



Volume 29, Issue 3

November, 2017

**November 21 7:00 P.M.**

### Current Conservation Research on Eastern Massasauga Rattlesnakes

Presented by **Jennifer Moore**, Professor, Assistant Professor, GVSU

In the last two decades, fungal diseases have rapidly attacked populations of frogs, bats, and salamanders. The latest victims under siege are snakes, and if snake fungal disease isn't stopped, researchers say it could yield disastrous results.

Snake fungal disease – caused by the pathogen *Ophidiomyces ophiodiicola* – is marked by skin lesions and thick blisters that can disfigure a snake's face and even prevent it from being able to eat, often leading to starvation. The outcome of the disease varies between species, but the mortality rate is especially high in rattlesnakes, including the eastern massasauga rattlesnake.

Jennifer is a conservation biologist and molecular ecologist at GVSU. Her research and teaching interests are broad, and include landscape genetics, behavioral ecology, conservation genetics, herpetology, population demography and spatial ecology. Jennifer has worked on a broad range of wildlife, but is particularly interested in amphibians and reptiles because of their unique life history characteristics, and their globally imperiled status.



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*We welcome everyone to OIAS's free programs.*

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## 2017-2018 Programs



January 16: *Ephemeral Wildflowers: Remarkable Blooming Wonders of Spring*, Carla Kocher, OIAS Member & President, Conservation Outreach Solutions, LLC

February 20: *Ornithology and Taxidermy*, Roger Tharp, OIAS Member

March 20: *Nest Wars: Research on Eastern Bluebirds and their Nestbox Competitors*, Kathy Winnett-Murray, Professor of Biology, Hope College

April 17: *A Birder's Guide to Muskegon County*, Ric Pedler & Charlie DeWitt, Muskegon Nature Club

May 15:

**6:00:** Potluck, Annual Meeting, and Member Photos

**7:00:** *Feather Brained – My Bumbling Quest to Become a Birder and Find a Rare Bird on My Own*, Bob Tarte, Author to talk about his latest book



### Mark Your Calendars Christmas Bird Count December 16th

Sponsored by: the Nature Education Center at Hemlock Crossing & Owashtanong Islands Audubon Society

The plan is to count throughout the day until 5:00 PM, then meet at the Ottawa County Nature Education Center at Hemlock Crossing for a potluck and checklist collection.

If you are interested, contact Carl at [oias@oias.org](mailto:oias@oias.org)

### Fall Field Trip DATE CHANGE

**Friday, November 24**

**8:30-12:00**

**Leader: Michael Lombardo**

**Muskegon Wastewater System**

Meet at 8:30 in the Loutit District Library parking lot on corner of Columbus and North 4<sup>th</sup> Street

Dress according to the weather. It can be windy and very chilly on the dikes.

The date was changed so not to conflict with an Ottawa County Parks field trip on November 18th.

**SNOW POLICY:** No meeting if Grand Haven Schools are closed.

**Short-eared Owl** *Asio flammeus*

Judi Manning



This medium-sized owl has long, smoothly rounded wings and a short tail. The flight is buoyant, erratic and mothlike. Flying silently and low over grasslands at dawn and just before dusk they use keen vision and acute hearing in search of food. Sometimes they can be seen in the daytime and usually quit feeding after nightfall. They are an important predator by managing animals (small rodents such as mice and voles) humans consider pests. Shrews, lemmings, a variety of insects, and birds (terns, shorebirds, gulls, songbirds) are also in the diet.



It is named for the short, inconspicuous feather tufts on its rounded head. The size and shape of the actual ears are identical but difficult to see and positioned differently on each side of the head to help in locating prey. Black-rimmed, large yellow eyes stare out from a pale facial disk.

They live in large open areas with low vegetation preferring marshes, bogs, dunes, and agricultural areas perching low in trees or on the ground. Being migratory they can be found in West Michigan during late fall and winter and over-winter in small groups in southern Michigan.

They are among the rarest nesting owls in Michigan. The female scrapes a bowl on the ground amid grasses and low plants in grasslands interspersed with shallow wetlands or wet meadows. She lines the nest with grasses and downy feathers. The male brings food for the young, gives it to the female and she feeds the young. Adults bark, scream, whine and give broken wing distraction displays to defend the nest and young from threats. Short-eared Owls nest in North America, South America, and Eurasia.

In the Great Lakes area there are diminishing areas of marshes, bogs and open grasslands. Short-eared Owls are endangered in Michigan, Illinois, and Pennsylvania because of their nesting habits and nomadism causing them to be very vulnerable to habitat loss. They are also threatened in Minnesota and of special concern in Indiana and Ohio.

Although endangered in some states, they are the world's most widely distributed owl and are found on every continent except Australia and Antarctica. A buffier, less streaky form is native to the Caribbean. The only native owl in Hawaii is a distinct subspecies, pueo (*Asio flammeus sandwichensis*) similar in appearance and found on the major islands. Descended from Alaska forebears, pueos took hold in the islands after the first Polynesians brought owl food – the Pacific rat – with them.

**Similar species:** Northern Harrier as they search for food in the same habitats and a similar flight, but have smaller heads, more pointed wings, and longer tails.

In the 2016 State of North America's Birds Report, it is listed as a Common Bird in Steep Decline. Habitat loss from intensive agriculture, livestock grazing, recreation, successional changes to habitat, and development are the major causes of population declines. Change in habitat ➤ alters suitable nesting areas and increases the possibility of nest destruction by skunks, raccoons, foxes, and coyotes ➤ affects the abundance, distribution, and vulnerability of prey species.

Short-eared Owls require large uninterrupted tracts of open grasslands, and appear to be particularly sensitive to habitat loss and fragmentation. It has disappeared from southern areas where it formerly nested because of loss of habitat. Other predators: Peregrine Falcons, Red-tailed Hawks, Great Horned Owls, Bald Eagles, Northern Harriers, Common Ravens, and Herring Gulls.

References: [https://www.allaboutbirds.org/guide/Short-eared\\_Owl/id](https://www.allaboutbirds.org/guide/Short-eared_Owl/id); <http://www.audubon.org/field-guide/bird/short-eared-owl>; [http://www.michigan.gov/dnr/0,4570,7-153-10370\\_12145\\_12202-33025--,00.html](http://www.michigan.gov/dnr/0,4570,7-153-10370_12145_12202-33025--,00.html); Michigan Natural Features Inventory, [https://mnfi.anr.msu.edu/abstracts/zoology/Asio\\_flammeus.pdf](https://mnfi.anr.msu.edu/abstracts/zoology/Asio_flammeus.pdf); [http://www.biokids.umich.edu/critters/Asio\\_flammeus/](http://www.biokids.umich.edu/critters/Asio_flammeus/)



This Forster's Tern is in flight. You can see its feet on the downside as it is looking up for predators. When reviewing photos I took at the Holland State Park pier I was surprised to see the posture of this tern as it flew in front of us.

Pictures are worth a thousand words.

## **Bird Banding**

Judi Manning

### **History**

The first record of banding a bird was about 1595 when one of Henry IV's banded Peregrine Falcons was lost in pursuit of a bustard in France. It showed up in Malta 24 hours later and about 1350 miles away, average flight of 56 miles an hour. In 1669 Duke Ferdinand placed a silver band on a Grey Heron. His grandson recovered the bird in 1728!

In 1803 John James Audubon tied silver cords to phoebes near Philadelphia and identified two nestlings when they returned the following year. He holds the first banding record in North America.

Bird banding developed in 1890 when a Danish school teacher, Hans Christian C. Mortensen placed zinc rings on the legs of European starlings. He realized they were too heavy and altered the birds' behavior and switched to aluminum. In 1902 Paul Bartsch, a well-known conchologist (the study of mollusk shells) whose hobby was birds, began the first scientific system of banding in North America using serially numbered leg bands.

The American Bird Banding Association was formed in 1909. In 1920 Frederick Lincoln was assigned the task of organizing the banding program in the USA in the Bureau of Biological Survey (now the United States Geological Survey.) He remained in charge of the bird banding program until 1946 and developed numbering schemes and a record keeping procedure. He eventually became responsible for a migratory bird program and made many lasting contributions to migratory bird conservation. The North American banding program has been a joint effort to oversee the activities of dedicated banders all over the world ever since.

Millions of birds have been banded. Recovery of banded birds was mainly used to identify migration routes.

### **Bird Capture**

In the early 1950's mist-nets and cannon-netting were widely used, enabling the banding of an increased number of birds.

Mist nets are used for small birds. Black netting is suspended between vertical poles and is almost impossible to see. Flying birds and bats get caught in the net. Cannon-nets are used for larger birds: gulls, waterfowl, and shorebirds. The net is projected across the birds and are trapped underneath it. Capturing birds requires substantial training and is often time consuming. The safety and welfare of the birds is most important. After a bird is captured and the species determined, a serially numbered band is recorded. Licensed banders are issued bands by the Bird Banding Laboratory of the USGS.

Body molt, fat content and breeding condition are checked. Flight feathers are also examined and the bird is weighed. Age is determined by wetting the head on the head and the skull is examined to determine the age. All this data is sent to the Bird Banding Lab and entered into a central data base. If the bird is renetted or the band information turned in, a lot of information can be used by researchers.

### **Types of Bands**

Bands made of aluminum or stainless steel fits birds hummingbirds to swans. Each band has a unique code that identifies the individual and shows where it was banded. Colored plastic bands

(Cont. pg. 5)

**Bird Banding** (Cont.)

are often also used. These bands can be read by binoculars or scopes. When reported they give information on stop-over duration or movements of birds.

Look for bands, especially the color bands. If you should recover a banded bird, you can report the band number and circumstances to the Bird Banding Lab by calling 1-800-327-BAND.

**Data Generated**

Regional and national bird banding programs have provided what we know about migratory routes, stop-over sites, and wintering areas. The data obtained on such a large scale that uses standardized methods contribute to our understanding of the ecology of North American land bird populations and of the factors leading to changes in their populations and to help guide conservation efforts.

References: A Brief History about the origins of Bird Banding, <https://www.pwrc.usgs.gov/bbl/homepage/historynew.cfm>; Bird Banding, Cleminson, A. & Nebel, S. (2012) Bird Banding. Nature Education Knowledge 3(8):1, <https://www.nature.com/scitable/knowledge/library/bird-banding-83032042>



Only banded Mallard we have seen

**Banding Great Lakes Piping Plovers**

Excerpts and synopsis: <https://www.greatlakespipingplover.org/banding>

**Banding**

Each of the banded Great Lakes Piping Plovers receives a USGS aluminum band with a unique 9-digit number. No other bird will have this number. Color-band patterns are used to allow recognition of individuals at a distance. It is estimated 96-98% of the Great Lakes population is banded and are able to be extensively monitored every year. Great Lakes Piping Plovers are easy to identify because of the orange color band.

Chicks are banded between 5 and 15 days old with an orange flag and bands made of plastic or aluminum. Every sibling in a family gets the same color and arrangement of three or four bands called a “brood marker combination”. Specific colors identify breeding areas so researchers can tell where a chick is hatched. Brood markers are reused in subsequent years.

Since 2006 they put a colored dot on the orange bands on chicks and a colored band with a three-digit number on it, which are unique.

When a chick becomes an adult and a breeder in the Great Lakes, they get re-banded. An orange band replaces the orange flag and they get a new, unique to them pattern of color bands. After an adult gets its unique combo of bands, they are not captured again to reduce disturbances and interactions with the birds as much as possible.

Trained professionals do the banding who have state and federal bird banding permits. Multiple studies have supported that the reproductive success, flight ability, overall well-being of the bird, survival\*, and more are not significantly influenced by wearing one or multiple bands.

**Why Report Banded Plovers? (and other birds)**

Citizen and agency reports of both breeding and non-breeding Piping Plovers are crucial to research about Great Lakes Piping Plovers’ life histories and habitat needs. Researchers have learned much since the banding program began in 1993, but there is still much to learn. A critical need currently exists for more information to target our resources where they can best help increase the population of Great Lakes Piping

(Cont. pg. 6)

**Banding Great Lakes Piping Plovers (Cont.)**

Plovers. Your observation is valuable!

Some of the many things they have learned from band observation reports:



Banded Piping Plover Holland State Park

- There is very little interbreeding between the three populations of Piping Plovers although they intermix during the non-breeding season.
- Piping Plovers have very high site fidelity, both on the breeding and wintering grounds.
- Approximately 37% of chicks that fledge survive their first year.
- If an individual survives the first trip to the wintering grounds and back, its average life expectancy is 5 years.
- The oldest Great Lakes Piping Plover on record is currently 15.
- Plovers don't necessarily return to their hatch site for breeding.
- Piping Plovers are more tied to a territory than to a particular mate. Pairs don't stay together year-round, but if they're successful at raising chicks they will often return to the same site and may pair up with the same mate year after year.
- The current migration speed record is a female who flew from northern Michigan to the Miami, FL, area in less than 45.5 hours. She had a 30 mph tail wind at least part of the way.
- There is ongoing research into sex ratios at hatching and at fledging.
- The more years a female nests at a given site, the better she is at raising offspring—in other words, the more familiar she is with the location, the more successful she will be.

**Reporting a Banded Plover**

Excerpts, Great Lakes Piping Plover, <https://www.greatlakespipingplover.org/reporting-plover-observations>

To report a banded Piping Plover email your information to [plover@umn.edu](mailto:plover@umn.edu). Within a week you will receive a message with the information about the plover you observed.

The critical pieces of information needed to make your observation useful are:

- A description of the band locations and colors on the bird's left and right legs. Note if you saw either alpha-numeric codes or colored dots on any bands or flags.
- Read and record band colors starting with the bird's left leg, from top to bottom, then its right leg, from top to bottom.
- A description of the location of your observation including the state and, if possible, the county.
- The date of your observation.

In addition it's very helpful to include:

- GPS coordinates for the location (these can be closely estimated from google earth if you don't have a GPS available.)
- Digital photographs of the plover. These are very useful when they're available. The most reliable reports include both a description and a photograph. If you send a photo please let us know if we can use it to post on this site and use it in other ways to benefit Piping Plover conservation. Also let us know how you'd like the photo credited.
- Comments about behavior, weather, and plumage (breeding/non-breeding/molting) or anything else unusual or interesting...

Many Piping Plovers were seen in Ottawa County this summer. Chip Francke compiled the sightings and history of the Ottawa County birds:

- #1 - juvenile bird fledged in 2017 at Manistee, MI (7/20 Holland State Park; 7/23 Grand Haven State Park)
- #2 - adult bird fledged in 2015 at Gulliver, MI, nested in 2017 at Whitefish Point where it hatched 3 chicks. (7/23 Grand Haven State Park)
- #3 - Female hatched in 2011 at Whitefish Point. She began breeding in 2013 at Vermillion, MI. This summer she nested at Grand Marais, MI. (7/26 Holland State Park with No. 1)
- #4 - adult male hatched in 2010 at Manistee, MI, First nested and was rebanded in 2013 at Sleeping Bear Point, in Sleeping Bear Dunes National Lakeshore. More recently he has been nesting on North Manitou Island. He fledged two chicks there this summer. (7/19 near Saugatuck)

There is a wildlife rehabilitation center in Grand Rapids:

**WILDLIFE REHAB CENTER**

1504 Union Avenue, NE, Grand Rapids, MI 49505, (616) 361-6109

They take non-predatory birds, water fowl, small mammals, reptiles and more.



For further information, check out the website: <http://www.wildlife-rehab-center.org/>

Follow the link on the website or call the main number, or you can TEXT their new Hotline at 616-606-5805! (Text Only Please!) They are happy to provide quick animal identification and base instructions for care while you set up a drop off time with their rehabbers or sub-permittees!

**2017-2018 OIAS Membership Application** Date \_\_\_\_\_

SEND BY EMAIL \_\_\_\_\_ Email: \_\_\_\_\_

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City/State/Zip \_\_\_\_\_

Phone \_\_\_\_\_ How did you hear about OIAS? \_\_\_\_\_

Check Member Type:  \$18 Individual or Family  \$30 Contributing  
 \$100 Individual Life

**My contribution to speaker fees \$** \_\_\_\_\_

Make checks payable to: Owashtanong Islands Audubon Society,  
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Receive by email



Grand Haven, Michigan

11/2017

**FAR FLOWING WATER**

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*Far Flowing Water is published eight times per year. If you would like to contribute a complete article for the next issue, please have your articles to me by January 1st*

**Mission Statement**  
**Owashtanong Islands Audubon Society**  
 a 501(c)(3) Nonprofit Corporation

- Provide stewardship of local Grand River island wildlife sanctuaries owned by the Michigan Audubon Society;
- Achieve through education, public recognition of the value and need for protecting and preserving wildlife, plants, soil, water and other natural resources as well as an understanding of their interdependence;
- Promote an interest in our native birds and as well as native flora and fauna, and their habitats because of their great economic, cultural and recreational value; and
- Aid the Michigan Audubon Society in its study, conservation and research efforts.



The Ring-billed Gull and Bald Eagle entertained us one day at Holland State Park

Piping Plover Bahama Mama that again nested at Muskegon State Park arrived back at Long Beach, Abaco, with 25 buddies (6 others banded) on October 22<sup>nd</sup>. This bird is being followed by her bands.

<http://muskegonbirdblog.blogspot.com/>

**Owashtanong Islands Audubon Society**  
 Judi Manning, Editor  
 P.O. Box 1654  
 Holland, MI 49422  
 PLEASE FORWARD  
 ADDRESS CORRECTION REQUESTED

Field Trip Date Change to November 24. See Page 2

**NOVEMBER 17, 2017**  
**7:00 Current Conservation Research on Eastern Massasauga Rattlesnakes**  
**Jennifer Moore, GVSU**