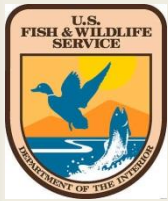


Lake Superior Environmental Monitoring Collaborative

Duluth, MN

November 19-20 2014



U.S. Fish and Wildlife Service

Charlie Wooley – Deputy Regional Director, Midwest Region

Piping Plover



- Working with partners to annually monitor breeding pairs, nests, and chicks fledged.
 - ❖ Apostle Islands National Lakeshore, WI
 - ❖ Grand Marais, MI
 - ❖ Vermillion Point, MI
 - ❖ Whitefish Point, MI
 - ❖ St. Louis River Estuary, MN/WI



Coastal Program



- Project-based monitoring in cooperation with partners
 - ❖ Superior Watershed Partnership, Piping plover
 - ❖ Sault Tribe of Chippewa Indians, St. Mary's River



Whitefish Point, MI

Migratory Birds



[Sign Up](#) [Sign In](#)

MIDWEST COORDINATED BIRD MONITORING PARTNERSHIP

Monitoring to Conserve Midwestern Birds

[ABOUT US](#) [OUR WORK](#) [MW AVIAN DATA CENTER](#) [WORKING GROUPS](#) [NEWS & OPPORTUNITIES](#) [WORKSHOP PROCEEDINGS](#)
[CALENDAR](#) [CONNECT](#)

WELCOME TO THE MIDWEST COORDINATED BIRD MONITORING PARTNERSHIP!



The Midwest Coordinated Bird Monitoring Partnership is a regional network committed to informed bird conservation decisions through enhanced coordination and exchange of monitoring information. Since 2009, we have been accomplishing these goals through regular workshops, an interactive website, registry of Midwest bird monitoring programs, focused working groups, and a state-of-the-art system for data management and decision support.

Welcome to
Midwest Coordinated Bird Monitoring
Partnership
[Sign Up](#)
or [Sign In](#)

EVENTS

[+ Add an Event](#)

- Voluntary network of partners - 500 individuals from approximately 100 organizations
- *Registry of Midwest Bird Monitoring Programs* –
 - >100 individual monitoring initiatives with sponsoring institutions and survey scope.



data.prbo.org/partners/mwadc/



Midwest Avian Data Center

a partner of the Avian Knowledge Network

Search:

- [Home](#)
- [Data Collection Tools](#)
- [Habitat Management](#)
- [Citizen Science](#)
- [Maps](#)
- [Data](#)
- [My MWADC](#)
- [About](#)
- [Download Data](#)

The **Midwest Avian Data Center** (MWADC), a regional node of the **Avian Knowledge Network** (AKN) hosted by the **Midwest Coordinated Bird Monitoring Partnership** and **PRBO Conservation Science**, integrates data on birds and ecosystems to improve conservation outcomes today and in the future. [Learn more>>](#)

My MWADC
 Manage & Query your Midwest Avian Data

If you are interested in becoming a MWADC Partner, please [contact us](#).



Data Collection Tools

For scientists and others conducting avian research, monitoring bird populations, and performing original



Habitat Management

For people involved in restoring, protecting, conserving, and monitoring wildlife habitat and ecosystems.



Citizen Science

For the public to get involved in collecting data that can help conserve birds and their habitats.

News

MWADC User's Guide
MWADC User's Guide

NEW MWADC Histogram Service
Our new histogram service, developed for the Midwest Avian Data Center, is now in a public beta release. [View temporal species distributions across the Midwest.](#)

Welcome to the Midwest Avian Data Center



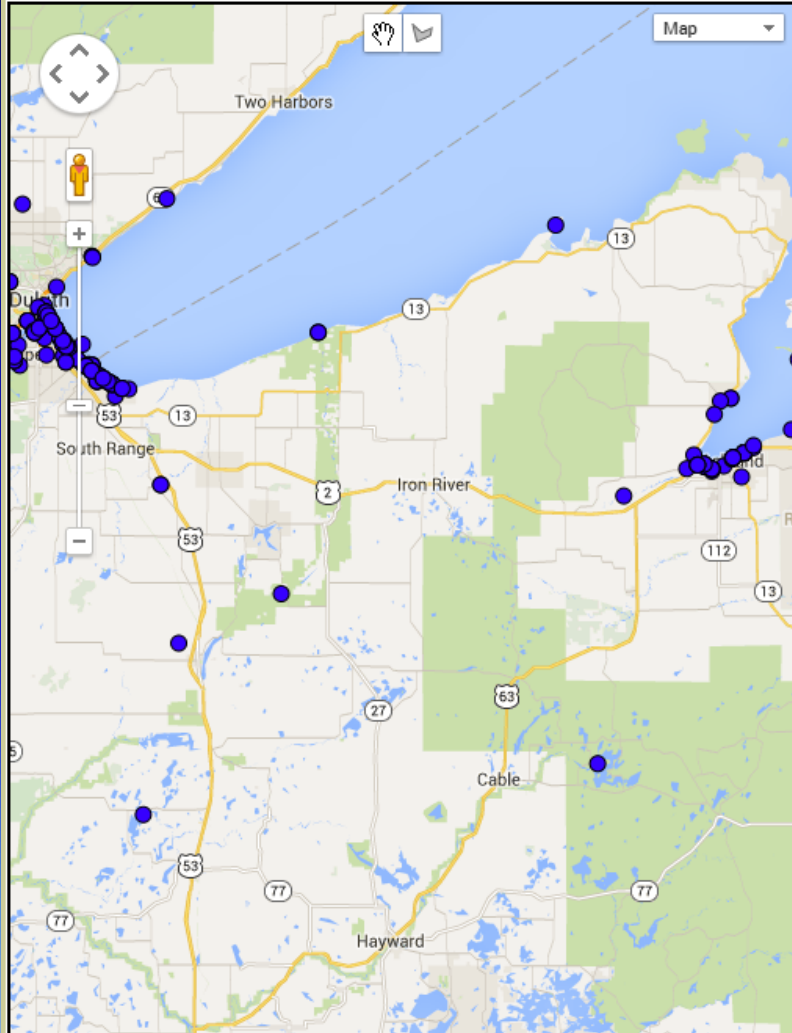
Midwest Avian Data Center

a partner of the Avian Knowledge Network

Search:

[Home](#) [Data Collection Tools](#) [Habitat Management](#) [Citizen Science](#) [Maps](#) [Data](#) [My MWADC](#) [About](#) [Download Data](#)

[Close window](#)



About These Maps

Choose a Species

Choose a date range (default is year-round)

Choose a Data Collection

- [Breeding Bird Survey](#)
- [eBird](#)
- [MAPS Stations](#)
- [Bird Conservation Network](#)
- [Important Bird Areas of Minnesota Monitoring](#)
- [Western Great Lakes Bird and Bat Observatory](#)
- [Kalamazoo Valley and Black Swamp Observatory](#)
- [Ottawa National Forest](#)
- [Indiana Point Counts](#)

Choose a Map Overlay

- States
- Bird Conservation Regions
- Counties
- Audubon Important Bird Areas
- Watersheds
- [National Wildlife Refuges](#)
- [US Protected Areas Database](#)
- [Marine Protected Areas](#)
- [NREL Wind Energy Potential](#)

[2011](#) | All Years |

**Bois Brule River Mouth
in All Years
1 visits from 2011—2011**

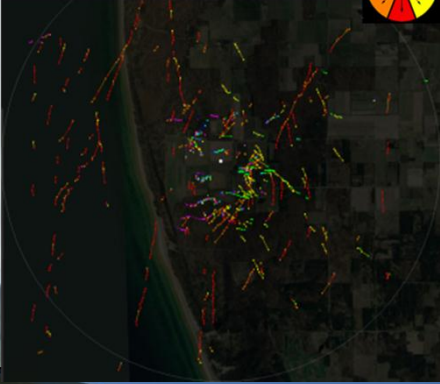
[Avian Data Summary](#)

American Redstart (2)
Common Loon (1)
Common Tern (1)
Double-crested Cormorant (1)
Herring Gull (12)
Wood Thrush (1)

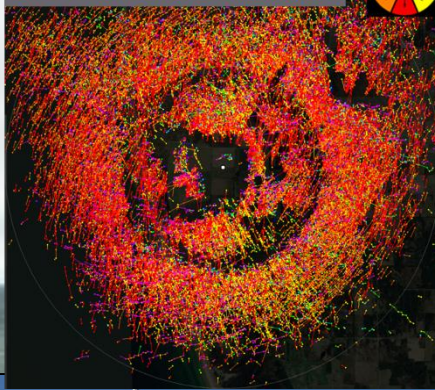
copy result table to: [CSV](#)



Horizontal Radar at 5PM
Random movement during daytime



Horizontal Radar at 10PM
Intense southerly movement at night



Whitefish Point, MI



Lake Sturgeon



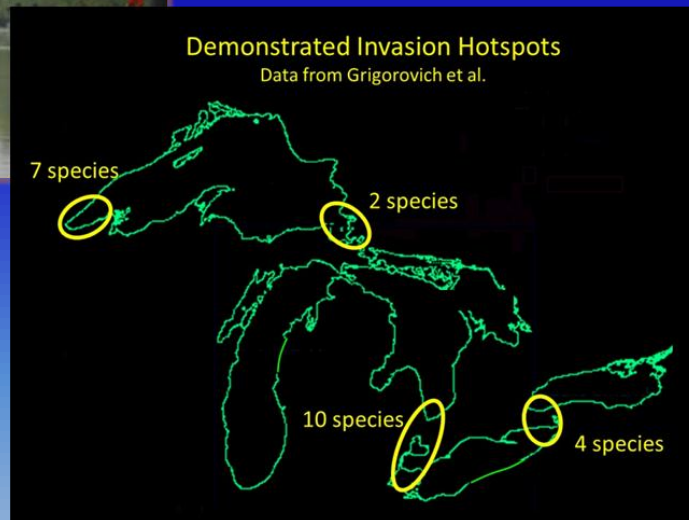
- Annual spring adult spawning population assessment on the Bad and White Rivers, WI
 - ❖ Lake Superior rehabilitation goals
- Annual juvenile/sub-adult lake sturgeon assessment off of the mouth of the Ontonagon River, MI
 - ❖ Survival and recruitment of Ontonagon streamside rearing
- **2016 CSMI** - juvenile index survey, LS Basinwide



AIS – Early Detection



- Annual monitoring of fishes and select benthic macroinvertebrates
 - ❖ St. Louis River Estuary
 - ❖ Thunder Bay, ON
 - ❖ Upper St. Mary's River, MI/ON
 - ❖ Chequamegon Bay, WI



- Inshore waters (<15m)
- Species counts

Sea Lamprey



- About **120** U.S. Lake Superior tributaries annually surveyed with electrofishing for larvae; **15** off-shore areas surveyed with Bayluscide for larvae.
- Annual adult and barrier assessments

Coaster Brook Trout



- Annual population surveys in
 - ❖ Whittlesey Creek, WI
 - ❖ Tobin Harbor and Washington Harbor, (Isle Royale, MI)
 - ❖ Washington Creek (Isle Royale, MI)
- PIT tag tracking, Whittlesey Creek brook trout
- Eletrofishing surveys, Chequamegon Bay
- Population data also for coho, brown trout, rainbow trout



Seney National Wildlife Refuge