

# Jack Pine *Warbler*

*THE SPRING BIRDING ISSUE:* Awash in Microplastics: Great Lakes Studies Raise Questions ■ Developments at WPBO ■  
■ Birding Michigan's National Lakeshores ■ Partners in Bird Conservation ■ Three Birds, One Weekend ■ Songbirds and Stress ■



# Jack Pine Warbler

## CONTACT US

**By mail:**  
Suite 200  
2310 Science Parkway  
Okemos, MI 48864

**By visiting:**  
Suite 200, 2310 Science Parkway  
Okemos, MI 48864

**By phone:**  
517-580-7364  
Mon.-Fri. 9 a.m.-5 p.m.

## STAFF

**Heather Good**  
Executive Director  
hgood@michiganaudubon.org

**Wendy Tatar**  
Program Coordinator  
wendy@michiganaudubon.org

**Kristin Phillips**  
Marketing and Communications Coordinator  
kphillips@michiganaudubon.org

**Rachelle Roake**  
Conservation Science Coordinator  
rroake@michiganaudubon.org

**Lyn Scrimger**  
Membership Manager  
LScrimger@michiganaudubon.org

## BOARD OF DIRECTORS

Alec Lindsay (chair), Ray Stocking (vice-chair), Mike Bishop (secretary), Penny Meints (treasurer), Elizabeth Abood-Carroll, Deaver Armstrong, Rich Bailhe, John Baumgartner, Mike Bishop, Anne Brasie, Rosann Kovalcik, Gregory Nelson

## EDITOR

**Laura Julier**  
julier@msu.edu

## PRODUCTION

**Kristin Phillips**  
Marketing and Communications Coordinator  
kphillips@michiganaudubon.org

## ADVERTISING

Guidelines available on request.

## PRINTING

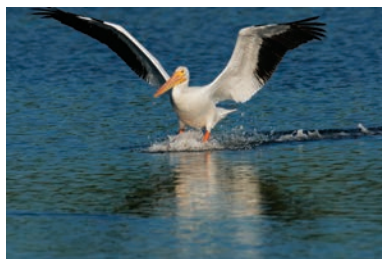
*Jack Pine Warbler* (ISSN 0021-3845) is published six times per year and is received by all Michigan Audubon members. It is printed by

**Foresight Group**  
2822 N. Martin Luther King Jr. Blvd.  
Lansing, MI 48906  
www.foresightgroup.net

Member of  
**EarthShare**  
Michigan



Printed on recycled paper made from 100% post-consumer waste.



## Cover Photo ■ American White Pelican Swimming

Photographer: Fai Chan

This photo was taken at John Ding Darling National Wildlife Refuge in Sanibel, Florida, April 10 of 2010. Fai, a photographer based in Jackson, Michigan, was using a 500 mm lens for the first time and chose the Refuge because of its limitless photo opportunities. This photo was his first encounter with the American White Pelican.

## Photo Details:

Camera: Nikon D300s, 500 mm lens. Aperture: f/10. Shutter speed: 1/2500. ISO: 800.

# Contents

## Features

2  
**Awash in Microplastics: Great Lakes Studies Raise Questions**

4  
**Birding Michigan's National Lakeshores during the Centennial**

6  
**Partners in Bird Conservation**

## Columns

7  
**Three Rare Birds, One Weekend**

8  
**Conservation Spotlight: Songbirds and Stress**

9  
**Book Review: *Better Birding***

10  
**Chapter Spotlight: Macomb Audubon Society**

11  
**Developments at Whitefish Point Bird Observatory**

## Departments

1  
**Executive Director's Letter**

5  
**New Members**

9  
**Calendar**

12-13  
**Announcements**



## MICHIGAN AUDUBON CONNECTS BIRDS AND PEOPLE FOR THE BENEFIT OF BOTH ...

... through conservation, education, and research efforts in the state of Michigan. Formed and incorporated in 1904, it is Michigan's oldest conservation organization. Michigan Audubon supports bird surveys throughout the state, publishes survey data, provides educational opportunities, and preserves nearly 5,000 acres of land within 19 sanctuaries as habitat for birds and other wildlife. The 41 chapters of Michigan Audubon focus on local conservation issues and provide educational programs within their communities. Contributions to Michigan Audubon are tax-deductible.

*Visit MichiganAudubon.org for more updates, and follow MichiganAudubon on social media*





# Executive Director's Letter

## WELCOME MICHIGAN AUDUBON'S NEW EXECUTIVE DIRECTOR, HEATHER GOOD

BY ALEC LINDSAY, CHAIR, MICHIGAN AUDUBON BOARD OF DIRECTORS  
AND EXECUTIVE DIRECTOR, HEATHER GOOD

On behalf of the Michigan Audubon Board of Directors, it is my great pleasure (and mild relief) to welcome a new executive director to Michigan Audubon. Heather Good brings to the organization a collaborative and thoughtful attitude, a remarkable set of professional skills, and an authentic passion for the Michigan Audubon mission.

Heather most recently served as a senior team leader in the communications and marketing office of the University of Michigan College of Engineering, where she led (or "wrangled," as she puts it) diverse teams in financial management, event planning, human resources, and project management. Although a native of Michigan (magna cum laude graduate of Western Michigan University, in English and environmental studies), Heather previously worked for the Audubon Society of Portland as membership and development coordinator and editor of its member publication, *The Warbler*. She has also taught at a Waldorf high school and served as an environmental consultant. In the past year, Heather got to know Michigan Audubon through her service as a volunteer board member. The board and staff are confident that Heather's professional experiences and training have cultivated the type of management expertise, organizational skills, and leadership abilities that will strengthen Michigan Audubon.

We're proud of what Michigan Audubon has accomplished as a professionalized grassroots organization, but we look forward to the next era of conservation success under her leadership. We hope you will turn to Heather and the rest of our staff when opportunities arise to advance our mission, connecting birds and people for the benefit of both.



Alec Lindsay

My earliest connection with nature took hold during summer visits to my grandfather's 80-acre property near West Branch, Michigan, where I would tag along with any relative venturing "up north" so that I could experience the intersection of prairie, wetland, forest, and inland lakes and ponds. Although I couldn't articulate it at the time, growing up in a nature-starved community in suburbs near Detroit had a great impact on me, and this small but lasting effort to preserve a parcel of land in our family had an equally great, remedying impact on my understanding of the world, my appreciation of nature, and my drive to contribute to conservation on a bigger scale.

Stepping into the role of Executive Director after serving on Michigan Audubon's Board of Directors is a great honor, and is undoubtedly related to my early days of watching birds, walking in the woods, hunting mushrooms, collecting owl pellets, and thumbing field guides, as well as my formal studies and work in environmental science, humanities, art, and education. I understand the simple, lasting power and impact potential of environmental education. As Executive Director, I am dedicated to expanding our environmental education efforts to children and adults alike, in addition to our valuable conservation work and growing, global contributions to avian research. This is truly an exciting, rich, and critical time for conservation work throughout the Great Lakes state.

Michigan Audubon is working hard to expand efforts in education, conservation, and research in a variety of habitats, events, and program settings, from forests to classrooms, board rooms to bogs. We sustain 19 nature sanctuaries, hold four signature birding events a year, maintain a strong, growing research and education presence at Whitefish Point Bird Observatory, lead a variety of tours and workshops, and are focusing efforts to promote Backyard Bird Habitats



throughout the state. We partner with state agencies and NGOs in order to unify and maximize our conservation efforts and work diligently to raise funds to make the greatest environmental impact possible while fulfilling our mission.

Spring and summer are bright and busy months for birds in Michigan, which means birders and your staff at Michigan Audubon's headquarters are often out in the thick of it, leading walks, organizing events, talks, tours, and educational efforts to spread the good word about what we can do to protect and appreciate birds and their habitat. I strongly encourage you to learn more about how you can transform your backyard into valuable, conservation-promoting habitat with native species planting, and consider attending one of our Backyard Bird Habitat Workshops or visit the Native Plants for Birds page on our website. One of the most immediate conservation impacts you can make as an individual rests in consciously crafting a bird-friendly backyard, and we are here to guide you through the process.

I look forward to meeting my fellow Michigan Audubon members, supporters and partners at our signature events and activities around the state as we work collectively to broaden and deepen our efforts to connect people and birds for the benefit of both.



Heather Good

# Awash in Microplastics: Great Lakes Studies Raise Questions

BY HOWARD MEYERSON

When the schooner *Inland Seas* slips her berth at Suttons Bay on June 24, her captain, crew, and passengers will share in a voyage of discovery—a two-hour educational journey under sail to learn about microplastics, an emerging environmental problem that ails the Great Lakes.

The two-year-old program, called “Exploring Microplastics,” is offered by the Inland Seas Education Association (ISEA), a nonprofit that teaches Great Lakes science aboard the 61-foot schooner. Its passengers will examine what crew members find while conducting a fine-mesh trawl for plankton. They will learn how tiny plastic particles enter the food chain and a lot more about how microplastics foul Great Lakes waters.

Jeanie Williams, ISEA’s lead scientist and education specialist, says plastic pollution is common in Lake Michigan. She and the ship’s crew have drawn numerous water samples off popular ports such as Charlevoix, Petoskey, Escanaba, Harbor Springs, and Suttons Bay. “We find plastic in all of our samples,” Williams notes. “Mostly we find fragments, but we also find film (plastic bag pieces) and fibers.”

## Microbeads: Just the Leading Edge

Microbeads, the tiny plastic particles found in toothpastes, cosmetics, and exfoliates, became a national environmental priority last year when the U.S. Congress passed the Microbeads-Free Waters Act of 2015. That law bans the manufacture and sale of products that contain them in three phases starting July 2017.

For several years leading up to the decision, microbeads were considered the foremost plastic pollution problem on the Great Lakes, but scientists now recognize the problem is much larger. The Great Lakes and its tributaries are literally awash with plastic pollution, from microscopic in size to those readily seen with the naked eye. Researchers are now zeroing in on microplastic fibers, synthetic threads that shed in the wash from fleece or other garments, along with tiny pieces of fishing line that anglers leave behind.

Synthetic fibers present a problem without easy solution. Precisely where they come from and how they get into the lakes are not well understood. Unlike microbeads, which can pass through many wastewater treatment plants, microfibers are often captured. Yet they too wash into the Great Lakes every day and threaten birds, fish, and other aquatic species by fouling digestive systems or transporting toxic chemicals that can adhere to their surfaces. Scientists know the potential exists for those chemicals to bio-accumulate as smaller creatures are eaten by larger.

“What’s interesting about Lake Michigan is we’ve found a lot more microfibers than microbeads,” offers Dr. Sherri Mason, professor of chemistry at State University of New York at

Microplastic poses a growing concern in oceans and other aquatic habitat.  
© 5Gyres/Oregon State University



Fredonia, whose 2012 and 2013 Great Lakes plastic pollution studies were often cited in Congressional and other policy discussions leading to the microbead ban.

Mason said her findings showed that the volume of plastic found increased as water flowed from one Great Lake to another—as though pouring one bucket of plastic particles into a second. Her 2012 survey of Lakes Superior, Huron, and Erie found an average of 43,157 plastic pieces per square kilometer. Ninety percent of the plastic was found in Lake Erie, where concentrations reached more than one million particles per square mile, and plastic microbeads dominated. Her 2013 study of Lakes Michigan, Erie, and Ontario found comparatively few microbeads and far more microplastic fragments. “The majority of what we found in Lake Michigan is classified as fragments,” Mason said. “Second most prominent was microfibrers and then little pieces of fishing line left behind.”

### Microplastic Fibers Abound

Austin Baldwin, a hydrologist with the U.S. Geological Survey Wisconsin Water Science Center, said he was surprised to find that microbeads comprised only one percent of the particles found in his 2014 study of 29 Great Lakes tributaries. His research, funded by the Great Lakes Restoration Initiative, found microplastics in every tributary studied. The concentrations were 10 to 100 times higher than found in the Great Lakes. And fibers dominated, making up 71 percent of the plastic collected.

“We were very surprised,” Baldwin said. “We expected to see a lot more of the beads. The source of the fibers remains somewhat of a mystery. We saw no relation between their concentration and land use, or in wastewater or run-off. That raises some interesting questions about where they are coming from. One recent Paris study confirmed that atmospheric deposition of microplastic fibers occurs in both dry and rainy periods. But how are they getting into the atmosphere? That hasn’t been studied much.”

Baldwin continued, “One interesting takeaway from the study is the dominance of fibers, and that microbeads aren’t the only problem.

Another is these fibers are settling into the Great Lakes so what are the implications for benthic (bottom-dwelling) organisms? A lot of studies show filter feeders like oysters are heavily impacted, and show decreases in reproduction because of microplastic ingestion.”

Baldwin and Mason have examined only larger particles, those 300–333 microns

and larger. Studies of smaller particles show much higher concentrations in water samples, according to Baldwin. Some are so small they don’t need to be eaten to become a problem. They can pass directly into the cells of an organism where “a large pellet goes in and passes out 12 hours later.”

Microplastics are known to make their way into the food chain. A 2013 study about plastic ingestion by Flesh-footed Shearwaters published in the journal *Environmental Pollution* states: “By the mid-1990s more than 111 (35%) of the world’s seabird species had been recorded with plastic in their stomachs.” That ingestion by seabirds caused a number of problems from starvation to suppressed growth rates and damage to the gut, among other things. Mason said her studies sampled 29 Great Lakes fish species and Double-crested Cormorants.

“In every single species we found plastic. Cormorants had the most of everything, like an average of 35 particles per bird,” Mason said. “All across the species it is largely fibers we are finding. The reason they are retained is they are woven into the gastro-intestinal tract where fragments and beads tend to be excreted. We know it is in the food chain, but we don’t ultimately know what impact it is having.” Mason has received a grant to do research on the food-web to learn more about that impact.

Williams, whose Lake Michigan water samples are sent to Mason for analysis, said her program is designed, among other things, to raise awareness so people become better Great Lakes stewards.

“It’s eye opening for adults,” Williams explained. “Many are totally surprised. They have no idea that a product they bought contains microplastics. We had one woman [on board] who works for a company that uses it. She said ‘We wash the wastes down the drain.’ She was shocked to learn they were polluting the waters. We hope our program will empower people to make different choices.”

---

Howard Meyerson ([howardmeyerson@gmail.com](mailto:howardmeyerson@gmail.com)) has been writing about birds, nature, the environment, and outdoor recreation for 30 years. He lives in Grand Rapids. His work appears in a variety of publications.



Students magnifying plastic particles. Courtesy of ISEA

The schooner Inland Seas. Courtesy of ISEA





# Birding Michigan's National Lakeshores during the Centennial

BY KIRBY ADAMS



**O**f the four national lakeshores in the U.S. National Park System, two are in Michigan and the others are each just beyond our border. All of them are spectacular birding destinations, reminding us again what a great state Michigan is for birds and birders.

Pictured Rocks National Lakeshore and Sleeping Bear Dunes National Lakeshore are as different from each other as Lakes Michigan and Superior, but at first glance, a list of the best birds at each may look similar. And when it comes to numbers of nesting birds, these two parks top most of the charts. Sleeping Bear has more nesting species than any other park, with around 160. Pictured Rocks shares the coveted warbler title with 23 species nesting in the park.

Finding the birds at Pictured Rocks usually involves getting into the woods, floating on Lake Superior, or perching yourself (safely and legally) on a cliff. A walk in the woods at dawn on an early summer morning is the best immersion into all the lakeshore has to offer. The dawn chorus in the north is unlike anything you can hear in lower Michigan. All of those warblers are staking out and defending territories in June, producing a cacophony of bird song that demands attention.

One of my favorite walks begins at the Miners Falls parking lot. This small opening in the forest gives you the best shot at actually seeing some good birds. While listening for warblers, see if you can spot at least four woodpecker species. Yellow-bellied Sapsuckers are always a treat in the summer. Before long the woods will beckon you to enter.

The warblers will be singing from the canopy, challenging your ear-birding skills, but the forest here rings more loudly with the two star vocalists of the north woods: the Hermit Thrush and the White-throated Sparrow. Halfway to Miners Falls one early July morning, I found myself watching a White-throated Sparrow singing from a low branch just off the trail, while Hermit Thrushes and a nearby Veery provided woodwind accompaniment. A calling loon couldn't have captured the essence of the north any better than that moment. At trail's end you're rewarded with a gorgeous waterfall and another small opening in the forest. Look for warblers, flycatchers, and vireos chasing insects in the ravine.

The actual edge of the lake is also a great birding destination at Pictured Rocks. In late summer, migrating shorebirds can appear randomly in good numbers on the beaches. Fall brings grebes, loons, and ducks on their way south. The cliffs provide nest sites for Peregrine Falcons, released in the park in 1989 and 1991 as part of a reintroduction effort. Another endangered bird getting some help from the park is the Piping Plover. None of the Great Lakes population of Piping Plover has nested within the park's borders recently, but they do on beaches just outside the park in Grand Marais. National Park Service biologists assist the U.S. Fish and Wildlife Service and a team of volunteers with monitoring those nests.

Piping Plovers are also the bird that first comes to my mind at Sleeping Bear Dunes National Lakeshore. The plovers have regular successful nesting areas at Platte River Point,





Mosquito Beach at Pictured Rocks National Lakeshore. © Marquette, Michigan Weather Service Forecast Office

along Good Harbor Bay, and out on North Manitou Island. All of the plover chicks are banded for future identification, allowing shorebird monitors to locate our Michigan plovers in Florida and the Bahamas. This past winter, several of Sleeping Bear's Piping Plovers were found wintering on Cumberland Island National Seashore in Georgia, reminding us that the National Park System provides refuge for more than just scenery.

Areas around nesting plovers are closed to entry of any kind, but it's still easy to see and photograph the birds. Adults will wander away from the closures to forage at the waterline, and the chicks will sometimes go sprinting around the beach as well. The best trick for good looks at plovers is to remain outside the closed area, stay still, and keep a low profile. If you literally lie in the sand and don't move very much, a plover could very well walk with a few feet of your camera. It's critically important not to walk inside the closed-off areas, as nests and motionless chicks can be almost invisible. It's also good practice not to wave your arms or spotting scope over your head. Danger often comes from above for a shorebird, so the lower you are, the less likely you are to stress the nesting birds. Volunteer monitors will even ask park guests not to fly kites near the nesting areas. It's a seemingly benign activity that can actually make a plover think a raptor is circling its nest.

While Sleeping Bear has no shortage of warblers, there is one of particular note—the Prairie Warbler. One of North

## We welcome our newest Michigan Audubon members:

Marla Anderson  
Linda Ar  
Dustin Block  
Giuseppe Cesolini  
Wendy Chick  
Jim & Sue Collison  
Jessica Decker  
Julie Decker  
Deborah Duncan  
Eric & Virginia Ederer  
Richard Forrest  
Rebecca Foster  
James Gonzalez  
Barbara Grunewald  
Debby Hecox  
Peter Heyn  
John Hulick  
Mary L Johnson

Steve Jones  
Steven Lee  
Corrie Navis  
Ryan Polega  
Robert & Marilyn Robinson  
Karen Schmidt  
Janet Smigielski  
Kay Stockfisch  
Michelle Suwinski  
Heidi Swanson  
Jim Terpenning  
Nannie Turrell  
Robin Wagner  
Rita Wells  
Antonio Xeira  
Allison Zink



Piping Plover. © Peter Wilton

America's more poorly-named birds, the Prairie Warbler has no affinity for prairies but prefers scrubland, tattered fields, and dunes. It's a warbler of the south with a range that mostly ends at Michigan's southern border, but a few pairs can't resist the inviting dune habitat all the way up to Sleeping Bear. Look and listen for them in the scrubby area behind the plover nesting grounds on Good Harbor Bay.

Pictured Rocks is celebrating its 50th birthday in this centennial year for the National Park Service, while Sleeping Bear Dunes is just a few years younger. After a century, it's not hard to see why the national parks have been called America's best idea, nor why these two national lakeshores remain, after five decades, some of the best ideas for birding in Michigan.

Writer and environmentalist Wallace Stegner said, "The national park idea, the best idea we ever had, was inevitable as soon as Americans learned to confront the wild continent not with fear and cupidity, but with delight, wonder, and awe." It's good to see that a century after the christening of the National Park Service, we birders find our parks here in Michigan to be continuously delightful, wondrous, and awesome.

---

Kirby Adams ([kirby.adams@gmail.com](mailto:kirby.adams@gmail.com)) writes the birding column for the online travel blog, National Parks Traveler. Kirby lives in Eaton Rapids.

# Partners in Bird Conservation

BY LYN SCRIMGER, WITH EXCERPT BY ED SCHOOLS, MNFI SENIOR CONSERVATION SCIENTIST

**M**ichigan Audubon has numerous partners in our work of protecting birds and their habitats. To varying degrees, our partners overlap in missions and strategies that connect to education, conservation, and research. Members, local Audubon chapters, nature centers, and state, federal, and non-governmental organizations all play important roles in bird conservation. As a state organization, we seek out partnerships whenever possible in order to maximize the impact of our conservation work.

What do Michigan Audubon members do?

- Advocate for bird protection, letting other people and legislators know of their values and concerns regarding bird and habitat protection.
- Educate themselves and others about why and how birds are important elements of a healthy ecosystem and community.
- Volunteer with local Audubon chapters, Michigan Audubon, and local natural areas preservation groups.
- Plant bird-friendly, native plants when landscaping.
- Provide and maintain nest boxes.
- Give financial support to local, state, and/or national Audubon organizations.

Members also contribute through citizen science efforts:

- They take part in the Rusty Blackbird Spring Migration Blitz.
- They submit birding observations to eBird.
- They participate in National Audubon's Christmas Bird Count.
- They conduct bird surveys on Michigan Audubon sanctuaries.
- And they donate and participate in Birdathon, a spring counting fundraiser at Whitefish Point Bird Observatory in Paradise, MI.

Many of our members are also active in local Audubon chapters and nature centers. These smaller, community-based groups can inspire members to learn more about birds and their habitats, to volunteer, and to advocate on behalf of birds. Some chapters help to maintain Michigan Audubon sanctuaries, and

most offer birding field trips in their communities, bird banding and nest-box monitoring opportunities, and bird count events. Learn more about specific chapters and nature clubs in the Spotlight article of every issue of the *Jack Pine Warbler*.

Beyond supporting local Audubon chapters, Michigan Audubon has partnered with numerous organizations, including the U.S. Fish & Wildlife Service, the U.S. Forest Service, the Michigan Department of Natural Resources, Ducks Unlimited, Kellogg Bird Sanctuary, Kalamazoo Nature Center, the Wild Ones Red Cedar Chapter, Huron Pines, and several others.

One partner doing particularly impactful conservation work in our state is the Michigan Natural Features Inventory (MNFI), a program of Michigan State University Extension and part of NatureServe's international network of Natural Heritage Programs ([www.natureserve.org](http://www.natureserve.org)). NatureServe's 80+ programs in the western hemisphere all use a similar methodology and database. According to NatureServe, they seek to answer questions about biodiversity such as "What exists? Where are they found? How are they doing?" MNFI's decades of research has built a dynamic database of rare plants and animals, and high-quality plant communities that constitute the most complete compilation of these data in Michigan. It's a critical source of information used to guide conservation decision-making.

MNFI conservation efforts include—

- conducting an integrated inventory of landscape features, natural communities, and rare species on state-owned lands in the southern Lower Peninsula;
- monitoring forest bat species in partnership with staff from the Hiawatha National Forest; and
- surveying High and Garden Islands with the Little Traverse Bay Bands (LTBB) of Odawa Indians in order to update, document, and delineate significant natural communities, and to expand surveys for rare plants, invertebrates, and invasive species.

MNFI is also working to incorporate citizen science data into conservation science. They are compiling information from sources such as eBird in order to document and update records of rare birds in Michigan. These data help define areas that are important for migration and avian conservation.

Michigan Audubon seeks out collaborative partnerships with organizations such as MNFI. We share a common goal in our conservation work and believe that a unified effort to preserve land and protect native species can only further our mission and serve bird conservation on a greater scale.

As Michigan's oldest conservation organization, we've accomplished a great deal in over 110 years of education, research, and conservation on behalf of birds. We host numerous bird-oriented events every year; with volunteer assistance, we conduct monitoring activities at our sanctuaries; at Whitefish Point we have one of the premier migration observation sites in North America, designated as an Important Bird Area; and our sanctuaries throughout the state are significant habitat conservation sites. We are also fortunate to have so many hard-working partners in bird conservation.

---

Lyn Scrimger is the membership manager for Michigan Audubon and can be reached at [lskrimger@michiganaudubon.org](mailto:lskrimger@michiganaudubon.org).

Golden-crowned Kinglet. © Skye Haas



Are you interested in partnering with Michigan Audubon? Write to us at [birds@michiganaudubon.org](mailto:birds@michiganaudubon.org).



# Three Rare Birds, One Weekend

BY WENDY TATAR

**T**he first weekend in June will provide birders the opportunity to see three small bird species that are listed as endangered or threatened, not only in Michigan but the rest of North America as well. The two events occurring that weekend are Cerulean Warbler Weekend and the Kirtland's Warbler Festival.

Cerulean Warbler Weekend (CWW) takes place at the Otis Farm Bird Sanctuary just outside of Hastings. Otis Farm sits amid the Barry State Game Area, home to vast mature hardwood forests, the favorite habitat of Cerulean Warbler. This small songster is rapidly declining due to the mining practices in their favored home in the Appalachian Mountains and destruction of their winter habitat in Columbia.

The fields at Otis Farm are often the nesting grounds of Henslow's Sparrow, a threatened grassland species sought after by birders across the globe. If the picky sparrow decides that the fields at Otis aren't quite right, there are numerous fields in Barry County that do meet their specifications. These two species and plenty of others make this small event; we limit attendance to 100, a great one to attend. CWW will be held June 3-5.

On Saturday June 4, the Kirtland's Warbler Festival will be held in Roscommon. This great family event provides the opportunity to take a bus ride to jack pine habitat to learn about, and hopefully see, the Kirtland's Warbler. There will be

Top left: Cerulean Warbler © Dan Behm  
Top right: Henslow's Sparrow © Dan Behm  
Below: Kirtland's Warbler © Skye Haas



a kids' tent, a pancake breakfast, a 5K and 1K kids' Fun Run, and nature presentations. More information can be found at [kirtlandswarblerfestival.org](http://kirtlandswarblerfestival.org).

A fundraiser, the Kirtland's Warbler Home Opener, will be held on Friday evening June 3 at the Ralph A. MacMullen Center (RAM Center) in Roscommon. Tickets for this social event with a migration program presented by Nathan Cooper of the Smithsonian Institute are \$25.

Pick up a Cerulean Warbler and Henslow's Sparrow on Friday, then head to Roscommon for a Kirtland's Warbler to top off your weekend. Or if you can't get Friday off work, get your KW first, and go on the Bus Full of Birders tour at CWW on Sunday. It will be a great weekend for birding in Michigan.

Wendy Tatar is the program coordinator for Michigan Audubon. Wendy can be reached at [wendy@michiganaudubon.org](mailto:wendy@michiganaudubon.org).

From Kirtland's Warbler to the American White Pelican

EXPLORE THE LARGEST

*Freshwater Coastal Wetlands*

IN AMERICA!

*The Saginaw Bay Birding Trail*

40 sites and 142 miles of the Midwest's best birding!

**SBLC-MI.ORG/BIRD**

**SAGINAW BAY  
BIRDING TRAIL**



# Conservation Spotlight: Songbirds and Stress

BY CORRIE NAVIS

Loud noises, bright lights, roaming cats, zooming cars—city living can be stressful for a little songbird. While cozy birdhouses and well-stocked feeders entice many species to live in our parks and backyards year-round, there may be downsides to living in a setting with so much unpredictability. As part of my master's thesis research at Eastern Michigan University, I'm studying how spending the winter in Michigan cities might impact the stress levels of one species, the American Goldfinch.

One of the rural locations where I'm on the search for goldfinches is Haehnle Sanctuary, where goldfinches can spend the winter in a fairly natural setting and don't have to deal with many of the



Setting up a live trap and mist net at Haehnle Sanctuary. A recording of American Goldfinch calls helps attract any that are in the area. © Corrie Navis



A male American Goldfinch from Haehnle Sanctuary, ready for release. © Corrie Navis

stressful experiences that urban birds do. This makes it a great location to compare against the stress levels of goldfinches in southeastern Michigan cities.

Of course, goldfinches can't answer a survey about how stressed they feel, so I measure levels of corticosterone, a stress hormone, in their blood. Unlike adrenaline, which kicks in quickly for the fight-or-flight response, corticosterone takes a few minutes to show up in the blood and can remain raised for a longer time after a stressful event. Raised stress hormone levels can be very important in helping a bird survive in the short term, causing them to put energy into tasks such as avoiding predators, but can have health effects if they remain unusually high over time. If a bird's stress hormone levels are spiking due to stressors that aren't actually life-threatening (such as the noisy car roaring down the street or the child running around a backyard), this may result in spending too little time focused on normal behaviors.

To measure goldfinch corticosterone levels, I take a small blood sample immediately after capturing a bird in a live trap or mist net. This sample allows me to assess its baseline stress level (how much corticosterone is in its blood as it goes about normal activities). Each bird is then kept in a cloth bag for half an hour, to simulate a moderately stressful event. I then take another blood sample to gauge how the bird responds to stressful situations in its environment. I also take several measures of body condition to compare any additional differences between birds that spend their winter in rural areas such as Haehnle Sanctuary and those in cities. Each goldfinch is fitted with a numbered aluminum leg band before release, so that any researchers who catch it in the future can track its condition and movements over time.

I'll be testing the blood samples later in the lab to see if city-dwelling goldfinches have a higher stress level in general or respond more strongly to particular stressful events. This will help us learn more about how urban development impacts our native songbirds, and what species are best able to thrive in such environments. This data will also contribute to ongoing research on American Goldfinch physiology and behavior that is being conducted by Dr. Jamie Cornelius and her students at EMU.

---

Corrie Navis is a master's student in the Ecology, Evolution, and Organismal Biology program at Eastern Michigan University and has spent the past two winters studying American Goldfinches in Michigan cities and rural areas. She is looking forward to continuing research and conservation work for birds and other animals after she graduates this year.



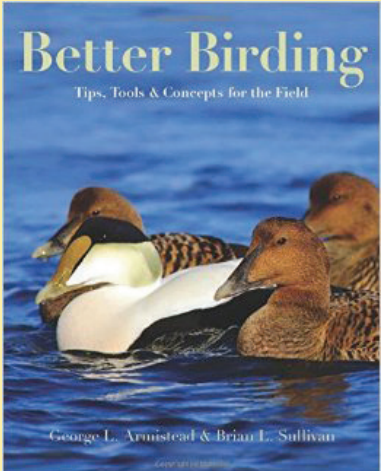
# Book Review: *Better Birding*

REVIEWED BY DARRELL LAWSON

I had been looking forward to reading *Better Birding* since even before the book had hit the market. So I was delighted when asked to review it. *Better Birding* is an attempt to explain bird identification with a more holistic approach than the usual one focusing on key field marks that most field guides promote. It attempts to help readers develop a framework to use behavioral cues, habitat preferences, and GISS (General Impression of Size and Shape) when identifying a bird in the field. I wish I would have had the foresight to purchase *Birding by Impression* by Kevin T. Karlson and Dale Rosselet for comparison, as these books seem to cover similar information, but alas I did not.

The book's introduction touches on a wide array of topics, from what it means to be a good birder, bird sounds, the ethics of using playback, species concepts, molt, and "Why Birding Is Cool," among others. That's a lot of topics to pack into seventeen pages and therefore most are given only cursory coverage. The information is not bad, but some of it could have been hashed out a bit more. The introduction attempts to function as an introduction to the material covered in the main chapters while also attempting to be a general introduction to birding itself. It may have worked better if these had been given separate treatment.

The main material is broken into sections such as waterbirds, skulkers, and birds of the forest edge. Each section is subdivided into chapters, as for example Loons, Swans, Monochromatic Mallards, and White Herons for the waterbirds. Chapters provide detailed descriptions of species in the group, tips for separating them, and photographs. This information is good and should prove helpful to those looking to improve their ability to separate out these difficult species in the field. However, I have always found illustrations more useful than photographs in bird identification guides; the illustrator has more freedom to draw birds in such a way that important characteristics can be shown. It can be difficult to get a photograph that is able to do this. *Better Birding* uses photographs and is not immune to the problem. In a few cases, the photo caption directs readers to pay attention to characteristics of the bird that the photo does not show well. The selection of groups that are included could have been better. The problem is that for most readers, only a small selection of the



*Better Birding*  
by George L. Armistead  
Available for sale  
in the Michigan Audubon  
Nature Bookstore: \$29.95

groups are going to be all that helpful, due to geographic restrictions. Learning to identify birds by impression takes experience in the field with that species, something you are only likely to get with your local birds. Most of us in Michigan are probably not going to come across enough Eiders or Yellow-bellied Kingbirds to learn to separate them without detailed study of field marks. It may have been more useful had the book focused on a wide-ranging group such as ducks or on a single North American region.

Despite the few issues I had with the book, I really did enjoy reading *Better Birding*, and I suspect many fellow bird nerds will as well. This book may not be as useful to the general birding public as it could have been, but if you enjoy studying bird identification just for the fun of it or want to pick up a few tips to improve your birding skills, then I would highly recommend *Better Birding*.

Darrell Lawson is the current president of the Petoskey Region Audubon Society (PRAS) and is an avid birder, although he only began birding three years ago. The mental challenge provided by birding and the opportunity to be outdoors is what drew Darrell to this hobby. He leads trips for PRAS and Michigan Audubon. When he isn't birding and spending time outdoors, Darrell works as a software engineer and can be reached at [lawsodw@gmail.com](mailto:lawsodw@gmail.com).

## Calendar

### May

- |       |  |       |  |
|-------|--|-------|--|
| 5–8   | <b>Indiana Dunes Birding Festival</b><br>Pierce Chesterton, Indiana              | 15    | <b>Daily Kirtland's Warbler Tours Begin</b><br>Hartwick Pines State Park, Grayling |
| 6–15  | <b>Biggest Week in American Birding</b><br>Magee Marsh, NW Ohio                  | 15–30 | <b>U.S. Forest Service Daily Kirtland's Warbler Tours</b><br>Mio                   |
| 7     | <b>Capital City Bird Sanctuary Open House</b><br>6001 Delta River Drive, Lansing | 19–22 | <b>Tawas Point Birding Festival</b><br>East Tawas                                  |
| 13–15 | <b>Aldo Leopold Festival</b><br>Cedarville                                       | 27–29 | <b>Warblers on the Water</b><br>Beaver Island                                      |
| 14    | <b>International Migratory Bird Day</b>  |       |  |

### June

- |     |  |
|-----|--|
| 3   | <b>Weekend Kirtland's Warbler tours begin</b><br>Oscoda (see announcements, page 12) |
| 3–5 | <b>Cerulean Warbler Weekend</b><br>Otis Farm Bird Sanctuary, Hastings                |
| 4   | <b>Kirtland's Warbler Festival</b><br>Roscommon                                      |

### July

- |   |   |
|---|---|
| 4 | <b>Last Day of Grayling Kirtland's Warbler tours</b><br>Hartwick Pines State Park, Grayling |
|---|---|

# Spotlight: Macomb Audubon Society

BY KRISTIN PHILLIPS



Tom Heatley and MAS looking at a Great Horned Owl at Lake St. Clair Metropark.  
© Barb Baldinger



MAS Stony Creek Metropark Field Trip © Barb Baldinger

**T**he Macomb Audubon Society is an active chapter of Michigan Audubon in southeast Michigan. Founded in the late 1970s, Macomb Audubon has approximately 100 members and holds regular programs, trips, and walks that are available to the public. The chapter has a four-pronged mission statement:

“Promote interest in the world of nature and to aid in the conservation of natural resources. Provide an outlet for nature activities via field trips. Provide an opportunity for the exchange of knowledge and experience through lectures, films, discussions, and newsletters. Aid organizations that provide people of all ages with opportunities to experience these above given objectives.”

Fulfilling its mission, Macomb Audubon members enjoy a multitude of field trips and presentations. According to new president, Randy Baker, one of Macomb Audubon's strongest features is the many naturalists among the membership who volunteer to lead field trips and presentations for members new to nature activities and birding. Regular trips go to the Tawas area and the Stony Creek Nature Center. The Macomb Audubon meets the first Monday of most months at the Sterling Heights Senior Center, where volunteers and members provide educational presentations with topics ranging from bird identification to birding and nature in locations near and far, in

addition to potlucks and social events. The chapter, like many Michigan Audubon chapters, is active in citizen science projects like the Christmas Bird Count and the Great Backyard Bird Count, as well as migration counts. Macomb Audubon's 2015 Christmas Bird Count set a new record, with 77 species, 22,036 individual birds, and a first-time sighting of a Northern Saw-whet Owl during the count.

Members of Macomb Audubon are active volunteers at their local parks and nature centers such as Stony Creek Nature Center and have regularly raised funds for the Michigan DNR's Peregrine Falcon Banding Program in southeast Michigan. Members Christine Becher and Barb Baldinger have volunteered for the Michigan DNR as Peregrine Falcon monitors. Christine Becher worked as a Peregrine Falcon coordinator in 2010 and helped organize a fundraiser last year, with 20 other volunteers, to raise money for the Peregrine Falcon program. They held a silent auction and pick-your-prize-style raffle, raising funds and promoting the program. Barb Baldinger, Michigan DNR volunteer and Peregrine Falcon nesting status photographer in 2014, also leads presentations for Macomb Audubon about the ongoing work of the program. You can learn more about Macomb Audubon's involvement from its Facebook page, Peregrine Falcons Southeast Michigan. In addition to this Facebook page, the chapter is also active online on multiple fronts. It keeps an actively updated website and a chapter Facebook page to keep members up-to-date and help attract younger members.

An upcoming presentation for the Macomb Audubon will take place on Monday June 6 at the Sterling Heights Senior Center. Retired Sterling Heights naturalist Gordon Lonie will be presenting on the topic of “Exploring Yellowstone National Park” and discussing the wildlife that can be found within the famous park. More information about Macomb Audubon meetings, leadership, and online presence can be found below.

---

Kristin Phillips is the marketing and communications coordinator for Michigan Audubon and can be reached at [kphillips@michiganaudubon.org](mailto:kphillips@michiganaudubon.org).

## Leaders

President: Randy Baker - [naturalistendev@hotmail.com](mailto:naturalistendev@hotmail.com)  
VP of programs: Holly Vaughn Joswich - [VaughnH@michigan.gov](mailto:VaughnH@michigan.gov)  
VP of membership: Beverlee Babcock - [Beverleebabcock4@gmail.com](mailto:Beverleebabcock4@gmail.com)  
VP of field trips: Colleen Traylor - [grandmothernature2@gmail.com](mailto:grandmothernature2@gmail.com)  
VP of field trips: James Smart - [cesmart4125@gmail.com](mailto:cesmart4125@gmail.com)

## Meetings

Meetings are normally held the first Monday of each month at 7:00 p.m. at the Sterling Heights Senior Center, located on the northeast side of Utica Rd., east of Van Dyke and south of 18 Mile Rd. Events are open to the public.

## Website

[macombaudubon.org](http://macombaudubon.org)  
[facebook.com/Macomb-Audubon-Society](https://facebook.com/Macomb-Audubon-Society)  
[facebook.com/Peregrine-Falcons-Southeast-Michigan](https://facebook.com/Peregrine-Falcons-Southeast-Michigan)



# Developments at Whitefish Point Bird Observatory

BY ALEC LINDSAY



Northern Harrier. © Skye Haas

The birds in our backyards can be charming, but there's something almost magical about those remote birding spots that collect large numbers of common and uncommon birds. Whitefish Point is just such a magical spot, and that's why Whitefish Point Bird Observatory (WPBO) was founded over 30 years ago. The wind- and wave-swept tip of the Point is a "wooded dune and swale complex" that is distinctive to the Great Lakes region. It supports a diversity of species, including lady slippers, starflower, bunchberry, labrador-tea, all under the cover of a gnarly jack pine forest. Bird lovers know this site supports rare breeding birds such as Spruce Grouse, Black-backed Woodpecker, and Piping Plover, but they also know that Whitefish Point is right in the middle of a migratory bird flyway, making it a premier site for observing migrating raptors, water birds, and songbirds. The professional counters hired at WPBO log tens of thousands of migrating birds each season. Over 340 species of birds have been recorded at WPBO over the years, and thousands of raptors and water birds can be seen on the most active of days. Although wild and rugged (and thus appealing to birds), the Bird Observatory—including the hawk deck and water bird count site—are accessible to visitors year-round.

This year we have five tremendous field staff members at the Point—all of whom are seasoned field ornithologists, and most of who have multiple seasons at WPBO under their belts already. Be sure to go to [michiganaudubon.org/about-us/staff](http://michiganaudubon.org/about-us/staff) for some brief biographical information on our talented staff. When you plan your visit to the Point this year, take time to head to the Waterbird Shack (spring and fall) in the morning for some first-hand updates on water bird migration from Louie Dombroski. By mid-morning, raptors should be flying, so checking in with Ted Keyel on the hawk deck should be productive. The hawk deck is a great place to catch sight of a Rough-legged Hawk, a Peregrine Falcon, a dozen Sharp-shinned Hawks, or

a hundred Broad-winged Hawks, depending on the weather and your luck. It's always easy and usually fruitful to take a few minutes to glass the bushes around the Owl's Roost Gift Shop (stop in and say hello to Joanne or Aletha on your way) for some exciting passerines like sparrows, finches, and warblers. Our sightings boards at the Owl's Roost have good information on rare or otherwise notable sightings around the Point, including notes on the owls being banded by Chris Neri and Nova Mackentley through the shortening UP nights.

This spring we are going to be hosting some skill-building and informational programs out at the Point, with our field ornithologist, Skye Haas, leading bird walks on the weekends. Given the regular censusing he will be doing through the week, we should be able to help visitors find those rare and unusual birds. If there's a group of birds that give you trouble with identification, Skye can help with that on those walks, but he's also planning a series of four identification workshops for the month of May: Hawks, Waterbirds, Warblers, and Sparrows. Check the WPBO website regularly for updates, schedules, and further information.

All of our staff are really excited for this year's field season, and the great thing is that they're all people who can't help but share their excitement with other bird enthusiasts. Whether you're a beginner or an expert, or any level of birder in-between WPBO has a lot to offer everyone. You have a standing invite to join us there, so come on up—these great people and the magical birds will be waiting.

---

Current chair of the Michigan Audubon Board, Alec Lindsay, Ph.D., is a professor of biology at Northern Michigan University, where he teaches Ornithology among many other subjects. He has published peer-reviewed research on taxa as diverse as loons, chickadees, whales, humans, and harpy eagles.

Lady's Slipper. © Skye Haas



# Announcements



Kirtland's Warbler © Alysa Spangler, Grade 6, Gladwin Junior High School. Courtesy of the US Forest Service, 2015-2016 Kirtland's Warbler Young Artist' Calendar

## Kirtland's Warbler Tours

There will be plenty of opportunities to see Kirtland's Warblers this year on guided tours with Michigan Audubon, the U.S. Forest Service, and the AuSable Valley Audubon.

Michigan Audubon will again be holding free tours in the Grayling area. The meeting location is at the Michigan Forest Visitors Center, located at Hartwick Pines State Park. Grayling tours are scheduled daily at 7:00 a.m. and operate May 15–July 4. On weekends and holidays (Memorial Day and 4th of July), there will also be tours at 11:00 a.m. More information is available at [michiganaudubon.org/kirtlands-warbler-tours](http://michiganaudubon.org/kirtlands-warbler-tours).

The U.S. Forest Service will run tours, but for a very limited time: daily, May 15–30 from the Mio Ranger Station, 107 McKinley Road in Mio. There is a \$10 participation fee for the tour. Reservations are requested and can be made by calling 989-826-3252.

New for 2016: the AuSable Valley Audubon will be offering tours out of Oscoda. They will operate on Friday, Saturday, and Sunday only and begin at 8:00 a.m. Reservations are encouraged 24 hours in advance and may be made by calling the Camp Inn Lodge at 989-739-2021 or sending an email to [campinnlodge@gmail.com](mailto:campinnlodge@gmail.com). Tours will be led by Sam Burckhardt and limited to 20 people. If tours have not filled, walk-in participation will be allowed. The tours will begin at the Camp Inn Lodge, 3111 U.S. 23, just south of Oscoda. Participants will watch a short video on the Kirtland's Warbler and jack pine habitat before heading to the U.S. Forest Service Kirtland's Warbler management area via car caravan.

Please note that there is a major road construction project taking place in Grayling this summer. The I-75 Business Loop bridge over the AuSable River will be replaced, requiring rerouting traffic on a detour. We recommend that participants of the Grayling tour plan an additional 10–15 minutes to get to Hartwick Pines, especially if you are staying in Grayling on the south side of the river.

## Volunteers Needed

Michigan Audubon is looking for volunteers to help at the Tawas Point Birding Festival and the Cerulean Warbler Weekend. Volunteers perform a variety of duties such as greeting at the check-in table, assisting on birding trips (checking in participants, keeping track of bird sightings, and keeping the group together), assisting at presentations (checking participants at the door, introducing speakers, dimming the lights, etc.), setting up on Thursday, assisting vendors on Friday morning or Saturday late afternoon (helping bring in or hauling out materials for vendors), or packing up late Saturday afternoon. If you are available and interested, please contact Wendy Tatar at 517-580-7364 or [wendy@michiganaudubon.org](mailto:wendy@michiganaudubon.org).

If your interest is more in helping out at one of our 19 sanctuaries, contact Rachelle Roake at [rroake@michiganaudubon.org](mailto:rroake@michiganaudubon.org) or 517-580-7364. Work at the sanctuaries includes but is not limited to bird surveys, invasive species removal, and trail maintenance.

## Symbolically Adopt an Owl

Calling all Michigan bird lovers to the Huron House Bed and Breakfast: the lakeside bed and breakfast is offering a 2-night "What a Hoot" getaway where guests may adopt their very own owl—complete with certificate, photograph of your specific owl, and a guarantee that you'll be notified if your bird is ever recaptured (thanks to Michigan Audubon). While it will take about 2–3 weeks to receive your adoption kit by mail, the innkeepers have a stuffed owl souvenir with a cute little bandana that says "Had a Hoot at Huron House."

The 'What a Hoot' experience starts at \$475 including taxes for the room, which includes a \$25 tax-deductible donation to Michigan Audubon for your adoption of a Northern Saw-Whet Owl—the adoption is billed separately upon check-in to the B&B. Adoption costs vary by species; other adoption possibilities include: Juvenile Saw-whet Owl, Long-eared Owl, Boreal Owl, Barred Owl, Great Gray Owl, Northern Hawk Owl, Short-eared Owl, and the Snowy Owl. Rooms, and owls, are subject to availability.

The Huron House Bed and Breakfast is located at 3124 North US-23, Oscoda, Michigan 48750. For more information call (989) 739-9255 or visit [huronhouse.com](http://huronhouse.com).





### Warblers on the Water Back for Second Year

Celebrate Beaver Island's spectacular location and habitats as birds and birders migrate to the island for the 2016 Warblers on the Waters (WOW) event. An outstanding group of expert field guides and trips are scheduled for Memorial Day weekend, May 27–30. Field trips, demonstrations, and presentations are free to registrants due to the generosity of island businesses and organizations. For more information, visit the Beaver Island Birding Trail's website at [beaverislandbirdingtrail.org](http://beaverislandbirdingtrail.org). Registration for birding events has already been brisk, so please register ASAP.

### Re-enrollment for Kroger Community Rewards

Those of you who shop at Kroger stores and use your Kroger Plus Shoppers Card to get discounts on your groceries, pharmaceuticals, and gasoline can have your purchases logged into the Community Rewards Program (CRP). The Kroger CRP supports nonprofit organizations by contributing a percentage of receipts to the organization of the shoppers choosing. Michigan Audubon is a participant in the Rewards Program. If you hold a CRP card, in April or May each year you must re-enroll the organization that you wish to support through your shopping. If you don't re-enroll, no funds are contributed.

To re-enroll go to [krogercommunityrewards.com](http://krogercommunityrewards.com). Click "sign in," enter your email and password, click "enroll now," and enter 90227 or Michigan Audubon in the box. Michigan Audubon will automatically appear in a box below that you must check. Once you've done that, click "enroll," and your grocery shopping will be earning money for Michigan Audubon. Your enrollment will be good until April 30, 2017, when you will need to re-enroll again.

If you regularly shop at Kroger and haven't enrolled for the Kroger CRP, please consider signing up. Though only 12 shoppers have enrolled to support Michigan Audubon, we received over \$300 in 2015. More shoppers will equal more money for bird conservation projects in Michigan.

### Aldo Leopold Festival Highlights Birds

The 2016 Aldo Leopold Festival in Cedarville will highlight birds as it launches the North Huron Birding Trail (NHBT). Because of bird migration, the festival will move to May 13–15, a change from its normal June date.

Featured presentations during the event will include Native Orchids of the Upper Peninsula, *Beautiful Birds of the Eastern U.P.*, and Dark Sky. Enjoy outdoor fun with guided birding trips lead by Dave Ewert of The Nature Conservancy and Elliot Nelson, one of the people that worked on getting the NHBT established. There will also be guided nature hikes, including one to the Drummond Island Alvar, along with kayaking trips and the first annual triathlon. Activities will be occurring throughout the Hessel, Cedarville, and Drummond Island areas. For a complete list of scheduled activities visit [lescheneaux.org/aldo-leopold](http://lescheneaux.org/aldo-leopold).

### It's a Great Time to Get Involved with Your Local Audubon Chapter

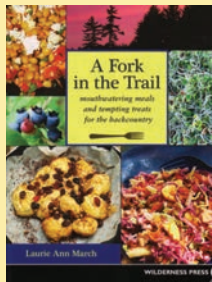
Spring migration brings with it numerous opportunities to get out and see the birds with the help of local birders. Most of the local chapters of Michigan Audubon hold weekly birding walks—sometimes more often. Most walks do not require membership or registration, and they are a great introduction for someone interested in possible membership with the local group. Michigan Audubon has 35 active chapters around the state; you can find information on all the local chapter locations at [michiganaudubon.org/about-us/chapters](http://michiganaudubon.org/about-us/chapters).

Dated Material

## Michigan Audubon Bookstore

*Your purchase from the bookstore supports Michigan Audubon's educational programs.*

Call 517-580-7364 to order books by phone or email Wendy Tatar at [wendy@michiganaudubon.org](mailto:wendy@michiganaudubon.org)



### A Fork in the Trail: Mouthwatering Meals and Tempting Treats for the Backcountry

by Laurie Ann March  
\$18.95

The photos in this book will make your mouth water. Each of over 240 recipes tells you what you need to prepare at home and then what you need to do once you're ready to complete the dish in the field. It even contains three recipes for dog treats. We also have *Another Fork in the Trail*, focusing on vegetarian and vegan recipes by the same author for \$17.95.



### Warblers of North America

by Kevin T. Karlson  
\$7.95

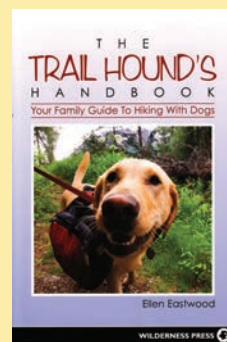
This is one of those laminated, waterproof, foldable field guides that are so popular and easy to carry. Hot off the presses, it contains Karlson's wonderful photographs of all the members of the warbler family (53 species). It's a great guide to carry with you when you head out on the birding trail in search of these beautiful little songbirds.



### Oroles

by Stan Tekiela  
\$6.95

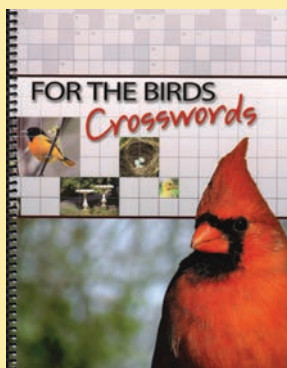
This small pocket guide packs a lot into its 48 pages. Although it contains information on all the species of orioles in North America, it concentrates heavily on the more numerous Baltimore Oriole. The book covers the natural history of the species and includes an interesting facts section loaded with trivia. It has a good deal of information on feeding the species and placement of feeders, plus how to keep those feeders clean. A great guide for those who love this bright songster.



### The Trail Hound's Handbook

by Ellen Eastwood  
\$12.95

This book was created to make hiking with dogs simple and fun. Containing lots of tips and tricks to employ on your journeys with your canine companion, it also has helpful information on first-aid items to pack for the dog and how to evaluate your dog's fitness for hiking. It really is a great guide that would help anyone looking to have their dog become a bigger part of their outdoor adventures and travel.



### For the Birds Crosswords

by Andrew J. Ries  
\$9.95

This ring-bound book contains 39 difficult crossword puzzles, both in 15x15 and 17x17 formats. Not all clues or answers deal with birds, but they are the theme to all of the puzzles. Wordplay and linguistic trickery make for a challenge.

**10% off** for all Michigan  
Audubon members!

**Order online, by phone, e-mail, or mail**

**Online.** [michiganaudubonstore.com](http://michiganaudubonstore.com) (Discount code: *MIAudubon14*)

**By phone.** 517-580-7364

**By e-mail.** [Wendy@michiganaudubon.org](mailto:Wendy@michiganaudubon.org)

**By mail.** Send name, address, phone number, and payment to Michigan Audubon Bookstore, 2310 Science Parkway, Suite 200, Okemos, MI 48864. Prepayment includes list price + 6% sales tax + \$4.25 postage and handling for the first item + \$.85 for each additional item.

**Payment accepted:** Visa or MasterCard