Madison Audubon Society's **Sanctuary**



2020 Annual Management, Research and Education Report



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Section I: Staff, Committee & Board Members

Goose Pond Staff

Susan Foote-Martin and Mark Martin, Resident Land Managers Graham Steinhauer, Resident Land Steward

Goose Pond Sanctuary Committee

Curt Caslavka Jim Shurts
William Damm Susan Slapnick
Janet Flynn Greg Tiedt
Arlene Koziol Topf Wells

Chuck Pils

Madison Audubon Central Office Staff

Matt Reetz – Executive Director Carolyn Byers – Director of Education Brenna Marsicek – Director of Communications John Minnich – Financial Manager

Madison Audubon Board of Directors 2020

Roger Packard – Board President
Galen Hasler – Vice President
Topf Wells – Secretary
Joanne Jones – Treasurer
Susan Knaack
Lisa Lepeak
Olivia Pietrantoni
David Rihn

Joanne Jones – TreasurerDavid RihnPat ClarkJohn ShillinglawPatrick EaganMareda Weiss

Matt Fortney

Section II: Introduction

A.) Overview of 2020

This annual report provides information on community engagement, conservation activities, and other achievements that occurred at Goose Pond, Erstad Prairie, and Otsego Marsh for the year 2020. Our thanks to members and donors that provided funds to support the sanctuaries and land management, and also to everyone who volunteered on restoration, management, research and educational projects.

B.) Highlights from 2020

Goose Pond Webcam and Live Stream

Since the <u>Goose Pond webcam</u> launch on December 12, 2020, 41 species of birds including 20 species of waterfowl have been observed on screen along with two mammal species: mink and muskrat. Some species likely to be seen on the webcam are canvasbacks, redheads, mallards, northern shovelers, Canada geese, and swans. Here are a few pieces of helpful information for using the webcam.

- Flocks of geese and other birds fly low over the cam, so don't forget to turn your sound up!
- If you have the webcam open in YouTube, hover over the video and a red line will appear at the bottom. Click along this line to view footage from the past several hours.
- View a brief trailer for the webcam here.

Special thanks to all the donors, Don Schmidt for coordinating the instillation, Chip Plummer for hooking up the solar panels, Justin Clarke with A2Z Security Cameras out of Texas who designed the entire system, and John Howe, Director of Raptor Research Project who has worked with Justin on erecting a number of webcams along the Mississippi River. View Raptor Research cams featuring eagle and other birds here. Justin and John are providing technical support as we learn more about the system. Also special thanks to JD Arnston for software support. He has volunteered many hours getting the system running and fine tuning the camera and microphone and on saving clips of especially high quality.



Waterfowl on the pond. Goose Pond Webcam

When we decided to erect the webcam, we did not realize the cost and effort it took to get the system up and running, but we are very pleased with the results. Dorothy Haines, a long-time Madison Audubon supporter, called to say that she keeps the webcam running all the time and really enjoys seeing and listening to the birds. She would like to thank everyone involved in this project.



Sunrise at Goose Pond. Goose Pond Webcam

Motus Wildlife Tracking Tower

The <u>Motus wildlife tracking tower</u> at Hopkins Road Prairie is up and running! These towers are designed to track wildlife in migration and work in a similar way to cell phone towers. Flying wildlife like birds, bats, and even large insects are tagged with a transmitter that is compatible with Motus towers. The

tower detects these transmitters and catalogs the data which is used by researchers. Thanks to Don Schmidt, metal artist, who coordinated the tower construction with Graham. Don secured the 20-foot pole, welded the metal to hold the three antennas (not yet attached in the picture) and solar panel, and coordinated the pouring of cement. Chip Plummer, electrician and friend of Don's, installed the solar panel, grounding rods, and other components. JD Arnston is the volunteer that works with Birds Canada to download the data and keep the system running.

Dr. Jennifer Phillips-Vanderberg of the <u>Western Great Lakes</u> <u>Bird and Bat Observatory</u> was excited to learn that our tower is now active. WGLBBO coordinates the Motus tracking system in southern and eastern Wisconsin. This is the tenth tower in our state. Thanks to major donors Curt and Arlys Caslavka and the James Dutton Foundation for providing the funds for us to erect the Motus tower.



Erecting the Motus tower. Mark Martin

C.) Impact of COVID-19 Pandemic

On January 1, 2020 we would not have believed that the COVID – 19 Virus was going to change our lives in less than three months. The virus became well known, and things shut down around the third week of March. By January 1, 2021 there were 494,000 confirmed cases and 5,677 deaths in Wisconsin. We stayed home and were afraid at first to do shop at the local grocery store. However, we quickly began wearing masks, living in isolation, and social distancing. The Martins stayed at their cabin near Rio while Graham used the Audubon office in the Kampen Road Residence.

We participated in the Great Wisconsin Birdathon by having parties' bird by themselves. We did not place the large scope at Prairie Lane or materials in the kiosk. We cancelled kestrel banding and scaled way back on monarch tagging with the public. The Prairie Partner Intern Program was held, but everyone wore a mask when together or within six feet of others. Everyone learned how to virtually communicate using Zoom. It will be interesting to see if the increase in virtual and web-based communications will remain at high levels in the future.

Many of our citizen science projects and volunteer opportunities occurred similarly to past years or were modified to accommodate CDC guidelines. Despite difficulties faced in 2020, these projects continued to improve our understanding of nature, benefit wildlife, and provide opportunities for people to connect with the land. Many people found comfort in the outdoors and we had a large increase in visitors viewing wildlife and hiking the trails.

D.) In Memoriam



Peter Fissel. Jim Otto

Peter Fissel, age 63

For many years Peter co-led the Madison Audubon Field Trip committee and he also led many field trips. Peter was also involved with many Christmas Bird Counts, the Breeding Bird Atlas, North American butterfly count, monarch tagging, DNR owl counts, and Goose Pond scope days. Peter worked for more than thirty years in UW-Madison's General Library System, first in the Memorial Library Circulation Department and then in the Thesis Binding Unit. Peter was the first to spot the Neotropic Cormorant at Horicon Marsh on July 3, 2011 (a new bird species for Wisconsin).

Jim Otto wrote "Peter participated in the Great Wisconsin Birdathon as captain of the Madison Audubon Society team "Biblioloons". He enjoyed WSO's "Jaegerfest" at Wisconsin Point on Lake Superior, and road trips to numerous other birding hot spots such as Wyalusing

go on birding trips with Peter. He was interested in so many things: birds, butterflies, dragonflies, weather, etc. He enjoyed being around, and interacting with others. Thanks to his family for the donation of Peter's birding optics to Goose Pond.

The Madison Audubon Peter Fissel Pollinator Garden, was named for Peter "a long-time Madison Audubon member and volunteer who was passionately interested in butterflies, birds, and in making the world a better place".



Planting the Peter Fissel Garden. Mark Martin

Howard "Stan" Druckenmiller, age 75

Stan had a 32-year career with the DNR was a Bureau Director, Division Administrator and Executive Assistant to the Secretary. His many accomplishments included establishment of the Knowles-Nelson Stewardship Program. He was a key leader in creating the Lower Wisconsin Riverway. Stan was a Bureau Director for the Endangered Resources program and the Bureau of Environmental Impact.

Stan and Jeanie volunteered for many years on coordinating the silent auction at the Madison Audubon art fair. Stan also served on the Madison Audubon Board and served as President. We enjoyed working with Stan at DNR and with Madison Audubon. Thanks to Jeanie who donated Stans camera and many lenses for use at Goose Pond.



John Jaeschke, <u>age 78</u>

John was a biology teacher and earned many awards for his outstanding teaching. John edited and helped with publishing "215 The Bird House" written by the Edna and Henry Koenig, a couple who cared for injured wildland and banded birds in Sauk City. John was president of the Wisconsin Audubon Council and Madison Audubon Society. We remember that John was featured in an article in the Wisconsin State Journal and one of his goals was to return bobwhite quail to Goose Pond Sanctuary.

Dorothy Gosting, age 94

Dorothy worked at UW-Madison in research. She was also a member of the Friends of the Arboretum and the Nature Conservancy. Whenever we saw Dorothy at conservation outings, she would always ask "How are things going at Goose Pond". She loved to come out and view the birds.

Mary Young, age 71

Mary worked in the Wisconsin Division of Public Health that allowed her to continue her educational focus but she also incorporated a strong environmental and public health component. Mary was a longtime board member and volunteer for Madison Audubon Society. She organized many of the successful Audubon Art Fairs. She participated in the annual Crane Count and observing the eagles' nests around Dane County from her car. She is remembered as a person totally connected to the world around her and engaged in making her environment better for the next generation.

Section III: Land Acquisition

2020 was a very good year for land acquisition for our Madison Audubon properties in Columbia County. The two acquisitions highlighted below of 106 acres brings the total amount of land protected by fee acquisition or easement to 3,819 acres. Madison Audubon has made great progress since acquiring the first 60 acres at Goose Pond in 1969. Zeloski Marsh, part of the Lake Mills State Wildlife Area and three parcels Rose Lake State Natural Area & Dorothy Carnes Park were acquired with grant funds and gifted to the DNR and Jefferson County. Thanks to everyone that has helped preserve and fund these projects.

Madison Audubon Land Protection - 1969 to 2020						
County and Preserve Owner		Acquisition (acres)	Easement (acres)			
Columbia County						
Erstad Prairie	MA	60				
Grassy Lake State Wildlife Area	Briggs		84			
Goose Pond Sanctuary	MA	730				
Otsego Marsh	MA	116				
Wildland, LLC	Martins		158			
Jefferson County						
Faville Grove Sanctuary	MA	757				
Easements	Musolf/Packard		151			
Hope Lake Bog	MA	35				
Lake Mills State Wildlife Area - Zeloksi Marsh	DNR	1,461				
Rose Lake State Natural Area	Jefferson Co	267				
& Dorothy Carnes Park	Parks					
TOTALS		3,426	393			

A.) Reierson Tract

Madison Audubon acquired 36 acres from Debra and Ronald Reierson in June. The tract is directly west of our existing 80 acres at Otsego Marsh. The plan is to restore wetland, prairie, and oak savanna habitat. The property included 19 acres of cropland, 7 acres of farmed wetlands, 5 acres of degraded savanna and conifers, and 5 acres of wetland habitat. Funding for the property was made possible by major donors: a North American Wetland Conservation Act (NAWCA) grant from the Fish and Wildlife Service, Jerry Martin, Dorothy Haines, Levi & Janet Wood, Roger Packard & David Musolf, Bob & Peggy Ridgely, Janice Zawacki, and 71 other donors.

B.) Benade Tract

On October 2, Madison Audubon closed on 70-acres purchased from our neighbor and friend, Judi Benade. The property is south of Kampen Road and one-half mile west of County I and the Browne and Jill's Prairies. Judi and her late husband Bill Grogan moved from Madison to Arlington and began volunteering at Goose Pond. We assisted Bill and Judi in 2004 by collecting seeds for planting their diverse 24-acre restoration. Funding for this property was made possible by the Arnold and Katherine Jackson Remainder Trust, the William and Jean Damm Land Acquisition Fund, the Jerry and Jill Martin Goose Pond Land Acquisition Fund, and a donation by Jerry Martin.

Section IV: Land Management

A.) Planting Prairie

Benade Tract

The main components on this site include 24 acres of high diversity prairie, 25 acres of low diversity grassland, 16 acres of cropland, three acres of shrubs of woods, and a two-acre pond. The cropland was planted to mesic prairie by 15 volunteers in early December, and the seed mix contained 95 species. We have confirmed a wide variety of grassland birds nesting on this property including turkeys, harriers, sedge wrens, meadowlarks, willow flycatchers, and pheasants. The 16-acre restoration will increase the habitat for bird species listed above and benefit hundreds of other species across taxa.



Erstad Prairie

Erstad Prairie is a 60-acre parcel managed by Goose Pond staff that is adjacent to the U.S. Fish & Wildlife Service's 709-acre Schoeneberg Marsh Waterfowl Production Area. This wetland complex has 212 species listed on eBird making it the second most diverse hotspot in Columbia County.

We interseeded prairie species into a 16-acre brome field in 2018. Volunteers and staff interseeded the same area in 2020 to boost prairie species establishment. The south side of Erstad Prairie was interseeded for the first time in 2020, bringing the total acres planted or replanted in 2020 at Erstad Prairie to 20.

Erstad Prairie. Graham Steinhauer

B.) Seed Collection

Species	Pounds
Common milkweed	110
Cup plant	28
Indian grass	210
Wild lupine	12
Water plantain	66
Prairie dropseed	25
Prairie potentilla	15
Rattlesnake master	14
Rosinweed	18
Showy sunflower	7
Spiderwort	19
Stiff gentian	1.5
White baptisia	125
Other	280
TOTAL	930.5

Seed Collecting at Goose Pond

The main reasons that we collect seed at Goose Pond are to use in our own restorations and to assist partners with their plantings. Goose Pond staff and volunteers collected 115 species from wetlands, prairies, and savannas. We held seed collection days on nine Saturdays throughout the fall and averaged 11 volunteers per day (8 in 2019). Volunteer participation likely increased in 2020 because people are looking for safe social activities that benefit their communities. Some of these volunteers are familiar faces that have been with us for many years and others were brand new. This resulted in a high-quality learning experience for newcomers, a fulfilling social opportunity, and efficient seed collection.



Past seed collection intern and current volunteer, Jean Traeger. Graham Steinhauer



Jungemann barn filled with milkweed pods. Graham Steinhauer

Milkweed Seed FREE to DNR and Other Partners

Goose Pond staff and over 30 volunteers collected common seed in 2020, and we offered this to land managers across the state FOR FREE to benefit monarchs. This outreach project was a huge success. All of our seed inventory was claimed in just four weeks! It's no secret that monarch caterpillars require milkweeds as a food source. Milkweeds also provide nectar resources for longtongued bees, wasps, flies, skippers, and butterflies. Sphinx moths, larger butterflies, and predatory wasps often pick up and transport pollinia which is required for milkweed pollination. Overall there were 55 orders for common milkweed seed (19 public land managers and 36 private landowners) that was planted at a rate of at least one ounce per acre (4,000 seeds) on 1,081 acres (736 public and 345 private). The seed distributed totaled 78 pounds (4,992,000 seeds) of pure live seed. This project was coordinated by Brenna Jones, Wisconsin Monarch Collaborative Coordinator; Brenna Marsicek, Madison Audubon; and Goose Pond Sanctuary. Thank you to all volunteers that assisted with this effort!

Plant Species of Focus - Stiff Gentian (Gentianella quinquefolia)

Downy, cream, bottle, and stiff gentian are found at Goose Pond. The first three are all in the genus *Gentiana*, the perennial gentians of the gentian family, which contains over 400 species worldwide. Stiff gentian is a *Gentianella*, commonly known as the dwarf gentians, and has 256 species worldwide. Stiff gentian is indeed small, but its biennial character is what most separates this species from the others. Stiff gentian has been severely reduced in Wisconsin, but patches of it still remain on dry mesic prairie remnants. Mark collected stiff gentian seed from one of these remnants in the 1990s to spread at Goose Pond, and it is now present on many of our well drained ridgetops. Unlike perennials



Stiff gentian. Madison Audubon

which have more or less stable populations, biennials often go through boom and bust years. This was definitely a boom year for stiff gentian with carpets of it found at several locations. Stiff gentian seeds are tiny ball bearing like seeds weighing in at 180,000 seeds/ounce.



UW farms remnant. Graham Steinhauer

C.) Prescribed Burns

While spring burn season was canceled due to COVID-19, Goose Pond staff still burned 43 acres in the fall. Some of these units include the oak savanna overlooking Goose Pond (9 acres), UW Farms Remnant Prairie (4), and Erstad Prairie (24). Prescribed fire is a crucial tool for grassland managers. Burning produces different effects depending on the time of year, but increasing native seed viability and decreasing the competitiveness of invasive shrubs are two of the most common goals. In addition, herbaceous invasive species are much easier to locate in a burned area.

D.) Invasive Plant Control

Invasive shrubs tend to stand out well against the golden prairie background, but other plants blend in and are exceedingly difficult to spot. Just ask the spotted knapweed that you're standing on but still can't find. If you're working on controlling a parsnip patch for two years but can't find the patch in year three, the patch will replenish itself and send you back to square one. Graham has been using a GPS based app for monitoring and control of invasive species since 2018. Saved points allow you to revisit sites within a few meters which has dramatically increased the efficiency of invasive species control over time. Wild parsnip, sweet clovers, and reed-canary grass are our three most prominent invasive species, but persistent control using both mechanical and chemical methods has greatly decreased their prevalence at Goose Pond.



Section V: Education

A.) Publications

Goose Pond Update

We started publishing the Goose Pond Update in 2018 to better communicate with our members, volunteers, and conservation enthusiasts. Since that time, the Update has increased dramatically in both content and subscribers. Updates are released about once every month and contain Goose Pond stories, events, accomplishments, and conservation news. If you'd like to subscribe to the Update, please email Mark and Sue at goosep@madisonaudubon.org with an inquiry.

Friday Feathered Features

Madison Audubon Society's *Friday Feathered Feature* is a weekly column. We feature birds, other animals, and events related to Goose Pond. We try to make the features educational and encourage visitors to come out and view the birds. We switch off weeks writing the feature with Faville Grove Sanctuary. For the most recent Friday Feathered Features from both Goose Pond and Faville Grove, visit Friday Feathered Feature on the Madison Audubon Website.

Goose Pond Friday Feathered Features			
Date	Title		
January 3	'Tis the season for snowy owls		
January 17	Common Raven		
January 31	We Named Her "Columbia"		
February 14	Two Decades of Christmas Bird Counts at Goose Pond Sanctuary		
February 28	Snapshot Wisconsin: Goose Pond's Bird List		
March 13	Snowy owls: Update on Columbia & Welcome to Fond du Lac		
March 27	Greater White-fronted Goose		
April 10	Hooded Merganser		
April 24	Earth Day Bird Count		
May 8	Double-crested Cormorant		
May 22	The "Not So" Reckless Wrens 2020 Birdathon and COVID-19		
June 5	Pied-billed Grebe		
June 19	American White Pelican		
July 10	Willow Flycatcher, "The Little Green Bird"		
July 24	Goose Pond Sanctuary Butterfly Count 2020		
August 7	Motus Wildlife Tracking Tower Is Up and Running at Goose Pond		
August 21	Madison Audubon's Kestrel Nest Box Program - 2020 Update		
September 18	Nighthawks for His Birthday		
October 2	Tree Swallow		
October 16	Pine Siskin - 2020 an Invasion Year		
October 30	See Sea Ducks at Goose Pond Sanctuary		
November 13	Ring-billed Gull		
December 11	The Snowbird Returns		
If you are not viewing this report electronically, but wish to access these FFF articles,			
simply google "Madison Audubon Friday Feathered Feature" followed by the article title.			

B.) Internships



Tanner Pettit - Goose Pond Limited Term Employee

Tanner Pettit graduated from UW-Madison in May with a degree in Wildlife Ecology at UW-Madison. He worked as a Prairie Partner intern during the summer of 2018 and as the Goose Pond Summer Intern in 2019. Because of stellar work ethic, experience, and can-do attitude, Tanner was asked to return as the Goose Pond LTE. Tanner and Graham worked together every day and killed more wild parsnip, sweet clover, and reed canary grass than any pair east of the Mississippi. He has been accepted into medical school and is pursuing a career as a rural doctor. Tanner is an avid conservationist who will continue to improve habitats on public and private lands.

Tanner on a prescribed burn. Graham Steinhauer

Prairie Partners Summer Interns

Madison Audubon, Groundswell Conservancy, Cherokee Marsh, and Pheasant Branch Conservancy, dubbed *The Prairie Partners*, again collaborated to fund five interns. Interns rotate to different sites each day of the week and work for 12 weeks. They work at Goose Pond every Friday. The goals of this internships are to provide valuable field experience, educate prospective conservation advocates, and achieve land management goals of the Prairie Partners. We appreciate the work of these inters during 2020 and wish them well in *Midd*

during 2020 and wish them well in finding future employment in the field of natural resources.



Middle five left to right - Balin Magee, Josie Crass, Caleb Lang, Ella Langer, Isabel Krueger. Tanner Pettit



Fall Seed Collection Employees

We hired Calla Norris, Tucker Sanborn, and Caleb Lang to collect prairie seed this fall. All three participated in the Prairie Partner Internship, and Calla was also a seed collector in the fall of 2019. Fall seed collection is probably the single best way to become familiar with plant identification, habitat preferences, and the requirements for planting a prairie. All are pursuing education or jobs in conservation.

Calla Norris and volunteers. Graham Steinhauer

Section VI: Citizen Science

A.) Birds



Kestrel banding volunteer. Graham Steinhauer

American Kestrel Nest Box Program

Madison Audubon couldn't be prouder of our American kestrel nest box program! We have the largest system of monitored boxes in the state, and perhaps the second largest in North America. Brand Smith coordinates the program with assistance of 65 volunteers who build erect and monitor nest boxes. Thanks to all, especially Brand Smith who is the project coordinator.

Fifty-six of 178 boxes, in an eight-county area, were used by kestrels in 2020. Many of the boxes are located in south-central Columbia County, especially around Goose Pond Sanctuary. Other species including eastern bluebirds, tree swallows, house wrens, screech owls, and even hooded mergansers and wood ducks have used the nest boxes. Janet Eschenbauch and her crew from the Central Wisconsin Kestrel Research Center banded 72 chicks and caught 1 adult in south central Columbia County. Nest locations and data was provided to the American Kestrel Partnership

Songbird Nest Boxes

2020 was a very good year for songbirds using nest boxes at Goose Pond/Erstad Prairie and on partner lands. Data was reported to the Bluebird Restoration Association of Wisconsin. JD Arnston observed eight tree swallows fledging from a single box, a first for Goose Pond. We're proud to have fledged so many tree swallows, especially since tree swallow numbers declined 49% between 1966 and 2014.

Monitors	Goose Pond	Boxes	Tree Swallow	Eastern Bluebird		BI-capped chickadee
Colleen Waugh	Browne Prairie	10	32	0	0	0
Nancy Piraino	Hill and Wynn Prairie	13	67	0	0	0
Amy Ihlenfeldt & Frank Iltis	Hopkins Road Prairie	12	53	0	0	0
JD Arnston & Bennicoffs	Lapinski - Kitz Prairie	23	83	0	0	0
Amy Ihlenfeldt & Frank Iltis	Sue Ames Prairie	16	78	0	0	0
Rachel Barker	Wood Family Prairie	12	48	0	0	0
Mark and Jenny McGinley	Erstad Prairie	14	73	0	0	0
	Subtotal	100	434	0	0	0

Monitors	Partners	Boxes	Tree Swallow	Eastern Bluebird		BI-capped chickadee
Jim Goodno	Cherokee Country Club	24	90	21	27	0
Kathie Brock	Pleasant Valley Conservancy	15	0	45	40	6
Sally Keyel	Sun Prairie Golf Course	21	0	35	84	20
Jim Goodno	St. Peter's Catholic Church	9	20	0	34	0
Bob & Gerry Bennicoff	Token Creek Conservancy	14	10	9	24	0
Mark & Susan Foote-Martin	Wildland	40	141	36	77	6
	Subtotal	123	261	146	286	32
	Totals	223	695	146	286	32
	Total Songbirds Fledged	1,159				

Five Decades of the Poynette Christmas Bird Count

Fifty years ago, on December 23, 1971, Bill Smith and Steve Krings conducted the first Poynette Christmas Bird Count (CBC) centered in Poynette at the Owl's Nest restaurant at the intersection of Highways 51 and CS. Bill, who grew up in Poynette, coordinated the count for the first decade and until Mark and Sue took the count over. The count is usually held on the last Saturday of December. On the first count Bill and Steve found 28 species including ruffed grouse, Wilson's snipe, herring gull, red-headed woodpecker and yellow-bellied sapsucker that were not found on this year's count.

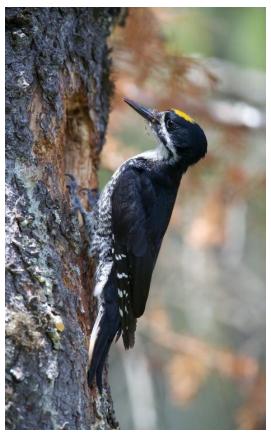


Eastern bluebird. Arlene Koziol

Counts were conducted in 49 years with 1977 being the missing year. On average there were 21 field observers and 12 households that ended up counting 470,108 birds of 135 species with an average of 61 species per year.

The field observers included 1,064 "people days" and teams walked 889 miles in 937 hours and drove 22,427 miles in 1,834 hours. Observers also spent 134 hours driving 1,346 miles counting owls. Seven species of owls were found including 171 eastern screech owls, 384 great horned owls, 13 snowy owls, 52 barred owls, 27 long-eared owls, 34 short-eared owls, and 15 northern saw-whet owls! The Al Shea family led in owl observations.

The top ten species in numbers were the Canada goose 66,089, dark-eyed junco 49,447, house sparrow 46,236, European starling 43,195, American crow 31,998, American tree sparrow 26,692, mallard 20,492, rock pigeon 17,733, black-capped chickadee 16,451, and snow bunting 15,149. It would be nice to know how many of the individuals were counted in more than one year.



Black-backed woodpecker. **USFWS**

Species that were present in the early years and not present now include the gray partridge (2005 last year), ruffed grouse (2005), northern bobwhite (1992), redheaded woodpecker (2009), and evening grosbeak (1988). Species that showed up and were present in later years were the wild turkey (1986 first count), peregrine falcon (2012), sandhill crane (1999), Eurasian collareddove (2003), common raven (2019), eastern bluebird (1989), and house finch (1990).

The "best bird" was when Allan Holzheuter found a black-backed woodpecker in 1985. Also, in 1985 a high number of 27 northern shrikes were found and at that time was one of the highest numbers of northern shrikes found on CBC's in North American. Another highlight has been the Al Shea family who has counted at the Portage Power Plant for over 40 years. Their record was finding 52 species in one year!

We analyzed the data for the first 30 years and presented the results at a WSO convention. We look forward to analyzing the 49 years of data. THANKS to the many field and feeder counters for all their time on the CBC over the decades. Someone said "the first 50 years are the hardest." We look forward to the next decade.

B.) Insects

North American Butterfly Count

In 2020 we set records with 23 participants (16 high in the past), 20 species (19) and 56 northern crescents (53). Participants ranged in age from 8 to 70 years old, and two new species were added to the list including the silver-spotted skipper and the banded hairstreak. The silver-spotted skipper has been seen before at Goose Pond but not on the official count.

We try to conduct the count the first week in July and find that butterfly numbers can vary greatly year to year. This year we found 2 red admirals (55 last year), 91 common wood-nymphs (8), 191 clouded sulphurs (4) and 72 black swallowtails (4). This was the seventh year that Madison Audubon volunteers counted at Goose Pond Sanctuary and Erstad Prairie as part of the Mud Lake Count.

Black swallowtail. Arlene Koziol



Odonate Surveys - Dragonflies and Damselflies

In 2020 we conducted baseline monitoring for odonates at Goose Pond Sanctuary, Otsego Marsh, Erstad Prairie and the adjacent Schoeneberg Marsh Waterfowl Production Area, and at the Martin's Wildland property near Rio where Madison Audubon holds a conservation easement. Odonates are rewarding to look for because they're active critters, have vibrant colors, are easily found, and there are many species. Odonates are habitat



Blue dasher. Richard Armstrong

restricted, and we think it's important to know what species

are present on our properties. When Goose Pond goes dry in future drought times, it will be interesting to monitor odonates and record what species are present and how long they take to return. Another reason to conduct the survey was to assist the DNR and the Wisconsin Dragonfly Society who are conducting an odonate survey to <u>update odonata records for the state</u>.

There are 75 species of odonates on the Columbia County list, and we found 29 of them! **Overall,** 17 species of dragonflies and 12 species of damselflies were found. We were very pleased

Dragonflies and Damselflies at Madison Audubon Projects in Columbia County						
Dragonfly Family	Common Name	Goose Pond	Schoeneberg Marsh/Erstad Pr.	Otsego Marsh	Wildland	
Clubtails	Horned Clubtail		-	2020		
	Common Green Darner	2020	2020	2020	2020	
Darners	Lance-tipped Darner	2020				
	Shadow Darner	2020				
	Autumn Meadowhawk	2020	2020	2020	2020	
	Band-winged Meadowhawk	2020	2020	2020		
	Black Saddlebags	2020	2020		2020	
	Blue Dasher	2020	2020	2020	2020	
	Common Whitetail	2020	2020	2020	2020	
	Dot-tailed Whiteface		2020	2020	2020	
Skimmers	Eastern Amberwing	2020	2020	2020		
	Eastern Pondhawk	2020	2020	2020	2020	
	Halloween Pennant	2020	2020	2020	2020	
	Red Saddlebags	2020	2020			
	Twelve-spotted Skimmer	2020	2020	2020	2020	
	White-faced Meadowhawk	2020	2020	2020	2020	
	Widow Skimmer	2020	2020	2020	2020	
Damselfly Family	Common Name	Goose Pond	Schoeneberg Marsh/Erstad Pr.	Otsego Marsh	Wildland	
Broad-Winged	Ebony Jewelwing			2020	2020	
	Eastern Forktail	2020	2020	2020	2020	
	Familiar Bluet	2020	2020	2020		
	Hagen's Bluet		2020			
Pond Damsels	Marsh Bluet	2020	2020		2020	
Pond Damseis	Orange Bluet		2020			
	Sedge Sprite				2020	
	Skimming Bluet		2020			
	Tule Bluet		2020		2020	
	Elegant Spreadwing		2020			
Spreadwings	Northern Spreadwing		2020			
	Slender Spreadwing		2020	2020		

with the first year results even though we did not begin in earnest until around July 20th. In 2019 there were no Odonata observations for Columbia County. In 2020 there were 284 observations from 86 day entries. Around 90% of the observations were from our volunteers. Graham wrote a blog on July 22, 2020 requesting volunteers to assist with the odonate survey on properties that Madison Audubon has an interest in. The post includes tactics for hunting odonates and advice on where to find them.

Monarch Butterfly Tagging

Their striking orange and black coloration, relative abundance, and harmless nature make monarchs a symbol that the public can immediately identify and interact with. Staff and volunteers helped to tag 840 monarchs at Goose Pond during the 2020 season, and two of our tags were recovered at the monarch wintering grounds in Mexico. Survey efforts in Mexico were low this year due to COVID-19. 6,165 individuals have been tagged in the fall since we started in 2012 with 44 total tag recoveries. Taggers at Goose Pond record the date, sex, and location along with which plant species each monarch is "nectaring on" or using as a food source. According to 5,522 pieces of nectaring data, a monarch's preference for what's on the dinner table is clear.

#	Common Name	Scientific Name	Frequency	% Frequency
1	Showy goldenrod	Solidago speciosa	2,239	40.5
2	Stiff goldenrod	Oligoneuron rigidum	598	10.8
3	Sawtooth sunflower	Helianthus grosseserratus	559	10.1
4	New England aster	Symphyotrichum novae-angliae	425	7.7
5	Meadow blazing star	Liatris ligulistylis	412	7.4
6	Canada goldenrod	Solidago canadensis	376	6.8
7	False boneset	Brickellia eupatorioides	366	6.6
8	Old field thistle	Cirsium discolor	193	3.5
9	Smooth blue aster	Symphyotrichum laeve	155	2.8
10	Frost aster	Symphyotrichum pilosum	104	1.9
11	Spotted Joe-Pye	Eutrochium maculatum	64	1.2
12	Missouri goldenrod	Solidago missouriensis	31	0.6

Showy goldenrod is the winner here, but all of the plants on this list are crucial for the fall monarch migration and for other late season pollinators. If you want to help monarchs recover from their precipitous population decline, establishing these species on your property is a great place to start. Meadow blazing star is likely the top monarch nectaring species out there, but its use frequency is shown below others in this table because it is a rare plant at Goose Pond. And of course, don't forget milkweeds for the caterpillars! Learn more about monarchs and their migration and order official monarch tags for yourself at MonarchWatch or report observations through Journey North.







Monarch caterpillar (left), volunteer Jim Otto (middle), Goose Pond roost (right). Arlene Koziol

Section VII: Wildlife

A.) Columbia the Snowy Owl Movements January 2020 to April 2021



Columbia with backpack transmitter. Monica Hall

Columbia was captured at Goose Pond Sanctuary on January 28, 2020 and fitted with a GPS transmitter that included a solar panel and battery and a cell phone by master bander Gene Jacobs, and then released. Columbia has undertaken an extraordinary journey.

She headed north out of Columbia County on March 8, 2020 passed through North Dakota in mid-March, skirted the west side of Hudson Bay in late May, and arrived at Prince of Wales Island by June. She spent the summer on the island which is over 2,100 miles north of Goose Pond.

Columbia's southward journey backtracked roughly over her northward one. She first reached a cell tower near Swan River, Manitoba on November 12, 2020. Instead of ending up in southern Wisconsin for the 2020-2021 winter, she hooked south and stopped in northwest Iowa on December 12. She maintained a territory east of Milford and southeast of Spirit Lake and did not move more than 10 miles from this point throughout the winter. She remained there until 7:00 p.m. on February 28th.

She then headed north to Fargo, then to Manitoba and on to Saskatchewan. She moved along the border with North Dakota and rarely visited North Dakota. At one point she was about 40 miles east of Montana. She last called in on April 3rd from Mikado, SK.

It is amazing that during her travels Columbia sat on the ice at Morrison Lake ND on March 20, 2020, November 28th, 2020, and March 4, 2021. Locations she visited twice include 30 miles north of Fargo ND, Lake Alice ND, Burntwood River MB, Canadian Forces Base Shilo, and the west coast of Hudson Bay north of Churchill MB. Her GPS system is incredible!

Columbia hatched in the summer of 2017 and will turn four this summer. Hopefully she will find a mate and raise a family. We look forward to hearing from her next fall and seeing where she journeyed.

Thanks to everyone who helped us work with Columbia, to donors for the transmitter, and to **Gene Jacobs** and other volunteers at Project SNOWstorm.

Columbia's movements. Project SNOWstorm



B.) Susan Recognized by United States Geological Service (USGS) for Volunteer Service

Sue retired from collaborative work with the USGS Wildlife Health Center after serving 10 years. "I enjoyed working with the professionals at USGS over the years and was able to see firsthand, the important work that they do to help wildlife in America and across the world." The Meadowlark photo that was presented to Sue was taken by Milton Friend, former director of the facility which carries his name. "In the 1970s, Madison Audubon worked to keep the Wildlife Health Center from being closed due to Federal budget shortfalls, so having the chance to volunteer at the Center was especially gratifying.



Sue Foote-Martin. Mark Martin

C.) Forster's Tern Platforms



Forster's terns are colony nesters with high breeding site fidelity which means that they nest in approximately the same place year after year. They prefer large bodies of open shallow water and nest on emergent vegetation. Rising water levels can drown nests within a colony and eliminate the production of an entire colony for that year. This problem has been exacerbated by wetland loss which historically helped to regulate these water levels.

New tern platforms. Graham Steinhauer

Wisconsin DNR tern experts Sumner Matteson and Daryl Christensen asked Madison Audubon to build Forster's tern nesting platforms. They are anchored in place by poles, but the platforms

themselves are allowed to rise and fall with fluctuating water levels. The platforms help to ensure that there is at least some young are added to the population each year. They will be deployed before the tern nesting season in June at Puckaway Lake and Green Bay. Thank you to Eagle Scout Josh Hodkiewicz for building these platforms and to Dan Jansen for assisting in construction.

Platform covered in vegetation with three eggs. Daryl Christensen



D.) Project Snapshot

Goose Pond Sanctuary has participated in the Department of Natural Resources (DNR) <u>Snapshot Wisconsin</u> program since the October 2017 and Mark and Sue have had a Project Snapshot camera at their Wildland property 13 miles north of Goose Pond since October 2018. Trail cameras are distributed state-wide and are placed on public or private land. Once the photos are uploaded, we classify them by species (or flag blank or human photos). The DNR uses this data to monitor wildlife populations across the state. Thanks to Jim Otto and Bob Bennicoff for helping classify the photos.

Our goal is to see the diversity in wildlife, seasonal use, and yearly changes in wildlife numbers. Our camera is in Jill's Prairie where three trails intersect, adjacent to restored prairie, cropland, and wetland. The Martin's camera is on a trail near a wetland, oak savanna and prairie restoration.

Looking at the data for Goose Pond - Wildland we found the following photos: Badger 3 GP - 3 WL, Bobcat 0-24, Cottontail 148-185, Coyote 433-80, Sandhill Crane 133-148, Deer 782-23,058, Gray Fox 0-1, Red Fox -1-2, Muskrat 6-0, Opossum 56-227, Other Birds 4,208-50, Otter 0-1, Pheasant 189-0, Raccoon 80-770, Striped Skunk 46-7, Tree Squirrels 0-392, Turkey 2-752, and Woodchuck 0-1.

DNR uses the data from over 1,700 cameras, to survey for species like badgers, bobcats, coyotes, fox, raccoons, and skunks. Comments from the data above. The 4,208 Other Bird photos from Goose Pond were mostly from the high-water levels in 2019 that had waterfowl swimming in front of the camera for days and taking thousands of photos. Differences seen: Goose Pond is great habitat for coyotes, other birds, pheasants, and striped skunks. While Wildland is great habitat for bobcats, deer, opossums, raccoons, tree squirrels, and turkeys.



Sandhill cranes (left) and Canada and white-fronted geese at Goose Pond, Bobcat at Wildland (top)





E.) Muskrat House Count

Graham surveyed muskrat houses in the winter finding 114 houses in 2020, 116 in 2019, and 49 in 2018. The survey only includes muskrats living in houses and does not include other muskrats living in banks and under roads. At about five muskrats per house, this means that these waters currently host at least 600 muskrats. According to a publication by the USDA, numbers as high as 35 individuals per acre have been reported in cattail marshes. Houses are constructed on shallow sites, but are adjacent to deeper water. This gives muskrats an easy place to build, but also ensures that they'll have plenty of liquid water so that they can reach foraging sites and feeding platforms during winter. The 2019 (top) and 2020 (bottom) survey maps show a similar distribution of houses with high concentrations being found at





the intersection of deep water and abundant emergent vegetation. Water levels were higher in 2019 than 2020, and the house distribution has contracted towards permanent bodies of water accordingly.



Muskrats feed on emergent vegetation and use it for building materials, and a characteristic ring of open water is frequently found around a house. This behavior provides heterogeneity in wetland vegetation which benefits waterfowl and other wetland birds. Sandhill cranes, Canada geese, mallards, and other species commonly nest or loaf on muskrat houses.

Muskrat house, Graham Steinhauer

F.) Spring Migration

Goose Pond opened on March 13, 2020 providing space for thousands of migrants arriving on south winds. Graham and Calla Norris conducted a bird survey finding 3,793 individuals (mostly waterfowl) from 28 species on March 16th. Some notable finds were eight northern pintail, two crane pairs, six American widgeon, 58 canvasbacks, and 1,972 greater white-fronted geese. Other types of wildlife showed themselves during this



Green heron. Arlene Koziol

early period like muskrats on their houses and the first tiger

salamander of the year on March 12th. On March 17th, Mark counted 1,830 tundra swans.

In the first week of April, several pairs of mallards were spotted in the prairies looking for potential nest sites. The mallard drake to hen ratio increased steadily on the pond during this time suggesting that hens had started to incubate. Graham did a survey of the pond on the evening of April 10th. Some highlights include 102 northern shovelers, 85 ruddy ducks, 130 Bonaparte's gulls, six ring-necked pheasants, five double crested cormorants, and a pair of red breasted mergansers. On May 5, Mark and Graham found several clay colored sparrows, two green herons, ten chimney swifts, 60 double-crested cormorants, and at least 50 other species. Dropping water levels in May exposed mudflats for species like the spotted sandpiper, willet, dunlin, dowitchers, Wilson's phalaropes, and yellowlegs.

G.) Fall Migration

Bobolink numbers peaked on September 3 with a total of 250 individuals. One month later, Mark, Tanner, Graham, Tucker, and Jim Otto counted 1,017 pine siskins feeding on ripening sawtooth sunflower seeds. Uncommon sparrows including Lincoln's, LeConte's, and Nelson's sparrows were spotted in weedy areas in early October. Thousands of Canada geese and mallards used Goose Pond as refuge during October and November, and an abundance of other waterfowl species



showed up along with them. Some of these included white-winged scoter (new to the Goose Pond bird list), northern pintails, scaup, ring-necked ducks, and greater white-fronted geese. Two horned grebes were also spotted on October 21. Huge flocks of geese and mallards returned from afternoon snacks in nearby cornfields forming a loose tornado as they jockeyed for space on the already crowded water. White-winged scoter. Mick Thompson FCC

Section VIII: Past Highlights

For many years Mark and Sue picked one important event to be the highlight of the year. These highlights tell of important natural events on the property and also show the great progress that has been made as a result of expanding the sanctuary. Below is a selection of these highlights from past years:

- 1990 30,000 mallards use Otsego Marsh as staging area during migration
- 1991 1,200 snow geese in fall at Goose Pond
- 1993 Record rainfall 16 inches in June and July
- 1994 Large numbers of waterfowl, pheasant and gray partridge broods
- 1996 Sandhill cranes return to nest at Goose Pond Sanctuary after 100-year absence
- 1997 Snowy owl invasion in January and February on the Arlington Prairie
- 2000 Willy Hutcheson's sighting of six species of geese at one time at Goose Pond
- 2002 Goose Pond went dry lowered water levels provided excellent shorebird habitat
- **2003** Acquisition of 1,730 acres at Goose Pond, Rose Lake & Zeloski Marsh
- **2004 –** Acquisition of the 116-acre Northern Prairie (now known as Lapinski-Kitze Prairie)
- **2005** Great Gray Owl added to Goose Pond bird checklist
- 2006 A flock of 41 American avocets sighted in April at Goose Pond
- **2012** Tagging 50 monarch butterflies at Goose Pond.
- 2014 Sighting seven snowy owls at Goose Pond at one time
- **2015** Silphium borer moths (state-endangered) discovered at Goose Pond and tagging of a snowy owl named "Goose Pond"
- **2016** Graduate student Heather Inzalaco documents 51 species and 1,663 pairs of breeding birds at Goose Pond
- **2017** Construction of "Wingspan" viewing pavilion, and seeing six species of geese at one time on Goose Pond, including a brant, in March
- **2018** Goose Pond Sanctuary celebrated its 50th anniversary. In recognition, seven wetland scrapes were installed as a lasting gift to wildlife.
- **2019** Record high water levels from March 15 through December 2019. At the end of the year over 200 acres of water was still present.
- **2020** Acquisition of the 36-acre Reierson parcel at Otsego Marsh and the 70-acre Benade tract at Goose Pond. Also the webcam and Motus tower were erected.