments were made to better reflect the presence of breeding birds in various areas. Adjustments included adding birds to the area and summary lists and removing duplicate sightings. Based on these counts and the corrections, there were estimated to be more than 1374 pairs of 68 species of birds.

The 2014 study confirmed 52 breeding bird species, found 17 probable species, 5 possible species, and 10 species unlikely to be nesting, including a variety of late migrating birds such as Herring Gull, White Pelican, Olive-sided Flycatcher, Alder Flycatcher, and Swainson's Thrush.

Combined Results 2014-2015

The breeding birds of the Preserve have changed little between the 2000-2002 and 2013-2015 Breeding Bird Study (see Habitat and Abundance Chart). Common birds stayed common and rare birds remained rare. A few species have increased or decreased, generally reflecting regional changes in abundance. Despite restoration, neither grassland nor savanna bird diversity have increased. The number and species diversity of marsh birds has declined, possibly due to declining habitat quality in the Class of 1918 Marsh.

The Preserve Breeding Bird Study 2013-2014 found 55 Confirmed (C), 16 Probable (Pr), and 8 Possible (Po) breeding bird species (the Breeding Bird Study in 2000-2002 had 69 Confirmed, 12 Probable, and 5 Possible). The birds that are Probable and Confirmed,

called likely breeding birds, are similar in the two periods. All 47 likely species with more than five breeding pairs in 2002 are still likely breeding birds now. Only the most elusive and irregular species were not found: 3 (none Confirmed) of the 15 uncommon and 8 of the 19 rare breeding birds (see chart). In summary, 70 of the 81 (86 %) likely breeding birds from the original study are still likely breeding birds.

2000-02 Preserve Breeding Birds Not Found 2013-14

<i>Name</i>	<i>Status</i>	<i>Pairs</i>	<i>Habitat</i>
Pied-billed Grebe	1C, 1Po	2	Marsh
Mute Swan	2C, 1Po	1	Marsh
Ruddy Duck	2Pr	1	Marsh
American Coot	2Pr	4	Marsh
Red-headed Woodpecker	1C, 2Pr	2	Savanna
Purple Martin	C1, 1Po	2	House
Least Flycatcher	2Pr, 1Po	4	Savanna
Chestnut-sided Warbler	C1, 1Pr	1	Forest
Field Sparrow	1C, 1Pr, 1Po	1	Grassland
Savannah Sparrow	1Pr, 2Po	3	Grassland
Pine Siskin	1C, 1Pr	1	Evergreen

Of the 55 Confirmed birds, the two new birds are Cliff Swallow, which nested on campus buildings near the Bay and the Willow Creek bridges, and the Wild Turkey (first nested 2008, confirmed both years). (For a complete list, see the Friends website.) In addition, the study Confirmed Barred Owl (Po 2002, Arlene Koziol 2014) and the previously Probable Sandhill Crane (pair present 2001, nested annually since 2003), Bank Swallow (Tent Colony Woods shoreline 2014), Rose-breasted Grosbeak (both years), Prothonotary Warbler (both years, attracted by houses at Picnic Point Marsh), and Broad-winged Hawk (Eagle Heights Woods in 2013). Of the 16 Probable breeding birds, 14 were previously likely breeding birds. New birds included two rare Probable species, Orchard Oriole and Nashville Warbler, and 5 of 8 rare Possible birds, Turkey Vulture, Black-billed Cuckoo, Sedge Wren, Eastern Towhee, and Lincoln’s Sparrow.

Some species appeared to change in abundance since 2002. American Robin population increased dramatically, from the twelfth to the second most common bird, doubling in numbers from an estimated 36 pairs to 78 pairs. Other increases in the very common and common birds (from rank 2002 to rank 2014 and number 2002 to number 2014): Red-bellied Woodpecker, from 18th to 11th and 28 to 37; Warbling Vireo, from 22nd to 12th and 22 to 36; White-breasted Nuthatch, from 28th to 15th and 18 to 34, [Cliff Swallow, noted above, from not present to 16th and 0 to 34]; and Common Yellowthroat, from 25th to 17th and 25 to 33. These changes are relatively small and may be due to difference in detection or year to year fluctuations. In contrast, the decreases in the very common and common birds (with the exception of the Cedar Waxwing (8th to 22nd and 44 to 22), which breeds in July and was not counted adequately) may be significant: Blue Jay, from 8th to 22nd and 46 to 26 (West Nile), American Crow; from

15th to 30th and 30 to 18 (West Nile); House Finch, from 30th to 33rd and 26 to 13 (regional decline). The fairly common (whose numbers are much smaller) species that increased were: Swamp Sparrow, from 56th to 40th and 3 to 9; Eastern Bluebird from 50th to 35th and 4 to 10 (additional maintained bird houses); Cooper's Hawk, from 54th to 43rd and 3 to 7; Rose-breasted Grosbeak, from 70th to 44th and 1 to 7. The fairly common species and other less common species that decreased: Willow Flycatcher, from 33rd to 46th and 14 to 6; Marsh Wren, from 24th to 47th and 20 to 6; Northern Flicker, from 32nd to 52nd and 14 to 5; Sora Rail, from 37th to 59th and 13 to 3; Brown Thrasher, from 45th to 65th and 6 to 1. (Note that several species may have the same number of birds but a different rank).

Changes in Marsh Birds

The diversity (see chart listing lost birds) and abundance of marsh birds in the Preserve has decreased, continuing a 25-year trend. Heavy rains both years caused water fluctuations and persistent high water in the marshes, making successful nesting difficult. The lack of plant diversity, the predominance of hybrid cattail, and the shallowness of the Class of 1918 Marsh may contribute to the decline of marsh birds. Both Virginia (from 4 to 0 or 1) and Sora Rails (from 13 to at most 2 or 3) declined, in 2014 attempting to nest in the Bay Marsh rather than the Class of 1918 Marsh. Other birds that usually nest in this Marsh, like Blue-winged Teal, Sandhill Crane, and Spotted Sandpiper, tried to nest in the small Picnic Point Marsh. Even Marsh Wrens (from 20 to 6) appear to have declined. (Note that the marsh birds are almost impossible to count in the Bay Marsh).

Final Year of the Breeding Bird Project

In the final year of the Breeding Bird Project, additional efforts will be made to confirm the species that are not yet confirmed. A year without a flood in early June might allow the confirmation of some of the shore and marsh birds that probably were flooded out the last two years. If possible additional counts will be conducted to confirm the population trends noted in 2014. Additional data analysis will occur. Bird lists of each area of the Preserve will be created.

Thank you

Thank you to all the people who helped with the Breeding Bird Project: Bill Barker, Glenda Denniston, Marti Evanson, Trudy Karlson, Arlene Koziol, Gisela Kutzbach, Mara McDonald, Paul Noeldner, Marcia Schmidt, the Bluebird box monitors and the Preserve birding community.