

State of the Birds, 2018-2022

Park 566



Dan Lory
February 2023

Goals of this project

As the Chicago Park District continues the EPA-funded environmental improvement actions in the park, this study's goals are to:

1. Establish a baseline measure of bird activity in the park
2. Attempt to measure impact of environmental improvement actions on bird activity in the park
3. Record the presence of other flora and fauna as observed

2022 was year 5 of data gathering and analysis



Short-eared Owl

About Park 566

Former site of US Steel South Works. Established as a park in 2004.

70-acre narrow strip along Lake Michigan from 79th St to 85th St.

Shore is comprised of scrap cement and huge plugs of slag from the former steel mill.

Park is almost entirely flat, with a raised berm along the lake for much of the length.

In 2017 the EPA awarded \$600K for “various environmental improvements.”

Work on those improvements began in autumn, 2017.

All photos in this presentation were taken by Dan Lory at Park 566 in 2022.

Habitat Features of Park 566



Environmental Improvements

2017 start	Nov 30, controlled burn of entire northern half of park
2018 key actions	<ul style="list-style-type: none">• Cleared small trees and brush, especially area 1• Cleared and planted dune area – Burr Oak, Jack Pine, dune grasses, prairie grasses• Broadcast a mix of prairie seeds over entire park• Sprayed to eliminate invasive plants• Mowed to cut back invasives and assist sprouting prairie grasses• Planted 400 shrubs and small trees on the berm in Area 1• Erected ropeway and split-rail fencing to limit access to planted areas.
Jan 2019	<p>Unlike Jan 2018, when entire park was shaved to 6” and barren, 2019 began with knee-high vegetation over much of park.</p> <p>400 shrubs in area 1 had remarkable survival rate.</p> <p>Same was true for Burr Oak and Jack Pine in area 1.</p> <p>Dune grasses appeared to suffer significant wave and ice damage</p>
April 2019	Work crews tended to new plantings in area 1, clearing undergrowth, repairing fences, etc.

Environmental Improvements

May 2019	Late May, spot spraying of certain plants in far north end of park
June 2019	6/17, sprayed entire half of park north of elbow to control invasives. 6/28, mowed the entire park to 6". No spraying evident.
July 2019	Noted presence of prairie plants and other native species that the June mowing was intended to assist, including the following: Black-eyed Susan, Purple Coneflower Goldenrod (species unknown), Partridge Pea
August 2019	Mowed entire area from South Shore Drive to the sand piles near middle of park.
September 2019	Mowed the area overgrown with lambs quarters, east of the sand piles and north to where the lambs quarters ceased.
March 2020	Controlled burn of entire park, with small swaths of unburned grasses remaining here and there throughout park

Environmental Improvements

July 2020	Mowed entire park to about one foot high.
August 2020	Cleared weeds from around the plantings at the NE end of park. Appears to be a very high survival rate on those plantings.
March 2021	Controlled burn of entire park, including between the planted Jack Pine and Burr Oak in the dunes area to the NE and the mid-park sand piles (sparing the mulberry). Did not burn the far south copse of sumac and mulberry, and left the south sand piles untouched. Overall, a much more complete burn than the one done in end 2020.
April 2021	Sprayed entire park with broadleaf-specific herbicide. Followed with spot spraying of thistle and other invasives throughout entire park, including beach area. Weeding and clean-up around hedge plantings, and spot spraying at far north end.
September 2021	To allow better access for birders and walkers to the area around the shrub plantings, Cardno mowed a 3'-wide circle path through the tall grasses.

Environmental Improvements

December 2021	Selective burn of area north of sandpiles and west of center road. No seeding was done in 2021.
Summer 2022	Low brush cleared around plantings in beach area and NE corner of park. Spot spraying of pockets of various invasives throughout park.

End 2022 vs 2017

- Phragmites almost eliminated, but small pockets persist
- Small stands of sumac and poplar once scattered through park are gone
- Canada thistle almost eliminated
- Bluestem, coneflowers, bergamot, other natives increasing
- Shrubs, burr oak and jack pine plantings in NE corner and beach area are established

Results 2022: Bird's-eye Overview

In 2022, 223 bird species were observed

133 birders submitted 646 birding checklists across 270 days.

6 new species were added to the park's cumulative record.

At end 2022, total cumulative species count is 255.

Park 566 ranks #13 among Cook County's birding hotspots.



Review of Procedure

Bird the park consistently, keeping records of all birds sighted

- Species
- Frequency/Count
- Nature of the presence

Data for the study were gathered from:



2018	270 observation walks 202 followed a fixed route, 68 were of varied routes
2019	469 observation walks 217 followed a fixed route, 252 were of varied routes
2020	251 observation walks (low number due to COVID restrictions) 87 followed a fixed route, 164 were of varied routes
2021	538 observation walks 195 followed a fixed route, 343 were of varied routes
2022	646 observation walks 249 followed a fixed route, 397 were of varied routes

NOTE: Number of observers and observation walks continues to increase year on year.

State of the Birds over time

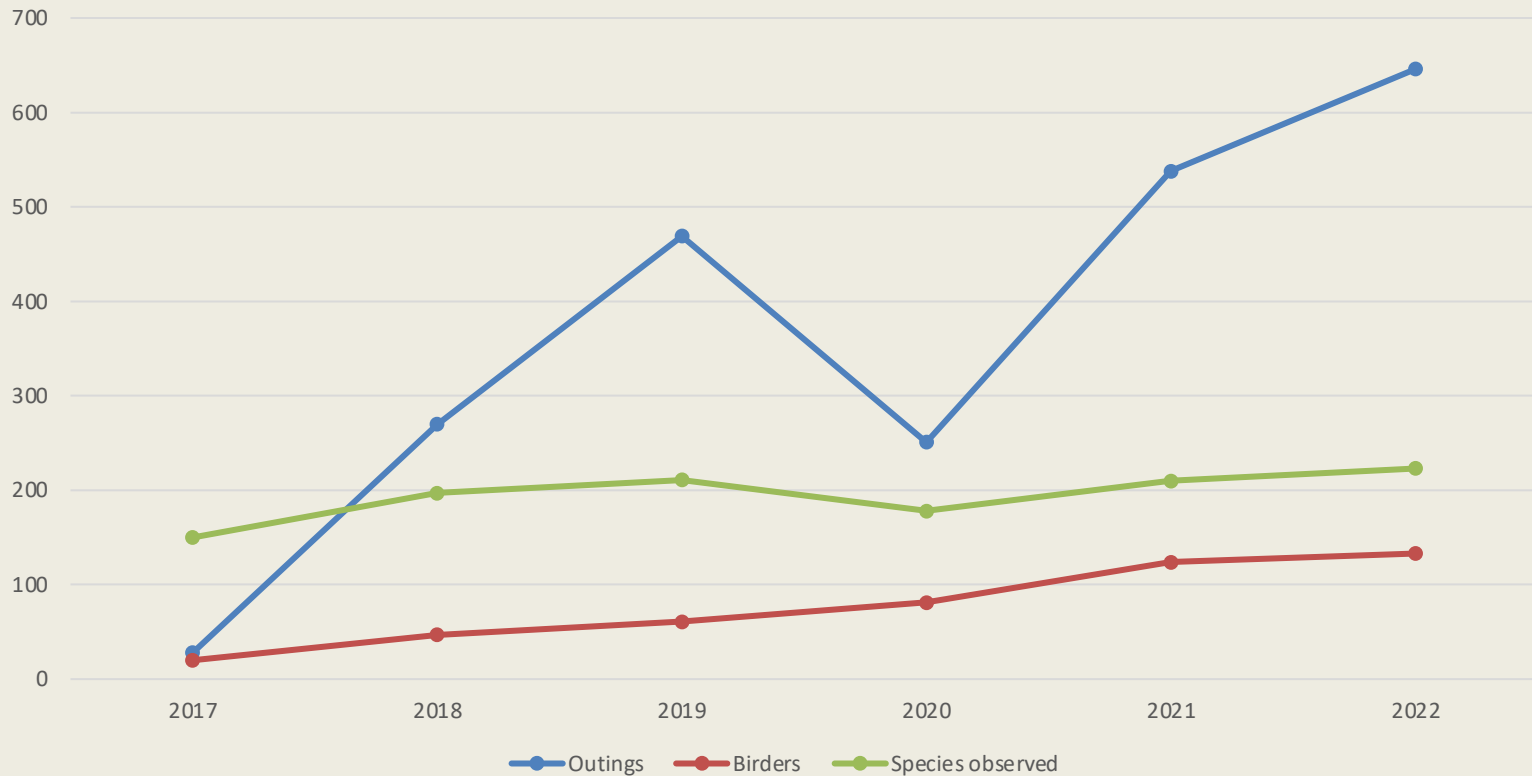
	(2017)	2018	2019	2020*	2021	2022
Number of Birding Outings	30	270	469	251	538	646
Number of Birders	20	47	61	81	124	133
Number of Species Observed	n/a	197	211	178	210	223
Park's Cumulative Species Total	169	216	233	241	249	255

* COVID restrictions

Cape May Warbler



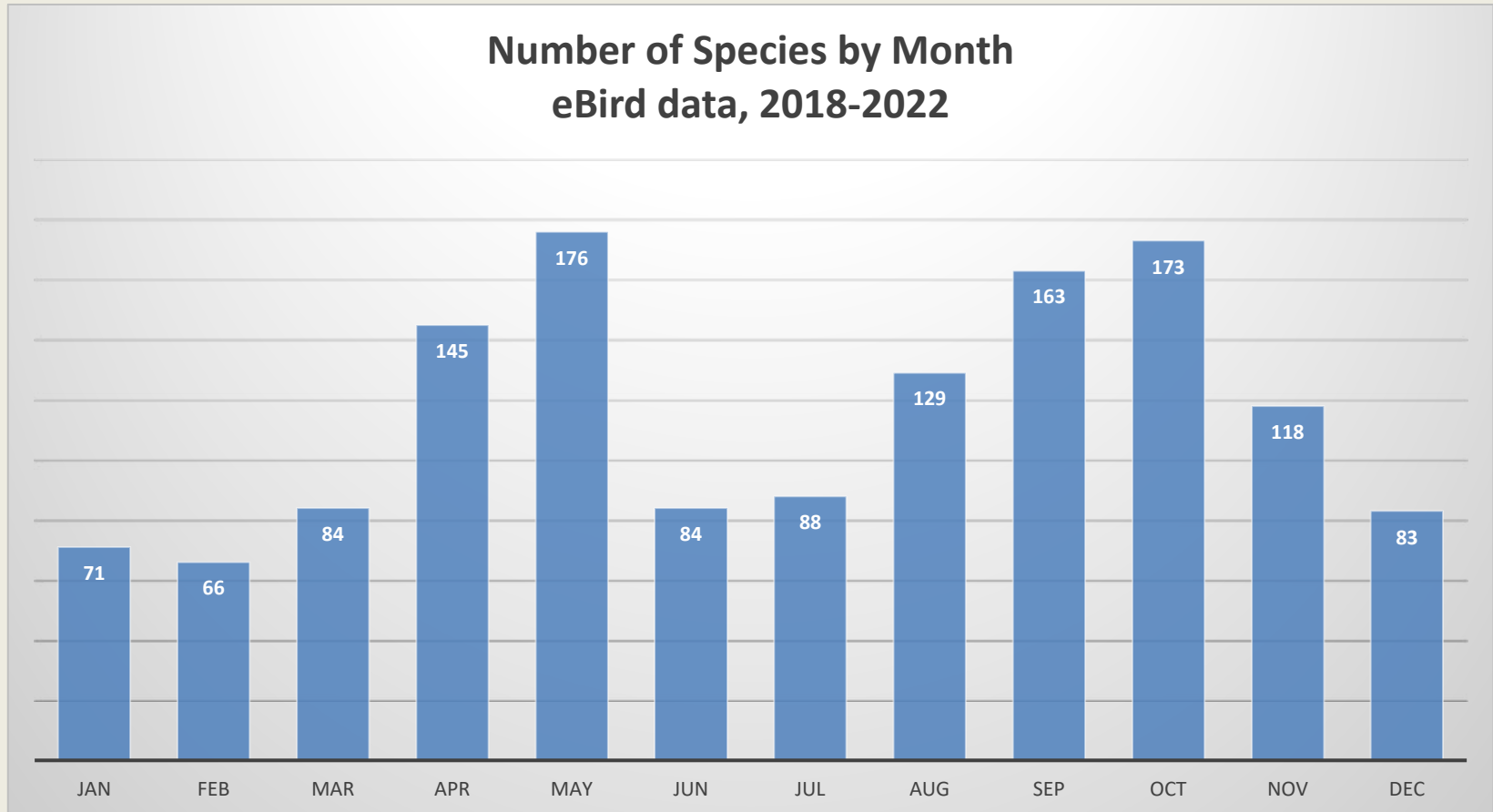
Park Utilization (by birds and birders) over time



2022 compared with previous years:

- The number of outings and species observed continue to increase year on year.
- In 2017, Park 566 was not even in the top 100 of Cook County birding hotspots. It is now #13 as measured by number of species observed.

State of the Birds by Season



The number of species observed in any given year has been between 197 and 223 species (excluding COVID-impacted 2020).

Spring migrants numerous April – May.

Fall migrants August – November.

Results: 2022 Bird's-eye Overview

Bottom Line:

Data point to a continuing, vibrant presence of migrant and resident birds.

There is a prevalence of waterfowl and grassland birds, with a healthy mix of shrub and woodland birds as well.

Typical annual species count: 210

Five years of birding data point to clear evidence of the positive impact of ongoing conservation actions.



Illinois Threatened and Endangered Species*

2 of the 6 species listed as **Threatened Species** were observed.

	2018	2019	2020	2021	2022
Osprey	✓	✓	✓	✓	✓
Black-billed Cuckoo	✓	✓		✓	✓



* *IL Endangered Species Protection Board Biennial Report, July 1, 2018—June 30, 2020*

Illinois Threatened and Endangered Species*

10 of the 23 species listed as **Endangered Species** were observed.

	2018	2019	2020	2021	2022
Short-eared Owl	✓	✓	✓	✓	✓
Upland Sandpiper	✓			✓	✓
American Bittern	✓	✓		✓	✓
Piping Plover				✓	✓
Northern Harrier	✓	✓	✓	✓	✓
Loggerhead Shrike					✓
Black-crowned Night-Heron	✓	✓	✓	✓	✓
Forster's Tern	✓	✓		✓	✓
Common Tern				✓	✓
Yellow-headed Blackbird			✓		

* *IL Endangered Species Protection Board Biennial Report, July 1, 2018—June 30, 2020*

Grassland Habitat Birds of Concern*

All of the 6 species listed by BCN (LVL 1, LVL 2) were observed.

	2018	2019	2020	2021	2022
Henslow's Sparrow				✓	
Bobolink	✓	✓	✓	✓	✓
Grasshopper Sparrow (nested)	✓	✓	✓	✓	✓
Sedge Wren (nested)	✓	✓	✓	✓	✓
Upland Sandpiper	✓			✓	✓
Eastern Meadowlark (nested)	✓	✓	✓	✓	✓

* Refers to species of declining populations in the Chicago Wilderness region for which conservation efforts can have significant impact-- as per Bird Conservation Network

Shrubland Habitat Birds of Concern*

4 of the 5 species listed by BCN (LVL 1, LVL 2) were observed.

	2018	2019	2020	2021	2022
Brown Thrasher (nested)	✓	✓	✓	✓	✓
Willow Flycatcher	✓	✓	✓	✓	✓
Field Sparrow (nested)	✓	✓	✓	✓	✓
Black-billed Cuckoo	✓	✓		✓	✓

** Refers to species of declining populations in the Chicago Wilderness region for which conservation efforts can have significant impact-- as per Bird Conservation Network*

Woodlands Habitat Birds of Concern*

6 of the 7 species listed by BCN (LVL 1, LVL 2) were observed.

	2018	2019	2020	2021	2022
Red-headed Woodpecker	✓	✓	✓	✓	✓
Eastern Whip-Poor-Will	✓	✓			
Yellow-billed Cuckoo	✓	✓	✓	✓	✓
Chimney Swift	✓	✓	✓	✓	✓
American Woodcock	✓	✓	✓	✓	✓
Wood Thrush		✓		✓	

** Refers to species of declining populations in the Chicago Wilderness region for which conservation efforts can have significant impact-- as per Bird Conservation Network*

Wetlands Habitat Birds of Concern*

5 of the 9 species listed by BCN (LVL 1, LVL 2) were observed.

	2018	2019	2020	2021	2022
Piping Plover				✓	✓
American Bittern	✓	✓		✓	✓
Common Tern				✓	✓
Black-crowned Night-Heron	✓	✓	✓	✓	✓
Wilson's Snipe	✓	✓	✓	✓	✓



Wilson's Snipe

Nesting Species – 19!

Evidenced by territorial behavior, carrying food, nest with eggs or young, juvenile birds present

Mallard

Spotted Sandpiper

Killdeer

American Kestrel

Warbling Vireo

Eastern Kingbird

Brown Thrasher

Gray Catbird

Common Yellowthroat

Dickcissel

Grasshopper Sparrow

Savannah Sparrow

Song Sparrow

Field Sparrow

Eastern Meadowlark

Sedge Wren

House Wren

American Robin

Indigo Bunting

2022 - Species reported for the first time

Tundra Swan

Say's Phoebe

Blue Grosbeak

Loggerhead Shrike

Lark Bunting

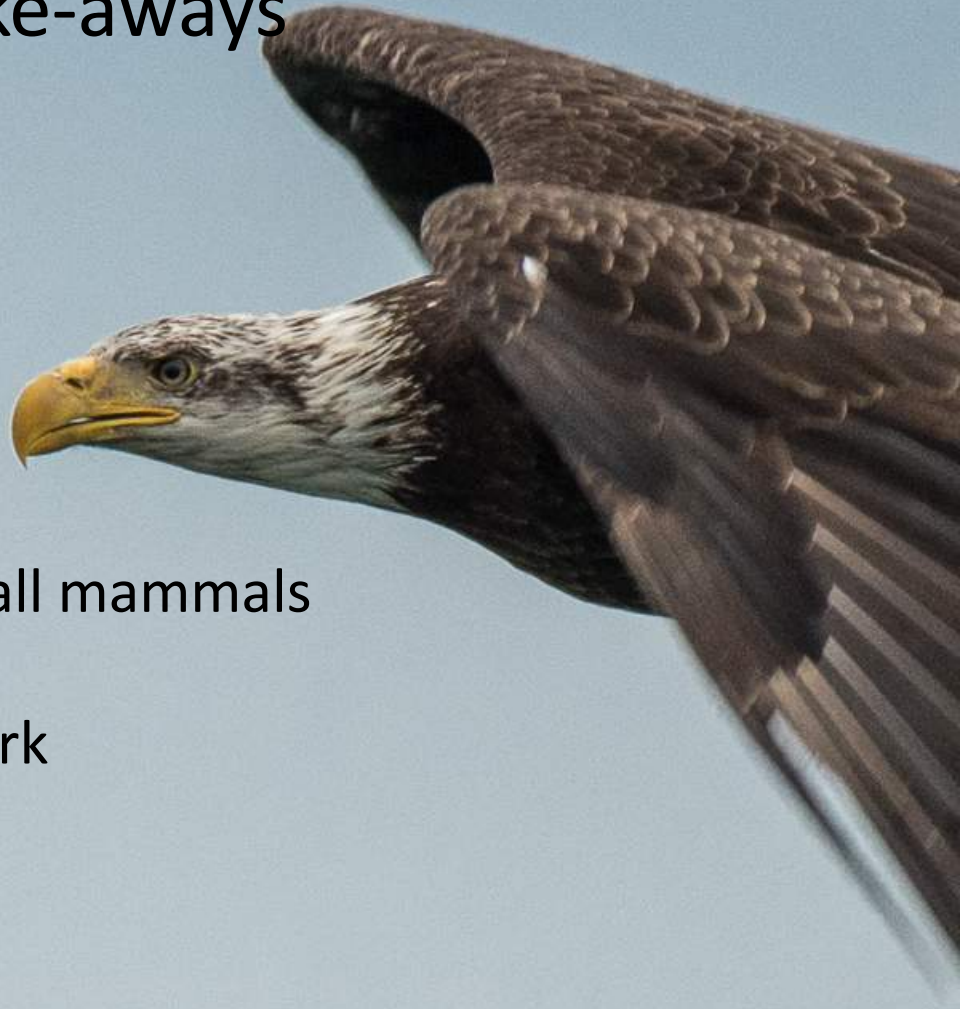
Brewer's Blackbird



Say's Phoebe

2018 - 2022: Five Years of Data Five Key Take-aways

- #1 Baseline: 210 species per year
- #2 Impressive variety
- #3 Abundance of reptiles and small mammals
- #4 Clear impact of restoration work
- #5 Increase in park utilization



#1: Baseline Annual Species Count = 210

Five years of observations tell us that the park hosts about 210 bird species in any given year.



Northern Mockingbird, hunting

- About 80% of these 210 species are seen every year without fail.
- The remaining 20% is a hodgepodge of birds that appear one year but not the next. Often some surprising rarities.
- The park's total species life list at end 2022: 255

#2: Impressive Variety, from grassland regulars to migrant warblers, with no scarcity of rarities.

Vibrant presence of virtually every grassland species:

19 sparrow species, with 4 species nesting

10 oriole and blackbird species (Bobolink, Baltimore Oriole, etc.)

Northern Harrier and Short-eared Owl

The expansive lakefront serves as an important stopover for songbirds migrating between the neotropics and Canada:

24 warbler species (Common Yellowthroat nesting)

Vagrants (outside their typical range) are frequent

Notables: Say's Phoebe, Lark Bunting, Brewer's Blackbird

Lake attracts over 60 species of waterfowl, gulls, terns, shorebirds.

Species' presence varies by season

#3: No shortage of herps and small mammals

The park hosts sufficient herps, small mammals and passerines to support a regular presence of raptors, both year-rounders and seasonal.

On any given day, you will likely see at least one of the following:

American Kestrel, Peregrine Falcon, Merlin,
Northern Harrier, Red-tailed Hawk, Cooper's Hawk
Red-shouldered Hawk, Short-eared Owl



American Kestrel
with Meadow Vole



Red-Tailed Hawk
with Plains Garter Snake

#4: Positive impact of restoration activities

Open space (majority of park)

Of the five years, 2022 was the most striking in terms of frequency and numbers of grassland species.

Grasshopper Sparrows especially numerous; at least three nesting pairs.

Bobolink were in greater number and frequency than ever before.

Plantings in NE corner of park

There is **clear evidence** of the positive impact of these plantings

Variety of flora is key to bird variety

- Bobolink, Red-winged Blackbirds, Sedge Wren, Dickcissel are prevalent in the tall grass area in the north (Big Bluestem, etc.)
- Meadowlark, Horned Lark, Grasshopper Sparrow seem to prefer the shorter grasses in the lower two thirds of the park
- Warblers, buntings, flycatchers in north plantings and wooded fringes

#5: Increase in park's popularity and use

The park has become a lively grassland with prairie flowers blooming in spring and summer, and shoulder-high golden grasses in autumn. A big appeal of the park is the feeling of peaceful isolation that it offers.

Birding outings increased 240% over 2018.

Other groups enjoying the park's beauty are joggers, bikers, dog-walkers, nature journaling clubs, even a UIC architecture class.



Big Bluestem

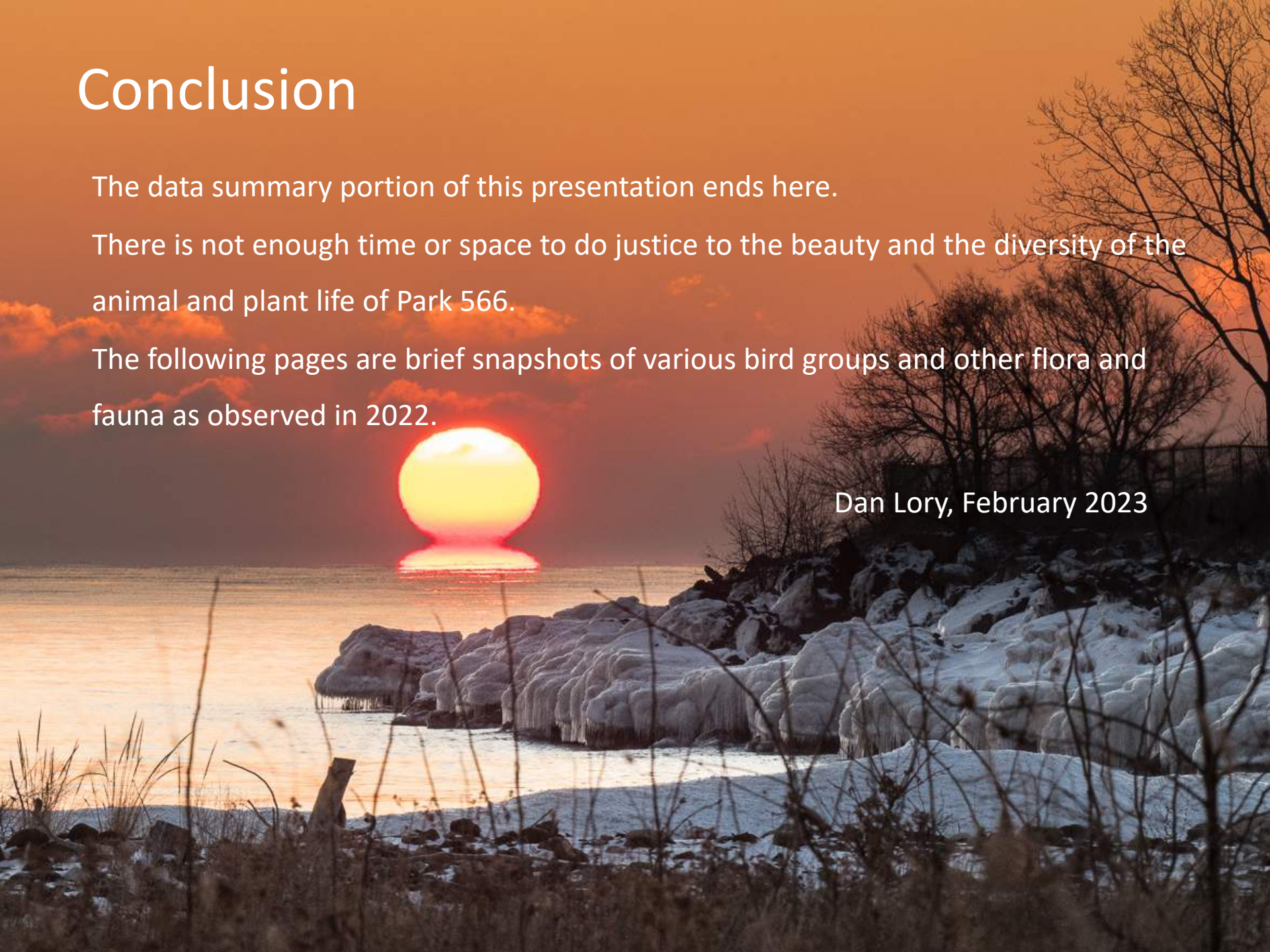
Conclusion

The data summary portion of this presentation ends here.

There is not enough time or space to do justice to the beauty and the diversity of the animal and plant life of Park 566.

The following pages are brief snapshots of various bird groups and other flora and fauna as observed in 2022.

Dan Lory, February 2023



Sparrows

19 species were observed in 2022, 13 with great regularity. Never before have this many species been reported with such regularity.

Evidence of nesting:

Song Sparrow

Field Sparrow

Grasshopper Sparrow

Savannah Sparrow



Savannah Sparrow



Grasshopper Sparrow

Sparrows

Significant frequency (more than 21 days in the year)

Savannah, Lincoln's, Dark-eyed Junco,
White-crowned, White-throated, Fox,
American Tree, Swamp, Song, Chipping
Field, Grasshopper, Vesper

Occasional (8-21 days)

Clay-colored
Eastern Towhee

Rare (1-7 days)

LeConte's
Nelson's
Lark Sparrow
Lark Bunting

2022 no-shows

Henslow's
Harris's



Lark Bunting

More sparrows,
because Park 566 is definitely a sparrow's park

Birds of Park 566, 2018-2022



Chipping Sparrow



Vesper Sparrow
(thinking about nesting!?)



Lark Sparrow

Birds of Park 566, 2018-2022



Clay-colored Sparrow



Song Sparrow



Eastern Towhee



Fox Sparrow

Warblers

- 25 species were observed in 2021
vs 26 species in 2021, 24 in 2018
- Evidence of nesting by Common Yellowthroat



Yellow-rumped Warbler



Prairie Warbler

Warblers

Frequent (10 days or more)

Palm, Common Yellowthroat, Yellow-rumped,
Yellow, Blackpoll, Magnolia, Tennessee, Cape May
Orange-crowned, Nashville, American Redstart,
Bay-breasted, Black-and-white, Wilson's

Occasional (3-9 days)

Black-throated Green, Chestnut-sided, Mourning,
Northern Parula
Northern Waterthrush
Blackburnian, Ovenbird

Rare (1 or 2 days)

Connecticut
Black-throated Blue
Canada, Prairie

2022 No Shows

Prothonotary, Pine



Bay-breasted Warbler



Mourning Warbler

More Warblers,
because they're just so beautiful.



Blackpoll Warbler



Magnolia Warbler



Blackburnian Warbler



Yellow Warbler

Raptors, Birds of Prey

Hawks, Vultures

Red-tailed Hawk

Northern Harrier

Sharp-shinned Hawk

Cooper's Hawk, Osprey

Bald Eagle, Turkey Vulture

Red-shouldered Hawk

Broad-winged Hawk



Rough-legged Hawk



Red-shouldered Hawk

Raptors, Birds of Prey

Falcons and Owls

Frequent:

American Kestrel, Merlin

Peregrine Falcon

Short-eared Owl

Rare:

Snowy Owl, Great Horned Owl



Peregrine Falcon



Merlin (with Dark-eyed Junco)



Short-eared Owl



Cooper's Hawk

More raptors, because...
why rile them?



Northern Harrier

Shorebirds, Rails, Sandpipers

Birds of Park 566, 2018-2022

Frequent

Killdeer (nested), American Coot
Spotted Sandpiper (nested), Sora

Occasional

Upland Sandpiper, Least Sandpiper
American Woodcock, Wilson's Snipe

Rare

Greater Yellowlegs,
Semipalmated Plover, Dunlin
Piping Plover, Lesser Yellowlegs
Solitary Sandpiper, Whimbrel
Black-bellied Plover, Willet
American Golden Plover
Baird's Sandpiper, Sanderling
American Avocet
Ruddy Turnstone

2022 No-Shows

Virginia Rail



Greater Yellowlegs



Least Sandpiper

Cranes, Herons

Occasional

Great Blue Heron

Green Heron

Rare

American Bittern

Sandhill Crane

Great Egret

Black-crowned Night-Heron



Green Heron



Great Blue Heron

Waterfowl, Grebes, Loons

Frequent

Canada Goose, Mallard
Red-breasted Merganser
Common Merganser
White-winged Scoter
Greater Scaup, Lesser Scaup
Double-crested Cormorant
Common Goldeneye
Horned Grebe
Redhead
Wood Duck
Bufflehead
Canvasback
Blue-winged Teal



Canvasback



Redhead, Red-breasted Merganser, Ruddy Duck

Waterfowl, Grebes, etc

Occasional

Northern Shoveler
Mute Swan, Ruddy Duck
Common Loon, Surf Scoter
Hooded Merganser
Black Scoter, Green-winged Teal
Ring-necked Duck, Long-tailed Duck



Trumpeter Swan

Rare

Red-throated Loon
Cackling Goose, Tundra Swan
Pied-billed Grebe
Red-necked Grebe
Trumpeter Swan, Gadwall
Ross's Goose, Northern Pintail
American Wigeon
American White Pelican
Neotropic Cormorant



Red-necked Grebe
Horned Grebe

Gulls, Terns

Frequent

Ring-billed Gull

Herring Gull

Caspian Tern

Occasional/Rare

Great Black-backed Gull

Lesser Black-backed Gull

Bonaparte's Gull

Franklin's Gull

Common Tern

Forster's Tern

Black-legged Kittiwake

Iceland Gull

Glaucous Gull



Glaucous Gull



Iceland Gull

Flycatchers, Vireos

Frequent

Eastern Phoebe, Warbling Vireo
Eastern Kingbird (nesting)
Willow Flycatcher
Least Flycatcher
Eastern Wood-Pewee

Occasional

Great Crested Flycatcher
Yellow-bellied Flycatcher
Red-eyed Vireo
Blue-headed Vireo

Rare

Say's Phoebe
Alder Flycatcher
Bell's Vireo
Philadelphia Vireo



Thrushes

Frequent

American Robin

Hermit Thrush

Swainson's Thrush

Rare

Veery

Eastern Bluebird

Gray-cheeked Thrush

Wrens

Frequent

House Wren, Winter Wren

Sedge Wren

Rare

Marsh Wren

(Carolina Wren has never been reported)



Winter Wren



Swainson's Thrush

Finches, etc

Frequent

American Goldfinch

Common Redpoll

House Finch

Occasional/Rare

Pine Siskin

Purple Finch

Hoary Redpoll



Common Redpoll



American Goldfinch

Blackbirds, Field and Meadow Birds

Summer

Red-winged Blackbird

Eastern Meadowlark (nested)

Dickcissel (nested)

Brown-headed Cowbird

Common Grackle

Baltimore Oriole

Orchard Oriole

Bobolink

Rusty Blackbird



Brewer's Blackbird



Orchard Oriole

Blackbirds, Field and Meadow Birds

Occasional Winter

- Snow Bunting
- Lapland Longspur
- Horned Lark



Snow Bunting



Lapland Longspur

Woodpeckers, Creepers, etc

Frequent/Occasional

- Northern Flicker
- Downy Woodpecker
- Yellow-bellied Sapsucker
- Red-breasted Nuthatch
- Brown Creeper
- Red-headed Woodpecker

Rare

- Red-bellied Woodpecker
- Hairy Woodpecker



Red-breasted Nuthatch



Red-headed Woodpecker

Red-bellied Woodpecker

Swallows, Nightjars, Swifts

Frequent

- Chimney Swift
- Northern Rough-winged Swallow
- Barn Swallow
- Tree Swallow
- Purple Martin
- Common Nighthawk

Occasional

- Bank Swallow
- Cliff Swallow



Barn Swallow, Bank Swallow



Northern Rough-winged Swallow

And assorted others



Ruby-crowned Kinglet



Ruby-throated Hummingbird



Bobolink

And assorted others



Brown Thrasher



Belted Kingfisher



American Crow

Plants of Park 566

At the start of this five-year project, Park 566 was overrun with Canada thistle, lambsquarters, and other invasive plants.

What a difference five years make.

Following is a sampling of the beautiful plant life that can now be enjoyed at Park 566. All photos are from 2022.

Wild Bergemot with Grasshopper Sparrow (twin mascots of Park 566)



Plants of Park 566



Plants of Park 566



Plants of Park 566



Prairie Rosinweed



Doubtful Knight's-spur



Prairie Sunflower

Plants of Park 566



Yellow Salsify



Purple Prairie Clover



Whorled Milkweed

Plants of Park 566



Pale Indian Plantain



Hoary Vervain



Lance-leaved Coreopsis

Plants of Park 566

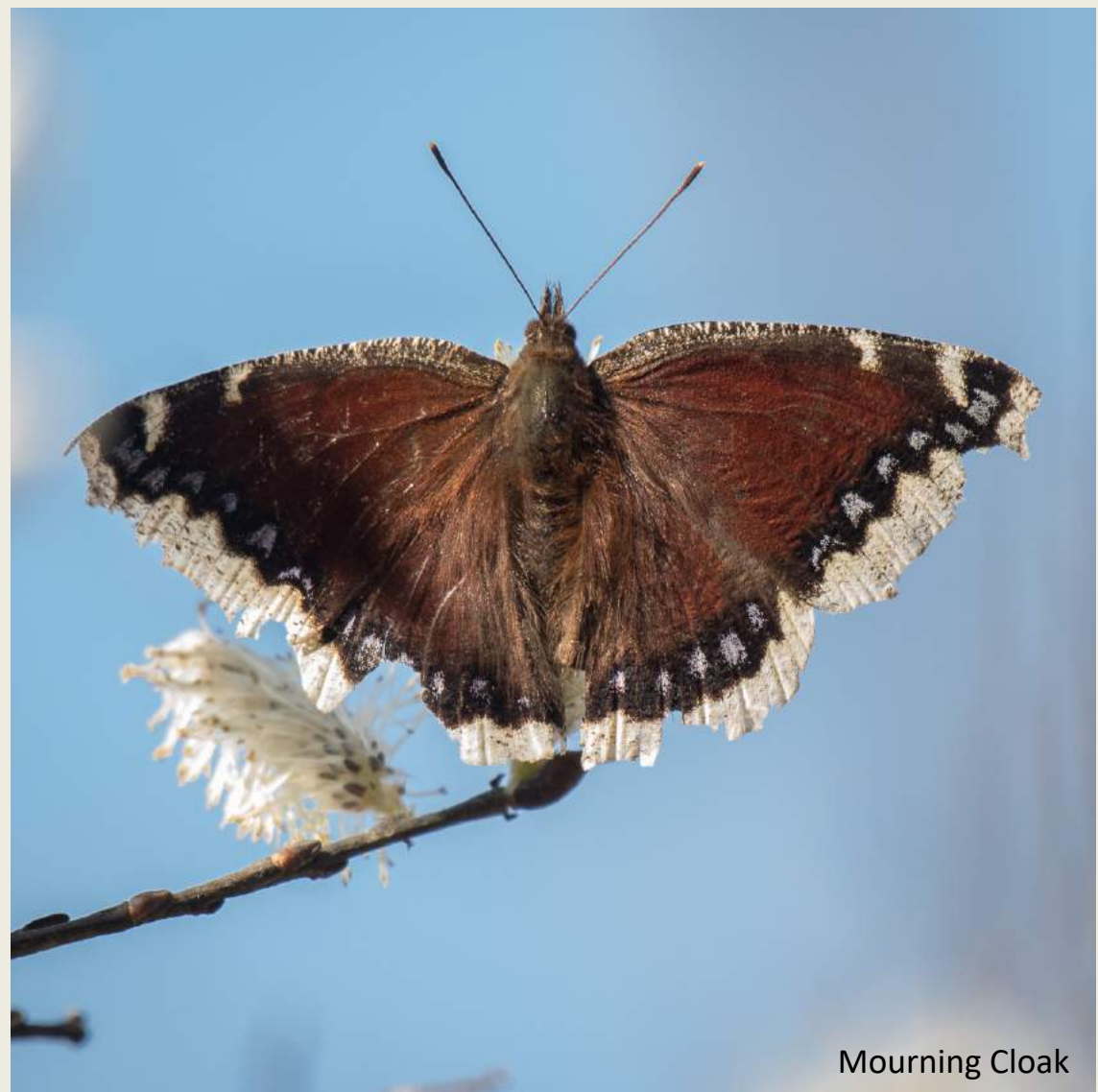


Butterflies and Moths

Birds of Park 566, 2018-2022



Asteroid Moth



Mourning Cloak

Dragonflies



Carolina Saddlebags




Widow Skimmer

Other Creatures




Eastern Carpenter Bee

A close-up photograph of an Eastern Carpenter Bee in flight. The bee has a fuzzy, brown thorax and a dark, metallic-looking abdomen. Its wings are transparent and slightly blurred due to motion. The background is a soft, out-of-focus green.



Spotted Cucumber Beetle

A close-up photograph of a Spotted Cucumber Beetle on a piece of grey fabric. The beetle has a bright yellow body with several distinct black spots. It is positioned near a seam or hole in the fabric.



Margined Calligrapher

A close-up photograph of a Margined Calligrapher on a yellow flower. The insect has a yellow and black striped abdomen and transparent wings. It is perched on the center of the flower, surrounded by yellow petals and stamens.

Non-biting (but annoying) Midges

A few Mammals



Eastern Red Bat



Silver-haired Bat



Meadow Vole



Common Five-lined Skink nest



DeKay's Brown Snake



Common Five-lined Skink

A few
Herps

Birds of Park 566: 2023 and beyond

2023 started with a bang.

On January 1, the park's first ever Western Meadowlark was observed, raising the park's cumulative species count to 256.

The geographically challenged bird appears to be over-wintering here, a testament to the vitality of this wonderful park.



Western Meadowlark