

# State of the Birds, 2019

Park 566

Dan Lory



# 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

2019 is year 2 of data gathering and analysis



# About Park 566

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

70-acre narrow strip along Lake Michigan from 79<sup>th</sup> St to 85<sup>th</sup> St.

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

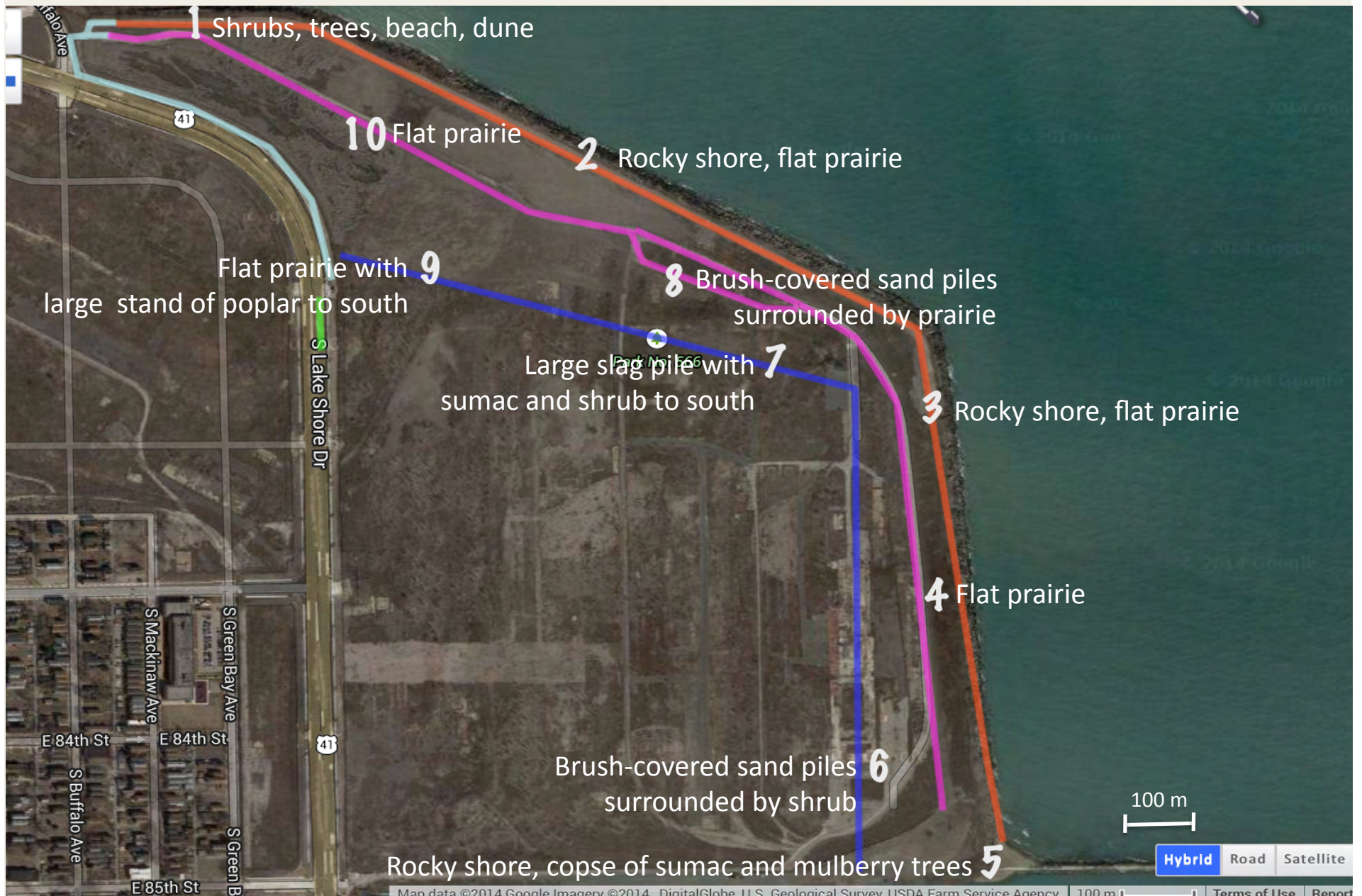
Park is almost entirely flat, with a raised berm along the lake for much of the length.

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

Work on those improvements began in autumn, 2017.



# 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"><li>• Cleared small trees and brush, especially area 1</li><li>• Cleared and planted dune area – Burr Oak, Jack Pine, dune grasses, prairie grasses</li><li>• Broadcast a mix of prairie seeds over entire park</li><li>• Sprayed to eliminate invasive plants</li><li>• Mowed to cut back invasives and assist sprouting prairie grasses</li><li>• Planted 400 shrubs and small trees on the berm in Area 1</li><li>• Erected ropeway and split-rail fencing to limit access to planted areas</li></ul>
Jan 2019	Unlike Jan 2018, when entire park was shaved to 6” and barren, 2019 began with knee-high vegetation over much of park. 400 shrubs in area 1 had remarkable survival rate. Same was true for Burr Oak and Jack Pine in area 1. Dune grasses appeared to suffer significant wave and ice damage
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.

# Review of Procedure

Stated simply:

Bird the park consistently, keeping records of all birds sighted

- Species
- Frequency/Count
- Specific locations of bird sightings (to limited degree)
- Nature of the presence (transitory, nesting, etc.)



Data for the study were gathered from:

2018	202 observation walks by DLory (fixed route) 68 observation walks by 47 other observers (varied routes)
2019	217 observation walks by DLory (fixed route) 252 observation walks by 61 other observers (varied routes)

NOTE:

High number of varied-route observations in 2019 increased the volume of data, but also made it difficult to parse the bird sightings by location in the park.

*\*\*All photos in this presentation were taken by Dan Lory at Park 566 in 2019.*

# State of the Birds: over time

Prior to 2015: No recorded birding outings

2015-2017:

- 30 birding outings per year by about 20 different individuals (as per eBird)
- 168 bird species observed

2018

- 270 birding outings by 47 individuals
- 197 species observed
- Park 566's lifetime species count: 215

2019

- 469 birding outings by 61 individuals
- 211 species observed
- Park 566's lifetime species count: 234





## Results 2019: Bird's-eye Overview

In 2019: 211 bird species were observed

61 birders submitted 469 checklists across 237 days



Canada Goose

Total species count for Park 566 is now 234 species

Park is ranked #24 among Cook County's birding hotspots

*Birds of Park 566, 2019*

## Results: 2019 Bird's-eye Overview

### Bottom Line:

This desolate looking park continues to host an impressive diversity of bird species common to:

Grasslands, Shrub/Savannah, Water/Wetlands



Common Merganser

2 years of data are not enough to draw conclusions on the effect of CPD restoration work

But some changes in bird presence in 2019 vs 2018 are noted in this report

## Threatened and Endangered Species\*

1 of the 7 species listed as **Threatened Species** was observed in Park 566:

Black-billed Cuckoo

6 of the 24 species listed as **Endangered Species** were observed in Park 566:

Black-crowned Night Heron

Short-eared Owl

American Bittern

Northern Harrier

Osprey

Forster's Tern



Black-billed Cuckoo

\* pertains to species' breeding status in Illinois, as recognized by State and Federal agencies

## Birds of Concern\*

**Grassland Habitat** Birds of Concern  
that visited Park 566:

- 8 of the 12 species listed by BCN
- Grasshopper Sparrow (nested)
- Bobolink
- American Kestrel (nested)
- Sedge Wren
- Dickcissel (nested)
- Common Nighthawk
- Eastern Meadowlark
- Northern Harrier



\* Refers to species of declining populations (in IL and elsewhere) for which conservation efforts can have significant impact-- as per Bird Conservation Network

# Birds of Concern\*

**Shrub Habitat** Birds of Concern that visited Park 566:

6 of the 10 species listed by BCN

Black-billed Cuckoo

Brown Thrasher (nested)

Willow Flycatcher

Field Sparrow (nested)

Bell's Vireo

Eastern Kingbird (nested)



Brown Thrasher



Eastern Kingbird

\* Refers to species of declining populations (in IL and elsewhere) for which conservation efforts can have significant impact-- as per Bird Conservation Network

# Birds of Concern\*

## **Woodlands Habitat** Birds of Concern that visited Park 566:

8 of the 14 species listed by BCN

Red-headed Woodpecker

Eastern Whip-poor-will

American Woodcock

Northern Flicker

Chimney Swift

Yellow-billed Cuckoo

Wood Thrush

Veery



Northern Flicker

\* Refers to species of declining populations (in IL and elsewhere) for which conservation efforts can have significant impact-- as per Bird Conservation Network

# Birds of Concern\*

**Wetlands Habitat** Birds of Concern that visited Park 566:

11 of the 22 species listed by BCN

American Bittern

Black-crowned Night Heron

Forster's Tern

Pied-billed Grebe

Wilson's Snipe

Marsh Wren

Virginia Rail

Sora

Osprey

Great Egret

Caspian Tern



\* Refers to species of declining populations (in IL and elsewhere) for which conservation efforts can have significant impact-- as per Bird Conservation Network

American Bittern

# Nesting Species

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

- Song Sparrow (areas 1,2,10)
- Field Sparrow (areas 6,7,9)
- Grasshopper Sparrow (areas 2,3)
- House Wren (areas 6,7)
- Brown Thrasher (areas 1,9)
- Dickcissel (areas 1,10)
- Eastern Kingbird (area 1)
- American Kestrel (area 6)
- Spotted Sandpiper (areas 2,3,5)



Spotted Sandpiper defending nest



## 2019 vs 2018: Notable Increases

49 species saw a two-fold increase in observation frequency.

Most notable:

White-throated Sparrow

Killdeer

Dickcissel

Chipping Sparrow

Warbling Vireo

Merlin

Least Flycatcher

Blue-gray Gnatcatcher

Horned Lark

Bobolink



## 2019 vs 2018: Notable Decreases

17 species saw a steep decline in observation frequency.

Most notable:

American Woodcock

Wilson's Snipe

Red-breasted Nuthatch

Northern Waterthrush

Snowy Owl

Osprey

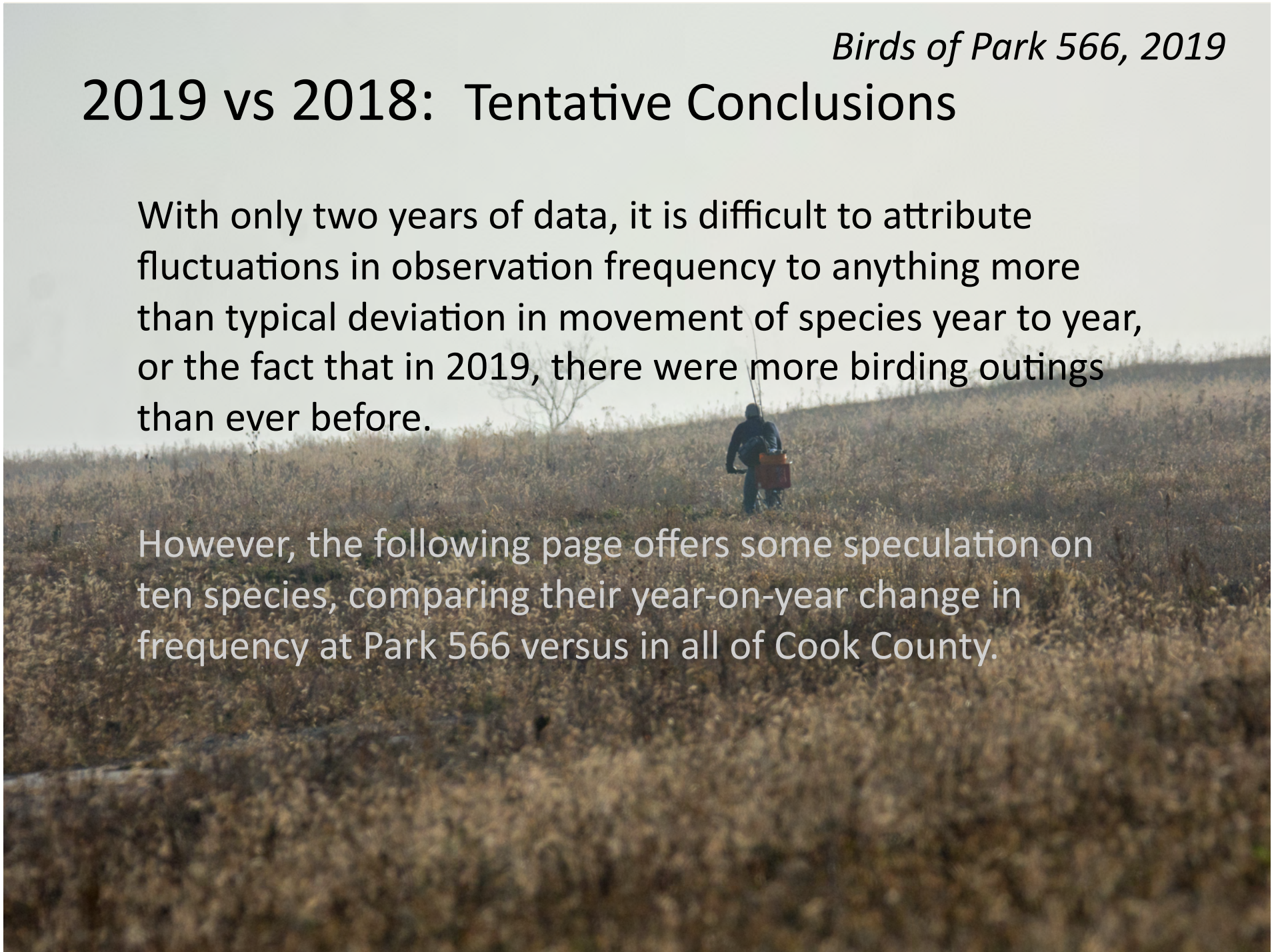
Veery



## 2019 vs 2018: Tentative Conclusions

With only two years of data, it is difficult to attribute fluctuations in observation frequency to anything more than typical deviation in movement of species year to year, or the fact that in 2019, there were more birding outings than ever before.

However, the following page offers some speculation on ten species, comparing their year-on-year change in frequency at Park 566 versus in all of Cook County.



# 2019 vs 2018: Some Tentative Conclusions

## Change in frequency of sightings, Park 566 vs Cook County

	YOY Δ Park 566	YOY Δ Cook Co	<b>Possible Explanation for increase/decrease</b> (While there is not enough data to point to a measurable impact on bird populations by specific environmental improvements, we can hazard some educated guesses.)
Common Redpoll	-100%	-89%	Dramatic change YOY is common with this Arctic migrant. Large drop not surprising.
Snowy Owl	-76%	-95%	Dramatic change YOY is common with this Arctic migrant. In 2019 there were only 22 sightings in all of Cook Co. 5 of them were at Park 566.
American Woodcock	-50%	6%	Actions at 566 may have had negative impact. After drastic mowing in Dec 2018, groundcover during spring migration was very sparse.
Grasshopper Sparrow	-11%	-29%	Mowings in 2019 likely influenced the population at 566, but the park still appears to have provided a better space than elsewhere in Cook Co.
Killdeer	35%	23%	Increase is only slightly more than for all Cook Co. Sparse ground vegetation that was bad for Woodcock possibly offered better nesting conditions for Killdeer.
Brown Thrasher	41%	47%	Park 566's increase matches Cook Co's. Park 566 is excellent habitat for thrashers.
Savannah Sparrow	57%	0%	Thrive in the sand piles and on the park fringes that were not mowed. Knee-high grasses in late summer and early winter led to continued presence into 2020.
White-throated Sparrow	146%	28%	Thrive on the fringes near the lake, and also in the sumac at far south end of park. USSteel restricted area also serves as good habitat.
Dickcissel	160%	-37%	Park 566 sighting frequency would have been even higher if not for a dramatic drop after the August mowing. Location and habitat is excellent for Dickcissel.
Horned Lark	633%	-29%	Migrants only. Increase in sightings may be partially due to more park visits by experienced birders. Nonetheless, this huge increase indicates good location and good habitat.

*Birds of Park 566, 2019*

# Sparrows

- 18 species were observed in 2019.
  - vs 14 species in 2018
- Evidence of breeding:
  - Song Sparrow (areas 1,2,10)
  - Field Sparrow (areas 6,7,9)
  - Grasshopper Sparrow (areas 2,3)



Vesper Sparrow



Lark Sparrow



Eastern Towhee

# Sparrows

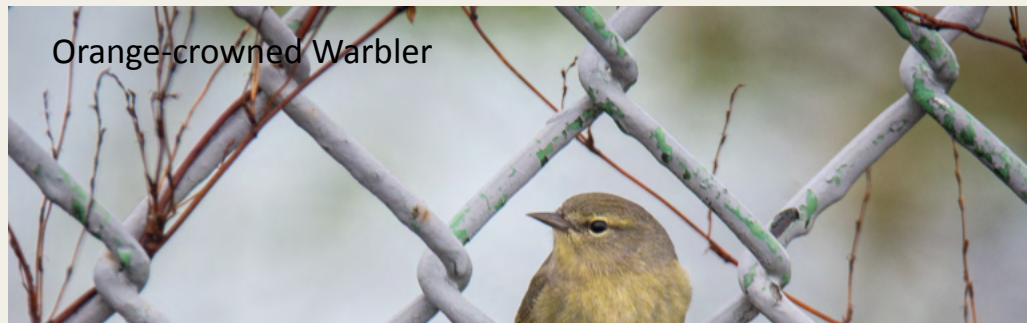
- Significant frequency (15 days or more)  
Savannah, Lincoln's, Dark-eyed Junco, Clay-colored, Chipping,  
White-crowned, White-throated, Eastern Towhee, Fox,  
American Tree, Swamp, Song  
Field, Grasshopper, Vesper
- Occasional (3-14 days)  
Lark Sparrow, LeConte's  
Nelson's
- Never observed  
Henslow's Sparrow



Field Sparrow

# Warblers

- 26 species were observed in 2019.  
vs 24 species in 2018
- Evidence of nesting  
No clear evidence of nesting by any species, not even Common Yellowthroat



Orange-crowned Warbler



Prairie Warbler



Black-throated Blue Warbler

# Warblers

## Frequent (15 days or more)

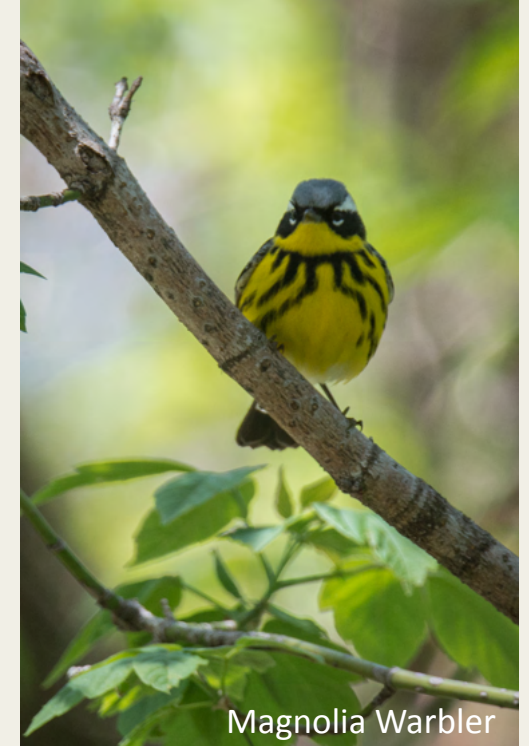
Palm, Common Yellowthroat, Yellow-rumped,  
Yellow, Blackpoll, Nashville, American Redstart,  
Magnolia

## Occasional (4-14 days)

Northern Waterthrush, Tennessee, Cape May,  
Ovenbird, Orange-crowned, Chestnut-sided,  
Wilson's, Bay-breasted, Black-throated Green

## Rare (3 days or less)

Northern Parula, Connecticut,  
Mourning, Black-throated Blue  
Blackburnian, Golden-winged  
Black-and-white, Prairie, Pine



Magnolia Warbler



Golden-winged Warbler



# Raptors, Birds of Prey

## Hawks, Vultures

- Red-tailed Hawk
- Broad-winged Hawk
- Rough-legged Hawk
- Northern Harrier
- Sharp-shinned Hawk
- Cooper's Hawk
- Bald Eagle
- Osprey
- Turkey Vulture



Sharp-shinned Hawk



Northern Harrier

# Raptors, Birds of Prey

Falcons (year-round, frequent)

American Kestrel

Merlin

Peregrine Falcon

Owls (seasonal)

Short-eared Owl

Snowy Owl



Peregrine Falcon



Short-eared Owl

Short-eared Owl

# Shorebirds, Rails, Sandpipers

*Birds of Park 566, 2019*

## Frequent

- Killdeer (nested)
- Spotted Sandpiper (nested)
- American Coot

## Occasional

- American Woodcock, Willet

## Rare

- Semipalmated Plover, Whimbrel
- Virginia Rail, Sandhill Crane
- American Avocet, Dunlin
- Sora, Solitary Sandpiper
- Sanderling, Least Sandpiper
- Semipalmated Sandpiper
- Greater Yellowlegs, Lesser Yellowlegs
- Purple Sandpiper, Wilson's Snipe



# Waterfowl, Grebes, etc

## Frequent

- Canada Goose (almost daily)
- Red-breasted Merganser
- Double-crested Cormorant
- White-winged Scoter
- Greater Scaup, Common Goldeneye
- Horned Grebe, Redhead, Bufflehead
- Common Merganser
- Common Loon
- Mallard (nested)
- Black Scoter
- Surf Scoter



White-winged Scoter



Greater Scaup

# Waterfowl, Grebes, etc

## Occasional

Wood Duck, Blue-winged Teal  
Canvasback, Pied-billed Grebe  
Hooded Merganser, Green-winged Teal  
Ring-necked Duck, Northern Shoveler  
Ruddy Duck, Long-tailed Duck

## Rare

Mute Swan, Trumpeter Swan  
Red-throated Loon  
Cackling Goose, Gadwall  
Northern Pintail  
American White Pelican  
American Black Duck  
Red-necked Grebe  
Greater White-fronted Goose  
American Wigeon  
Neotropic Cormorant



Surf Scoter



Red-necked Grebe

# Gulls, Terns

## Frequent

Ring-billed Gull

Herring Gull

Caspian Tern

## Rare

Great Black-backed Gull

Bonaparte's Gull

Iceland Gull

Glaucous Gull

Forster's Tern

Common Tern



Great Black-backed Gull



Bonaparte's Gull



Common Tern

# Flycatchers, Vireos

## Frequent

Eastern Phoebe  
Eastern Kingbird (nesting)  
Warbling Vireo, Least Flycatcher

## Occasional

Eastern Wood-Pewee,  
Willow Flycatcher  
Alder Flycatcher  
Red-eyed Vireo  
Blue-headed Vireo  
Philadelphia Vireo

## Rare

Great Crested Flycatcher  
Yellow-bellied Flycatcher  
Yellow-throated Vireo  
Bell's Vireo



Least Flycatcher



Blue-headed Vireo

# Thrushes

## Frequent

American Robin  
Hermit Thrush  
Swainson's Thrush

## Rare

Veery  
Eastern Bluebird  
Gray-cheeked Thrush  
Wood Thrush

# Wrens

## Frequent

House Wren, Winter Wren,  
Sedge Wren

## Rare

Marsh Wren, Carolina Wren





# Chickadee, Kinglets...

Black-capped Chickadee  
Blue-gray Gnatcatcher  
Golden-crowned Kinglet  
Ruby-crowned Kinglet

Across the group, 45% increase in  
frequency over 2018



Black-capped Chickadee



Golden-crowned Kinglet



Ruby-crowned Kinglet

*Birds of Park 566, 2019*

# Finches, etc

Frequent

American Goldfinch

House Finch

Rare

Pine Siskin

NOTE: No Redpolls observed since early 2018



American Goldfinch



Pine Siskin (with Eastern Phoebe)



House Finch

# Blackbirds, Field and Meadow Birds

## Summer

Red-winged Blackbird

Eastern Meadowlark

Dickcissel

Brown-headed Cowbird

Common Grackle

Baltimore Oriole

Orchard Oriole

Bobolink

\* Rusty Blackbird not observed



# Blackbirds, Field and Meadow Birds

## Frequent Winter

- Snow Bunting
- Lapland Longspur
- Horned Lark



Horned Lark



Lapland Longspur



Snow Bunting

# Thrashers, Pipits, etc.

## Frequent/Occasional

European Starling

Brown Thrasher (nested)

Gray Catbird

American Pipit

## Rare

Northern Mockingbird

## Not observed in 2019

Northern Shrike

Yellow-breasted Chat



European Starling



Northern Mockingbird

# Woodpeckers, Creepers, etc

## Frequent/Occasional

Northern Flicker

Downy Woodpecker

Yellow-bellied Sapsucker

Brown Creeper

Red-bellied Woodpecker

## Rare

Red-headed Woodpecker

Red-breasted Nuthatch

Hairy Woodpecker

\* White-breasted Nuthatch not observed



Downy Woodpecker



Yellow-bellied Sapsucker

# Swallows, Nightjars, Swifts

## Frequent/Occasional

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

## Rare

Eastern Whip-poor-will  
Bank Swallow



Northern Rough-winged Swallow



Cliff Swallow

# Rare Bird Surprise Visitors

- Wild Turkey
- Purple Sandpiper
- Le Conte's Sparrow
- Nelson's Sparrow
- Cattle Egret
- Whimbrel



Whimbrel



Wild Turkey



Purple Sandpiper



# No-shows

Seen in 2018, but not observed in 2019

Western Grebe

Black-bellied Plover

American Golden-Plover

Upland Sandpiper

Ruddy Turnstone

Baird's Sandpiper

Lesser Black-backed Gull

Great Horned Owl

White-breasted Nuthatch

Common Redpoll

Rusty Blackbird

Prothonotary Warbler

Scarlet Tanager

Northern Shrike

Yellow-breasted Chat

Hoary Redpoll

Blue-winged Warbler

Canada Warbler

And....



Velvet Foot



Partridge Pea



Ravenel's Stinkhorn

# Butterflies and Moths



Tawny-edged Skipper



Common Sootywing



Mourning Cloak



Silver-spotted Skipper

# Butterflies and Moths

*Birds of Park 566, 2019*



Chickweed Geometer



Olive-shaded Bird Dropping Moth



Spotted Buff Gem Moth



Corn Earworm Moth

# Butterflies and Moths



American Lady



Pearl Crescent



Eastern Tiger Swallowtail



Virginia Tiger Moth

# Dragonflies





Forbes Tree Cricket



Brown-belted Bumblebee

## Other Creatures



Green June Beetle



Oleander Aphid

# Other Creatures





# Other Creatures



Coyote



Cope's/Grey Tree Frog and friend



White-tailed Deer

# Conclusion

As year two of the restoration work ended, the following could be noted:

Dominance of invasive plants was reduced dramatically;

Some prairie grasses and flowers have established a foothold;

Newly planted shrubs and trees are in their second year of growth;

Continued groundwork is laid for substantive environmental improvements;

Two years of data of avian presence and activity has been established.

Dan Lory, February 2020

