



Dike 14-Doan Brook IBA Avian Survey Project Progress Report 4: August 2015-March 2016

Background

In 2000, the National Audubon Society designated Cleveland Lakefront Nature Preserve (CLNP), also known as Dike 14, as an Important Bird Area because the area provides essential habitat for migratory, breeding, and wintering birds. CLNP is an 88-acre peninsula on the south shore of Lake Erie that was originally formed by the Corps of Engineers' disposal of dredge spoils between 1976 and 1999. The area is located at the intersection of four migratory bird routes: Lake Erie, the Lake Erie shoreline, the Cuyahoga River valley, and the Doan Brook valley. Over time, its diverse habitats have sustained 280 species of birds, 41 species of butterflies, and many mammals.

In 2012 the Cleveland-Cuyahoga County Port Authority (lease holder and manager for the property) changed the area's name from Dike 14 to Cleveland Lakefront Nature Preserve and opened CLNP to the public. In 2014, Western Cuyahoga Audubon Society, Kirtland Bird Club, and the Audubon Society of Greater Cleveland adopted CLNP as a site for on-going monitoring of bird activity and initiated this Avian Survey Project. The project received funding through a grant from the Grange Insurance Audubon Center's IBA Small Grants Program.

This progress report describes work on the project between August 1, 2015 and March 21, 2016.

Summary of Work to Date

The Avian Survey Project has progressed according to the timeline proposed in the grant application to the IBA Small Grants Program. Survey frequency was very good over the mild winter of 2015-16, with a total of 83 surveys performed between August 2015 and mid March 2016. Two or more surveys were performed during most weeks, with only a few weeks when weather limited the surveys to one. Almost all of the surveys included all 17 points, with two surveying 16 and one, when weather deteriorated, including only one point and a checklist.

Surveys by two of the three regular surveyors have been somewhat less frequent in recent months, but other surveyors have stepped up to keep regular surveys going. A total of 17

volunteers participated during this reporting period. Eleven surveyors took part in more than two surveys during the reporting period, and 5 others helped out in a survey or two.

All data (except for one day, for which data are pending) have been initially entered by the surveyors, compiled in a central database, and uploaded into Cornell Lab of Ornithology's ebird database. Data summaries have also been posted in a Google docs worksheet (see https://docs.google.com/spreadsheets/d/1vc-chWRU_Ld5lrMxKzQm7ZvdmjnE_HnSKRYZiAQdNn4/edit?usp=sharing).

In the fall of 2015, the Port Authority initiated what is intended to be a multi-year effort to remove invasive species and improve habitat at CLNP. In late August, the "sparrow field" on the west side of the site and the trails between that field and the northwest point were treated with herbicide to kill invasive species and then seeded with a temporary seed mix. The treated areas were mowed in November 2015.

Summary of Data

Detailed summaries of the species observed during the Avian Survey Project from 1 August 2015 through 21 March 2016 are attached. Surveys have documented 184 species of birds at the site since the survey's inception. In addition to the attached detailed tables, the two tables below summarize the most frequently observed species for two time periods: 1) all surveys to date, and 2) Winter 2015-16: 1 November 2015 – 29 February 2016.

Results of All Surveys to Date (Table 1)

Table 1 summarizes the most commonly observed species during all surveys to date. The table presents frequency of observance in three ways: 1) the percentage of points at which a species was counted (left column); 2) the percentage of overall surveys during which the species was counted at one or more points (middle column); and 3) the average number of individuals counted per survey (right column). It should be noted that the data are preliminary and have not been adjusted for species detectability or other factors, so that vocal or visually obvious species may be over represented.

Red-winged Blackbirds, Songs Sparrows, American Robins, American Goldfinches, and Northern Cardinal are the five species reported at the most points during the full 20-month survey period (see Table 1, left column). The list of most commonly reported species changes somewhat when the number of surveys during which the species was reported is considered, rather than the number of points at which it was observed (see Table 1, middle column¹). By this measure, Northern Cardinal remains the most commonly observed. Downy Woodpecker, American Goldfinch, American Robin, and Red-winged Blackbird round out the top five species

¹ Percent of Surveys Reported is based on checklist data. Percent of Points Reported and Individuals Counted/Survey are based on point count data.

seen at some time during a survey. With the exception of Red-winged Blackbird, these are all non-migratory (or partially migratory) species that may be regularly present but in smaller numbers. A small number of Red-winged Blackbirds was noted at CLNP during most surveys over the relatively mild winter of 2015-16.

The average number of individuals of each species recorded per survey provides an assessment of the species that are most numerous (see Table 1, right column). By this measure, Red-winged Blackbirds are most common, followed by American Robins, Chimney Swifts (feeding over the area), Song Sparrows, and American Goldfinch.

The species included in Table 1 have shifted slightly since the previous report as a result of different seasons included in the reporting period (13 months from mid-summer through late summer in the previous report and 20 months from mid-summer through early spring in this report). The table is intended to give a snapshot of bird activity at the site, rather than to support any rigorous analysis.

Cleveland Lakefront Nature Preserve - Avian Surveys					
Table 1 - Summary of Most Commonly Observed Species					
All Surveys 4 July 2014 - 21 March 2016					
Percent of Points Reported		Percent of Surveys Reported		Individuals Counted/Survey	
Red-winged Blackbird	43%	Northern Cardinal	97%	Red-winged Blackbird	21
Song Sparrow	40%	Downy Woodpecker	90%	American Robin	14
American Robin	36%	American Goldfinch	89%	Chimney Swift	11
American Goldfinch	25%	American Robin	89%	Song Sparrow	10
Northern Cardinal	23%	Red-winged Blackbird	85%	American Goldfinch	9
Yellow Warbler	23%	Song Sparrow	83%	Yellow Warbler	9
Gray Catbird	22%	Black-capped Chickadee	72%	Barn Swallow	9
Downy Woodpecker	21%	Blue Jay	68%	Gray Catbird	5
Chimney Swift	15%	Northern Flicker	60%	Northern Cardinal	5
Warbling Vireo	13%	Mourning Dove	56%	Downy Woodpecker	5
Barn Swallow	12%	Gray Catbird	52%	European Starling	4
Willow Flycatcher	12%	Chimney Swift	48%	Common Grackle	3
Northern Flicker	11%	Eastern Towhee	47%	Blue Jay	3
Blue Jay	9%	Common Yellowthroat	43%	Unidentified Blackbird	3
Common Yellowthroat	9%	House Wren	43%	Warbling Vireo	3

Note: Gulls and waterfowl are excluded from this summary. Data are preliminary and have not been adjusted to account for species detectability or other factors.

Results Winter 2015-16: 1 November 2015 – 29 February 2016 (Table 2)

Results from November 2015 through February 2016 reflect the species that winter at CLNP. During this relatively mild winter, resident species such as Downy Woodpecker, American Goldfinch, American Robin, Northern Cardinal, and Black-capped Chickadee were joined by a small number of Red-winged Blackbirds that remained there throughout the winter.

Species of Particular Interest

All five of the species of special interest have been observed at CLNP. As was previously noted, singing Wood Thrush were observed consistently in the interior of the site (primarily Points 5 and 14) between late May and mid July of 2015, and there appears to have been one or two pairs breeding there. Chimney Swifts fed over the area in significant numbers, beginning in early May. The area does not include suitable swift breeding habitat, but may nonetheless be serving as an important feeding area. Magnolia Warbler has been an occasional visitor during spring and fall migration, as has Yellow-bellied Sapsucker. A Red-headed Woodpecker was seen flying over the area during one point count in September 2015.

Cleveland Lakefront Nature Preserve - Avian Surveys					
Table 2 - Summary of Most Commonly Observed Species					
Winter 2015-16: November-February					
Percent of Points Reported		Percent of Surveys Reported		Individuals Counted/Survey	
Downy Woodpecker	39%	Black-capped Chickadee	100%	American Robin	28
Red-winged Blackbird	23%	Downy Woodpecker	100%	Red-winged Blackbird	16
American Goldfinch	20%	Northern Cardinal	97%	Downy Woodpecker	10
American Robin	19%	American Robin	94%	American Goldfinch	10
Northern Cardinal	18%	Blue Jay	92%	Northern Cardinal	5
Black-capped Chickadee	13%	Red-winged Blackbird	92%	Black-capped Chickadee	5
Blue Jay	12%	American Tree Sparrow	83%	American Tree Sparrow	4
American Tree Sparrow	10%	American Goldfinch	81%	Blue Jay	3
Song Sparrow	7%	Song Sparrow	53%	Song Sparrow	2
Dark-eyed Junco	4%	House Sparrow	47%	Dark-eyed Junco	2
Bald Eagle	4%	Dark-eyed Junco	44%	American Crow	2
American Crow	3%	White-breasted Nuthatch	44%	Bald Eagle	1
Red-bellied Woodpecker	3%	White-throated Sparrow	42%	Red-bellied Woodpecker	1
White-throated Sparrow	3%	Bald Eagle	36%	White-throated Sparrow	1
White-breasted Nuthatch	2%	Red-bellied Woodpecker	36%	White-breasted Nuthatch	1

Note: Gulls and waterfowl are excluded from this summary. Data are preliminary and have not been adjusted to account for species detectability or other factors.

Other Notable Species and Observations

Surveyors were pleased to note that Red-breasted Nuthatch and Eastern Towhee were intermittently observed during the winter of 2015-16. They continue to be concerned by the relatively small number and infrequent observation of White-throated Sparrows over the fall and winter.

Although 20 months of data are insufficient to permit any real analysis, graphical presentation of point count observations to date for four winter residents or short-distance migrants highlights some interesting variation between the observations during the harsh winter of 2014-15 and the mild winter of 2015-16. Note that all data and observations are preliminary. Supporting figures follow the full text of this report.

Red-winged Blackbirds (Figure 1): As has been mentioned, a small number of Red-winged Blackbirds was observed during most surveys over the past winter (34 of 36 surveys²). By contrast, this species was seen during only two of 20 surveys from November 2014 through February 2015. In addition, examination of Figure 1 shows that large migratory movements of Red-winged Blackbirds began about 9 days earlier in 2016 than they did in 2015.

American Robins (Figure 2): Like Red-winged Blackbirds, American Robins were observed much more frequently and in larger numbers over the past winter than during the winter of 2014-15, and increasing numbers of migrating birds were seen about a week earlier in the spring.

Song Sparrows (Figure 3): Wintering Song Sparrows were less frequently observed, and seen in much smaller numbers, than either Red-winged Blackbirds or American Robins, and they were seen in roughly the same fraction of the surveys in 2014-15 and 2015-16. Migratory movement of Song Sparrows appears to have begun a week to 10 days earlier this spring than it did last spring.

White-throated Sparrow (Figure 4): As is mentioned above, surveyor perception is that White-throated Sparrow numbers have been very low for several years and, additionally, that they were lower this winter than last. However, survey data do not support lower numbers this year than last. In general, more White-throated Sparrows were seen in the fall of 2015 than in the fall of 2014, and observations were more frequent over this past winter than in the winter before. It is nonetheless quite possible that observations in both years represent smaller numbers than were present in previous years, before our survey began.

Future Activities

Surveys will continue at the rate of at least one per week, with periodic reporting.

Avian Survey Project Timeline

A detailed timeline of Avian Survey Project activities to date is as follows:

- March 2014 – Partner organizations began to recruit volunteers interested in conducting surveys.

² The fraction of surveys during which a species was observed is based on checklist data, rather than on the point count data shown in the figures.

- May 2014 – Kirtland Bird Club member Laura Gooch agreed to coordinate the surveys.
- 31 May 2014 – Black Swamp Bird Observatory research director Mark Shieldcastle conducted an orientation and training session for interested volunteers (25 participants).
- July 2014 – A document outlining monitoring protocols, guidelines, and other materials for the survey (attached) was developed and distributed to interested volunteers.
- 2 July 2014 – Laura Gooch, Julie West, and Gary Neuman placed 17 metal stakes marking the point count locations.
- 4 July 2014 – Julie West and Gary Neuman conducted the first systematic survey.
- 14 July 2014 – The survey protocol document was distributed.
- 20 July 2014 – A training survey is conducted, attended by three volunteers.
- 27 July 2014 – A training survey is conducted, attended by three additional volunteers.
- 16 July 2014 – Systematic surveys began.
- 29 August 2014 – Five stakes damaged by mowing were replaced.
- 16 March 2015 – Points 4, 5, and 6 were moved to improve coverage of some parts of the site. Revised point count protocols including formal partial surveys were distributed.
- 22 March 2015 – Volunteer training survey held, attended by four volunteers.
- 5 April 2015 – Volunteer training survey held, attended by eight volunteers.
- 31 July 2015 – Surveys continue
- 25 August 2015 – Port Authority treated invasive species on the “sparrow field” and along the trail from the sparrow field to the northwest point.
- 16 November 2015 – Port Authority mowed the “sparrow field” and the previous treated areas along the trail from the sparrow field to the northwest point.

Attachments

- CLNP/Dike 14 – Avian Survey: Checklist 8/1/15-3/21/16
- CLNP/Dike 14 – Avian Survey: Count Summary 8/1/15-3/21/16







