

MIDWEST FURBEARER GROUP ANNUAL REPORT JUNE 2017

MEETING TIME AND PLACE

The Iowa Department of Natural Resources (IA DNR) hosted the Midwest Furbearer Workshop June 5 – 8th, 2017. The meeting was held in Decorah, IA at Luther College's Baker Village. The field tour covered wildlife management areas and conservation easements along the Upper Iowa River Corridor.

ATTENDANCE

Thirty five (35) participants attended the workshop in 2017, including state furbearer biologists from 10 Midwest member states (Indiana, North Dakota, Nebraska, Kansas, Minnesota, Michigan, Wisconsin, Missouri, Kentucky, and Iowa) plus Arkansas. Additional attendees included representatives from: South Dakota Game, Fish & Parks, Kansas State University, Iowa State University, Western Illinois University, South Dakota State University and the U.S. Fish & Wildlife Service Upper Mississippi National Wildlife Refuge. A complete list of attendees and contact information for state furbearer biologists is available in Appendices 1 and 2.

The Furbearer Committee welcomes two new Midwest state furbearer biologists to this year's workshop - Geriann Albers (Indiana Dept. of Natural Resources) and Laura Conlee (Missouri Dept. of Conservation). Both have valuable furbearer experience from other states they worked in previously.

EXECUTIVE SUMMARY

Forums such as the Midwest Furbearer Workshop provide valuable opportunities for state furbearer biologists to become acquainted with emerging issues and exchange information and ideas related to furbearer research and management. As such, the need for state fish and wildlife agencies to establish/maintain furbearer biologist positions and support travel of furbearer biologists to the annual Midwest Furbearer Workshop is imperative to promote quality furbearer management and research in each state. It is more important than ever that state agencies are in the forefront of issues related to furbearer management and regulated trapping in order to ensure abundant populations, address important conflicts, and provide sustainable recreational opportunity.

At the 2017 meeting, numerous speakers presented information on topics related to camera trap survey methods, furbearer ecology, meso-carnivore interactions,

monitoring, and regulated trapping. Professional presentations were given on the following topics:

- Midwest regional gray fox genetics
- Eastern spotted skunk biogeography and survey information
- MN fisher study updates
- Habitat management plan for the Upper Mississippi National Wildlife Refuge
- Furbearer trapping data from the Upper Mississippi National Wildlife Refuge
- Spring spotlight survey data modeling in Iowa
- Prey availability, competition, and land-use of carnivores in urban areas
- Occupancy model dynamics of co-occurring canids
- Bobcat populations and range expansion in the Midwest
- Bobcat management with competing stakeholders
- Bobcat home range size in ag-dominated landscapes
- Spatial alignment and trail cam detection rates
- Camera trap session – WI, MN, and MI survey methods
- Distribution and habitat selection of swift fox in the northern great plains
- Habitat variables of river otters in Iowa
- Furbearer program updates from Indiana and Iowa
- CITES tagging methods in Kentucky
- Muskrat declines across North America
- Impacts of invasive hybrid cattails on distribution of muskrats
- Mt lion habitat suitability in North Dakota
- Wisconsin beaver management

The Decorah area and Luther College campus offered a diverse outdoor setting for attendees to hike trails, trout fish, and explore. As usual, the breaks, evening hours, and business meeting also allowed much exchange of information on current results from population and harvest surveys, current challenges and issues in furbearer management within each state, and an opportunity to discuss new or proposed research projects. The workshop provided a good venue for discussing new ideas or issues that affect multiple state agencies. Summaries of these topics are presented below as Director Action or Information Items.

DIRECTOR ACTION ITEMS

None

DIRECTOR INFORMATION ITEMS

1. Large Carnivore Subcommittee – For background on this topic, see the 2016 Report. Although the Furbearer Committee in 2016 felt there was no need to form a specific sub-committee on large carnivores, we agreed that we could do more to keep the Directors up-to-date on regional large carnivore topics since there is no specific MAFWA wolf, bear, or cougar committee. Additional discussion at this year's workshop suggested a desire for us to add some status updates for large carnivores into the Furbearer Committee report.

At this time, the Midwest Furbearer Committee has agreed to incorporate large carnivores in the following way:

- Incorporate the sharing of significant information on large carnivores at the annual Midwest Furbearer Workshop which would preclude the need to hold an additional separate meeting by state furbearer biologists for large carnivores.
- Significant technical information on large carnivores will be shared during the annual Midwest Furbearer Workshop via presentations and in the annual workshop report. Significant information on large carnivores will include findings from recent research, changes in the distribution of bears, wolves, and mountain lions, changes in large carnivore harvest seasons, and changes in their protected status.
- Each state will provide a large carnivore status update and any notable changes beginning in this 2017 report (Appendix 5).

At least 3 meetings are held either regionally or nationally related to black bears, gray wolves, and mountain lions – the Midwest Wolf Stewards meeting, the Eastern Black bear workshop, and the Mountain lion workshop typically held in the western U.S. While these meetings vary in breadth of the audience, all provide an opportunity for biologists to network with other biologists and share information on management and research.

Biologists from MN, WI, MI, and Ontario typically attend the Midwest Wolf Stewards workshop, though it is open to all states. To allow for more biologist-to-biologist discussion, at the last 2 Midwest Wolf Stewards meetings State wolf biologists met in advance of the main conference to discuss wolf management and research updates, issues, and needs. Agency biologists agree that this 'pre-meeting' serves a worthwhile purpose and will continue to be held in advance of the larger Wolf Stewards meeting. The Wolf Stewards meeting is normally held every year, but it will not be held next year because there is an International Wolf Meeting to be held in Minneapolis in 2018 and that will serve to

replace next year's Wolf Stewards meeting.

Four Midwest furbearer biologists (NE, KS, ND, and MO) attended the recent mountain lion workshop held in May in Colorado. This workshop is held every three years. Within the Midwest, 3 states have documented breeding populations (NE, SD, and ND). Several other states have had a notable number of confirmations over the years; Missouri now has a total of 69 confirmed instances of mountain lion presence and has confirmed detection of a female through DNA evidence.

Currently, the Eastern Black Bear Workshop meets every other year and was last held in 2016. Currently, established populations of black bears in the Midwest exist in MN, WI, MI, MO, and KY. Biologists from these Midwest states often attend this workshop or other bear meetings. Proceedings of the Eastern Black bear workshop typically contain a table showing bear population and harvest statistics for all eastern states. A summary of key metrics for black bears, wolves, and mountain lions in the Midwest is shown in Appendix 5.

2. Otter avoidance with beaver trapping – Laura Palmer (KY furbearer biologist) shared with the group that USDA – Wildlife Services (WS) is in the process of developing a study to examine otter avoidance in beaver traps as part of their beaver management areas program (bmap). Any states who are able to provide input from their prior experience or interested in participating in the study should contact Colleen Olfenbuttel or Todd Menke (USDA – WS, North Carolina).
3. The Southeast Region is interested in the possible collaboration of muskrat research with other regions. Research would focus on survival and cause-specific mortality. If states from the Midwest Region are interested in participating Laura Palmer (KY) and Colleen Olfenbuttel (North Carolina) can be contacted.
4. Population modeling – The committee discussed the pros and cons of Statistical Population Reconstruction (SPR) and Integrated Population Modeling (IPM). Some states are interested in attaining population estimates of secretive furbearer species that are hard to survey with regular survey methods, especially if existing and usually cost-effective data from harvest information such as tooth age, trapper effort, etc. are already being collected. Missouri is working with Josh Millspaugh to develop and test bobcat and otter SPR models. Michigan is developing modeling for fisher and marten. Minnesota recently published a paper on incorporation of telemetry data into SPR models. Iowa has a project to use IPM for otters and possibly bobcats. The Midwest Committee agreed

that population modeling may be a good topic to include at next year's workshop.

5. Trapper effort data collection – the committee discussed the importance of collecting data annually on trapper effort. This information is comparatively cheap to obtain and can be extremely useful as a population index, is required as an input into SPR models for estimating abundance, and subsumes the many variables (e.g., fur prices, gas prices, unemployment) that can influence harvest in sometimes complicated or interactive ways. Some states have been collecting trapper effort data for several years, while other states have not. And that it's important collect data on trap nights. The committee agreed that more effort should be made to collect trapper effort data, and more discussion is needed to ensure that effort data are obtained in similar manners across jurisdictions, thereby facilitating regional analyses of population trends.
6. Bears and CITES Tagging – In 2015 - 2016, and largely coordinated by AFWAs Fur Resources Technical Working Group (FRTWG), furbearer/bear biologists were engaged with the USFWS to 1) improve the CITES permit process for sending biological samples from bears to Canada (e.g., for DNA analysis) and 2) consider establishing a CITES tagging process for bear pelts that is similar to wolves, bobcats and otters. Primary concerns among the states have been a slow and cumbersome process for sending biological samples out-of-country and potential waste of a fur resource due to the high cost of a CITES export permit for an individual bear hunter (permit cost often exceeds pelt value). To date the FRTWG has conducted a survey of bear biologists to assess interest/concerns, though the survey may need to be re-done due to concerns over the level of CITES understanding by respondents. In addition, the FRTWG helped coordinate a webinar between USFWS staff and bear biologists. As a result of the various discussions, some changes have been made to the permit process for scientific specimens, but the new 'pre-approval' process still takes up to 2 months to complete, is only valid for 6 months, and final issuance of any specific permit will still take a minimum of 1–2 weeks, so is not a real solution for many urgent situations (e.g., rapid DNA confirmations in cases involving human attacks). Furthermore, USFWS remains reluctant to start the process necessary (i.e., Federal Register) to move toward a bear pelt tagging system similar to wolf, otter and bobcat that allows states to apply for CITES authority and then issue tags directly to bear hunters/trappers. Their primary concern appears to be their sense of a lack of demand, but this fails to consider that low demand may be a result of lack of knowledge among hunters that such opportunity even exists in addition to the high cost of an individual permit (~ \$100); if bobcat/otter trappers had to purchase

individual permits, in most years we predict there would be little demand to export pelts of these species as well. As such, the FRTWG and Midwest Furbearer Committee are encouraging more local discussion between Regional AFWA associations and their respective Regional FWS Offices to try and encourage further simplification of the process for biological specimens as well as a Federal register proposal to create a CITES pelt tagging process for bears similar to otter, bobcat, and wolves. A substantial portion of the national bear harvest comes from 3 Midwest states (MN/WI/MI) so the issue is relevant to MAFWA. Currently, AFWA will continue to try to work with the US F&WS on this issue but for now there are no further changes pending.

7. Midwest Regional Gray Fox Genetics Update – Beginning in 2012, the USFWS published a 90-day finding that listed of the “Plains spotted skunk” and “Prairie gray fox” was warranted and they initiated a status review for these species/sub-species. Because of concerns over the taxonomy of these entities, various efforts to collect DNA samples have been undertaken, including collaboration between Midwest fur biologists and Dawn Reding from Luther College. Dawn Reding gave a presentation during the workshop updating attendees of the findings so far. Due to cooperation from several states, Dawn has been able to conduct genetics work on gray fox tissue from several regions throughout the U.S. in addition to the Midwest, either from freshly collected tissue or older tissue from museum specimens. So far, the genetics work shows some differences occur in an east to west gradient, but the Midwestern gray fox are similar genetically to gray fox in the eastern U.S. Midwest states will no longer need to collect gray fox tissue samples for this project. Though T&E listing may be resolved, concern still exists in several Midwest states about the apparent decline in gray fox populations.
8. Spotted Skunks – Blake Sasse (Arkansas Game & Fish Commission) updated the committee that he’s working to inventory the prevalence/locations of spotted skunks (eastern/western) in the U.S. He emphasized to the group that pro-active monitoring for spotted skunks and possible tissue sampling (similar to gray fox) may be beneficial to future research efforts. He urged states to let him know of confirmed spotted skunks from their state and that he can compile over time. Encouraged increased awareness by furbearer biologists and diligence with reporting them because every little bit helps in understanding their current distribution.

The Midwest Furbearer Working Group thanks state Directors for their continued support of travel of state furbearer biologists to the annual Midwest Furbearer Resources Workshop. With tight budgets and restricted travel this annual

workshop continues to be a critical component of sound resource management in the Midwest. Annual meetings allow for an open, thorough exchange of information and knowledge resulting in efficient, effective, and sound management of these unique species.

TIME AND PLACE OF NEXT MEETING

The North Dakota Game & Fish Department will host the 2018 Midwest Furbearer Workshop. An exact time and location is yet to be determined. A complete list of previous host states is available in Appendix 4.

John Erb (MN furbearer biologist) passed on information to the committee from Laura Palmer (KY furbearer biologist) that the Southeast Region has proposed to hold a joint meeting with the Midwest Region in 2019. The proposed location at this time is Oklahoma. The Midwest Furbearer Committee is in general agreement to participate. The objective of the joint meeting is to share information among regions. More details to carry out the joint regional meeting will emerge in 2018.

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Appendix 1. 2017 Midwest Furbearer Workshop Attendees.

Name		Agency/Affiliation
Adam	Ahlers	Kansas State University
Gerianne	Albers	Indiana DNR
Adam	Bump	Michigan Department of Natural Resources
Bill	Clark	Iowa State University (retired)
Laura	Conlee	Missouri Department of Conservation
John	Erb	Minnesota DNR
Vince	Evelsizer	Iowa DNR
Lile	Fox	Iowa Department of Natural Resources
Matthew	Gross	South Dakota Game; Fish & Parks
Terry	Haindfield	Iowa DNR
Tim	Hiller	Wildlife Ecology Institute & FTA
David	Hoffman	Iowa DNR
Drew	Howing	Iowa Lakes Community College
Chris	Jacques	Western Illinois University
Jim	Jansen	Iowa DNR
Dan	Kaminski	Iowa DNR
Andrew	Kellner	Iowa DNR
Robert	Klaver	USGS; Iowa Coop F&W Research Unit
Robert	Lonsinger	University of Wisconsin-Stevens Point
Logan	McEwan	Iowa DNR
Emily	Mitchell	South Dakota State University
Melissa	Nichols	Michigan DNR
Bridget	Nixon	Iowa State University
Laura	Palmer	Kentucky Department of Fish & Wildlife Resources
Matt	Peek	Kansas Dept of Wildlife; Parks and Tourism
Dawn	Reding	Luther College
Shawn	Rosler	Wisconsin DNR
Blake	Sasse	Arkansas Game and Fish Comm
Nathan	Schmitz	Iowa DNR
Tim	Swearingen	Western Illinois University
Stephanie	Tucker	North Dakota Game & Fish Department
Curtis	Twellmann	Wisconsin DNR
Kyle	Wait	Kansas State University
Sam	Wilson	Nebraska Game and Parks Commission
Stephen	Winter	USFWS – Upper Mississippi National Wildlife Refuge

APPENDIX 2. MAFWA Furbearer Biologists – Contact Information.

Illinois

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Iowa

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Minnesota

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Missouri

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Nebraska

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North Dakota

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Appendix 3. 2017 Midwest Furbearer Workshop – Agenda.

Midwest Furbearer Workshop June 5 – 8, 2017 Luther College, Baker Village Decorah, Iowa

AGENDA

Monday June 5th (Travel Day)

- | | |
|----------------|----------------------------|
| 5:00 - 9:00 PM | Registration |
| 5:00 - 8:00 PM | Informal Networking Social |

Tuesday June 6th

- | | |
|---------------|--|
| 6:45 - 8:00 | Breakfast Buffet (Included) |
| 7:30 - 8:30 | Registration |
| 8:40 – 9:00 | Welcome, Logistics, etc.
Dawn Reding and Vince Evelsizer |
| 9:00 - 9:20 | Midwest Regional Gray Fox Genetics Study – An Update
Dr. Dawn Reding, Luther College |
| 9:20 - 9:40 | Eastern spotted skunk historical biogeography and various surveys
Blake Sasse – Arkansas Game & Fish Commission |
| 9:40 - 10:00 | The status of Fisher in Minnesota – an eight year study
John Erb – Furbearer Biologist, Minnesota DNR |
| 10:00 - 10:20 | Habitat Management Plan for the Next 20 Years – Upper Mississippi National
Wildlife Refuge
Stephen Winter – US FWS Biologist, Upper Mississippi River National Refuge |
| 10:20 - 10:40 | Break |
| 10:40 - 11:00 | Twenty Years of Furbearer Trapping Data from the Upper Mississippi
River National Wildlife & Fish Refuge
Stephen Winter ¹ and Brian Stemper ² - US Fish and Wildlife Service,
Upper Mississippi River National Wildlife & Fish Refuge |
| 11:00 - 11:20 | Evaluating spring spotlight survey data for modeling resource selection
functions for mesocarnivores in Iowa
Dan Kaminski – Spatial Analyst, Iowa DNR |
| 11:20 - 11:40 | Does prey availability, competition, or land-use change affect carnivore |

	distributions across urban land-use gradients? Wait KR and Ahlers AA
11:40 – 12:00	The application of occupancy models to investigate the dynamics of co-occurring canids Robert C. Lonsinger*, Eric M. Gese, Larissa L. Bailey, Lisette P. Waits
12:00 – 1:15	Lunch Buffet (Included)
1:20 - 1:40	Bobcat populations and range expansion in the Midwest Dr. William Clark - retired ISU professor of animal ecology
1:40 – 2:00	Managing a Resource and Recreation with Competing Stakeholder Interests: Michigan Bobcat Case Study Adam Bump - Furbearer Specialist, Michigan DNR
2:00 – 2:20	Evaluating home range size of bobcats in an agriculturally-dominated landscape of west central Illinois Tim Swearingin - Graduate Student, Western Illinois University
2:20 – 2:40	Influence of spatial alignment on photographic detection rates at remotely triggered camera stations Tim C. Swearingin* , Christopher N. Jacques, Robert W. Klaver, Chuck R. Anderson, C. S. DePerno, and J. A. Jenks
2:40 - 3:00	Break
3:00 – 3:20	CAMERA TRAP SESSION Wisconsin – Shawn Rossler – Furbearer Biologist, Wisconsin DNR
3:20 – 3:40	Minnesota - Evaluation of study design options for deployment of trail cameras in multi-furbearer occupancy surveys John Erb – Furbearer Biologist, Minnesota DNR
3:40 – 4:00	Michigan - Assessing Trail Cameras for Detecting an Expanding Bobcat Population in West-central Michigan Dwayne Etter, Sarah Mayhew, Adam Bump and Melissa Nichols* - Michigan DNR
4:00 – 4:20	Camera trap discussion – logistics, software, personnel
4:20 – 4:40	Distribution and Habitat Selection of Swift Fox (<i>Vulpes velox</i>) in the Northern Great Plains Emily L. Mitchell ¹ , Tammy L. Wilson ² , Donelle Schwalm ³ , and Jonathan A. Jenks ¹
Dinner	<u>Option A:</u> Go Local!--Optional Pints & Pizza Social at Toppling Goliath Brewing Co. with Mabe's Pizza (buy your own) from 5 - 8pm <u>Option B:</u> Go Local!--McCaffrey's Dolce Vita departing at 6 pm Wood fire pizza and other dinner options, set in a wooded valley

Wednesday June 7th

6:45 – 8:00	Breakfast Buffet (Included)
7:30 - 8:00	Registration
8:30 – 8:50	Iowa Furbearer Trends in Population and Harvest - Overview Dave Hoffman – Iowa Department of Natural Resources
8:50 - 9:10	Habitat variables and river otter in Iowa Bridie Nixon, Ph.D Candidate – Iowa State University
9:10 – 9:30	CITES tagging – the Kentucky Way Laura Palmer – Furbearer Biologist, KY Dept of Fish & Game
9:30 – 9:50	Indiana Furbearer Update Gerianne Albers – Indiana Dept. of Natural Resources
9:50 - 10:10	Muskrat Declines Across North America Dr. Adam Ahlers – Kansas State University
10:10 - 10:30	BREAK
10:30 – 10:50	Quantifying the impacts of invasive hybrid cattails on the spatial distribution of muskrats. Larreur M, Windels SK, Olson BT, and Ahlers AA.
10:50 - 11:10	Mountain Lion habitat suitability modeling in North Dakota Stephanie Tucker – Furbearer Biologist, North Dakota Game & Fish Dept
11:10 - 11:30	WI Beaver Management Plan Shawn Rossler – Furbearer Biologist, Wisconsin DNR
11:30 – 11:50	Discussion – Future Furbearer Topics on the Horizon (Trail Cams, Drones, Models, Surveys, Budgets, etc)
11:50 - 1:00	LUNCH Buffet (Included) & Silent Auction Wrap-up
1:00 – 1:15	Load onto bus and prepare to Depart for Field Tour
1:15 – 5:00	Field Tour of Upper Iowa River Corridor including a “Daytime Coon Calling” with a dog. (GW) Demo
5:00 – 8:00	Dinner (On Your Own)

Thursday June 8th

6:45 – 8:00	Breakfast Buffet
8:00 – 9:00	Lodging Checkout
9:00 – 11:30	Business Meeting (State Furbearer Biologists and Invited Guests Only)
-	State Reports
-	Location for 2018 Midwest Furbearer Workshop
-	Other
11:30 AM	Adjourn – Safe Travels Home! (Lunch on your own)

Appendix 4. Host States of Midwest Furbearer Workshops.

Year	State	Year	State
1979	Kansas	2012	Missouri
1983	Wisconsin	2013	Illinois
1984	Illinois	2014	Ohio
1985	Iowa	2015	Indiana
1987	Minnesota	2016	Minnesota
1988	Indiana	2017	Iowa
1989	Missouri		
1990	Nebraska		
1991	South Dakota		
1992	Ohio		
1993	Oklahoma		
1994	North Dakota		
1995	West Virginia		
1996	Michigan		
1997	Illinois		
1998	Kansas		
1999	Wisconsin		
2000	Missouri		
2001	Ohio		
2002	Iowa		
2003	Minnesota		
2004	Illinois		
2005	North Dakota		
2006	Michigan		
2007	Nebraska		
2008	Kansas		
2009	Kentucky		
2010	South Dakota		
2011	Wisconsin		

Appendix 5. Large Carnivore Status Report.

Mountain Lions

	Protected (Y/N)	Estimated Population	Harvest (Y/N)	Recent changes in Distribution
Illinois	N/A			
Indiana	Y	0	N	rare visitor
Iowa	N	<5	N	occasional visitor
Kansas	Y	0	N	None, still getting infrequent dispersers
Kentucky		0	N	N/A
Michigan	Y	No breeding population	N	A few transients each year
Minnesota	Y	No breeding population	N	Decline in transients apparent from 2014 – 2016 compared to 2010 - 2013
Missouri	Y	No breeding population.	N	6-10 transients confirmed each year. 69 Confirmations since 1994.
Nebraska	Y - game animal	No statewide estimate. Pine Ridge Unit: 22-33 (2010-15 surveys)	2014 harvest, no harvest since	3 populations formed since mid-2000s.
North Dakota	Y	N/A	Y	N
Ohio	N/A			
South Dakota	N/A			
Wisconsin	Y	No breeding population	N	Rare transients
Manitoba	N/A			
Ontario	N/A			
Saskatchewan	N/A			

Black Bears

	Protected (Y/N)	Estimated Population	Harvest (Y/N)	Recent changes in Distribution
Illinois	N/A			
Indiana	Y	<5	N	occasional visitor
Iowa	N	<5	N	occasional visitor
Kansas	Y	0	N	None, still getting infrequent dispersers
Kentucky	N	400 in core area	Y	expanding population
Michigan	N- game species	~12,000	Y	expanding population
Minnesota	Y –game species	12 ~ 15,000	Y	decline from late 90's to ~ 2010, slight increase since
Missouri	Y	300-350	N	Growing and expanding population
Nebraska	Y - game animal	0	N	rare visitor
North Dakota	Y	N/A	N	Occasional visitor
Ohio	NA			
South Dakota	N/A			
Wisconsin	Y – game animal	28,900	Y	Expanding
Manitoba	N/A			
Ontario	N/A			
Saskatchewan	N/A			

Gray Wolves

	Protected (Y/N)	Estimated Population	Harvest (Y/N)	Recent changes in Distribution
Illinois	N/A			
Indiana	Y	0	N	rare visitor
Iowa	Y	<5	N	occasional visitor
Kansas	Y	0	N	None, have only confirmed one
Kentucky		0	N	N/A
Michigan	Y	~618	N	UP fully occupied
Minnesota	Y	~ 2200 (in 2016)	N	none
Missouri	Y	0; No breeding population	N	Rare visitor
Nebraska	Y	0	N	rare visitor
North Dakota	Y	N/A	N	Occasional visitor
Ohio	N/A			
South Dakota	N/A			
Wisconsin	Y	925-952	N	Expanding
Manitoba	N/A			
Ontario	N/A			
Saskatchewan	N/A			