

NEWSLETTER OF THE MADISON AUDUBON SOCIETY

WINTER 2014-15

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Our mission is to protect and improve habitat for birds and other wildlife through education and

A Gathering Storm for Our Birds

My six-year-old son thinks birds are awesome. This summer we sat together and watched a bald eagle deftly pluck fish from a mirrored Wisconsin lake. But this special shared moment might never have come to pass if it weren't for people coming

together because they, like my son, love birds. Decades ago with the publication of Silent Spring, Rachel Carson sounded the alarm on rampant chemical pollution that threatened the very existence of birds like the bald eagle. Thankfully, citizens everywhere, but especially in Wisconsin, answered that call and worked together to force major policy changes to pull bird species back from the brink. (See Banning DDT on p.7.) Sadly, we are facing another major challenge that portends another silent spring.

An alarming new study by National global warming. Audubon scientists spent seven years studying 588 bird

species in Canada and the United States and found that the majority—314 species—will lose more than half of their current

The news is bad for Wisconsin. Some of our birds most at risk are familiar, beloved birds that are part of our childhood memories. Can you imagine summer mornings in northern Wisconsin without the plaintive cry of the common loon?

With the projected habitat shifts, common loons might no longer call Wisconsin home. Wood and hermit thrushes, wood warblers, and wood ducks could face extinction in Wisconsin before the end of the century. The mallard is projected to lose

> 75 percent of its summer bobolink-80 habitat: percent; golden-winged warbler—100 percent.

To me, this is personal. If we do nothing, many of our cherished birds could disappear within children's grandchildren's lifetimes. And this carries significant consequences. know that birds have immeasurable aesthetic, inspirational, and

economic value. generates hundreds of millions in revenue for our state in sales, travel and

National Audubon Ecologist jobs related to wildlife viewing. Birds **Chad Wilsey** provide billions of dollars worth of pest on Climate Change control and pollination services-for free. But birds also serve as indicators See back page for details. of bigger problems on the horizon

that are relevant to all. Extreme weather, fierce wildfires, agricultural disruptions, and sea level rise will affect everyone. If birds are in trouble, so are we.

It is easy to think of this as a problem for the future. Two-thirds of Americans believe effects of global warming will begin during their lifetimes, yet fewer than one-third

(See Gathering Storm, p. 3)



We have saved the bald eagle from the existential threat of DDT. Now we must act to save them from the threat of global warming.

Special Public Presentation

Audubon Society reveals that the bald eagle and hundreds of other bird species are severely threatened by

geographic range by 2080. Many could become extinct.

Masthead: Tamaracks at Faville Grove Sanctuary



Wake Up and Smell the Coffee

Forget about birds. Here's a fact that should wake us all up to the seriousness of global warming: It's threatening the worldwide coffee crop!

OK, we're all Audubon members so we can't forget about birds—after all, what good is a cup of coffee

if it doesn't wake you up to the sound of birds singing—but the plight of coffee is instructive nonetheless.

The most immediate threat to coffee is a disease thrives in warm, humid weather. As global temperatures rise and rainfall patterns change. disease the could spread to new areas and higher altitudes. Because the crop lacks genetic diversity, nearly all commercially grown coffee is at risk. So plant breeders are racing to

protect the 125 or so known species of coffee native to Ethiopia, Madagascar and other areas (and other coffee species that likely remain to be discovered), in hopes of introducing more genetic diversity into the crop and increasing its resilience in the face of global warming and other threats.

As the coffee problem shows, building adaptability to global warming involves building adaptability generally. Even if we do everything right from here on out to stop global warming in its tracks, we still should work to increase the genetic diversity of

coffee and all the other crops we rely on, just as we should protect all of the natural reserves of genetic diversity that are found in the wild everywhere.

Similarly, the efforts we must undertake to head off future global warming are the same efforts we need to undertake to address many other problems, environmental and social. Leaving fossil fuels in the ground by conserving energy and developing renewable sources of energy accomplishes much in addition to reducing carbon emissions: It reduces air and water pollution associated with the extraction and burning of fossil fuels; it reduces the hazards associated with mining, transport and storage of fossil fuels; and it strengthens local economies by creating jobs and reducing payments to distant fossil fuel producers, to mention a few of the collateral benefits.

Addressing the causes and consequences of climate change has never been the primary motivating force behind Madison Audubon's sanctuary efforts, and yet as you can read on page four, we are accomplishing just that on a local level. Our programs to educate children and adults about the natural world, and our work to advocate for sane environmental policies will yield many benefits, including reductions in greenhouse gases and greater adaptability in the face of climate change.

So, yes, let's keep birds in mind. Like coffee trees, their wellbeing tells us something important about our own wellbeing. The care and attention we devote to birds is care and attention we devote to ourselves and to all life on Earth. The time to act to protect birds from the threats of climate change is now. The benefits will be many.





Fall flowers in a diverse prairie restoration at Faville Grove: Greater diversity means greater adaptability

Emily Meier

Communications and outreach coordinator

One Down (Under) + Two Up = Fully Staffed Again

Over the past year, Brianna Laube Duran has contributed her energy and enthusiasm to Madison Audubon as our education coordinator. She helped spearhead a major expansion of our education program, reached out to new audiences, and helped introduce thousands of kids to bird conservation. Brianna's positive attitude and love of teaching contributed enormously to the success that MAS has experienced. We wish Brianna and her husband, Phil, happy trails as they venture to New Zealand.

We are delighted to announce two outstanding additions to our dedicated team! Emily Meier is our

new communications and outreach coordinator and will serve as the creative lead in engaging the public through social media, volunteer coordination, and modern, effective communication. Emily is a Wisconsin native who earned a B.S. degree in secondary education from UW-Madison in 2012 before moving west to work with the Teton Science Schools in Wyoming. There she has worked as a field instructor, program assistant, and program administrator for the field education department. She has significant experience in social media management, coordination and co-hosting of

Gathering Storm

(Continued from p. 1)

view it as a threat to our way of life. This is probably why climate change and the environment are viewed as lower priority government issues by the

average citizen. But the reality is that global warming is a problem already occurring. The birds are telling us that. have already seen the effects of a warmer world on migration patterns, bird distributions, food availability. Global warming is a problem for today.

There is hope. We must act now if we want to secure a

strong natural legacy for our kids and grandkids, and Wisconsin can once again play a leading role. There are two things we must do.

First, we have to protect the places where birds live today. These places will become even more critical to birds in the future. Madison Audubon is no stranger to protecting habitat. We are very proud of the work completed at our sanctuaries to protect land, restore native habitats and provide healthy places for birds and other animals. As a result of the dedicated work of staff and people like you, birds are flourishing at our properties. Your support will ensure these areas remain "strongholds" for birds in the future.

Second, we must work together to reduce the severity of global warming. We can do this through

both personal and community actions. But we also need to spread the word on the importance of birds and that losing even one species to a warming

> climate is not an option. We are proud of our programs educational that reach out to citizens, young people, and new communities. It is truly a privilege to witness a spark of curiosity grow into a love of birds and nature. We hope your support for these programs continues to grow as we strive to foster a conservation ethic in the next generation of Wisconsinites.

When you care about birds and the well-being of your community, the issue of global warming becomes much more serious. The cost of inaction is simply too great. Two centuries ago, massive flocks of the passenger pigeon blanketed the skies of Wisconsin. The sad account of its extinction shows us that without intervention even the most abundant bird in the world can be pushed into the ether. We are at a similar precipice with global warming, except now we are not talking about the loss of one bird species, but hundreds of them. Together we can stop that. I assure you I will be working diligently to do so—for Wisconsin, for me, and for my little boy.

Matt Reetz, executive director mreetz@madisonaudubon.org



By the year 2080, bobolinks may no longer nest in Wisconsin according to new projections from National Audubon. See range projections for all species in the study at *climate.audubon.org*.

education programs, grant writing, outdoor wilderness skills, and graphic design. Indeed, the hiring committee members all agreed that Emily has one of the coolest resumes we had ever seen!

We are also proud to welcome Carolyn Byers as our new education and operations specialist. Carolyn has a passion for environmental education and bird conservation. She has led pasture walks for farming families, birding trips for adults, nature walks for middle and elementary school children, and held many university teaching assistantships. Her diverse experiences include teaching basic ecology and camping skills to inner city teens and developing a bird ecology curriculum for special

education students. Carolyn also has significant knowledge and passion for avian field research, having earned a B.S. in biology from the University of New Hampshire, and a M.S. in wildlife ecology from UW-Madison. For her thesis she completed research in southwestern Wisconsin on grassland birds' use of farm fields that have been planted to warm-season (prairie) grasses under the federal Conservation Reserve Program.

We look forward to working with Emily and Carolyn as we continue to strengthen our educational programs, communications and organizational efficiency. Welcome!





Matt Reetz and son



Carolyn Byers
Education and operations specialist



Charred plant material returns to the soil

where it resists further decomposition

Fire-Dependent Communities and Global Warming

The dominant natural communities found in south central Wisconsin are dependent on periodic fire. At Faville Grove Sanctuary, we protect small areas of tamarack swamp where fires never reach, and at

both sanctuaries, we protect open water habitats and emergent wetlands. But for the most part, the natural areas that Madison Audubon protects and restores are fire-dependent communities: prairies, savannas, and even southern oak woodlands where fires occasionally burn but are of low enough intensity to allow fire-resistant bur and white oaks to thrive.

Given the urgency of global warming, we are sometimes asked why we don't plant everything we can to trees in order to sequester carbon, and give up on all the controlled burning, which dumps carbon dioxide back into the atmosphere?

State threatened wild quinine or American feverfew in seed at Favlle Grove

into the soil, where they are extremely resistant to decomposition and provide excellent substrate for attachment of soil microbes that further improve soil structure and carbon storage.

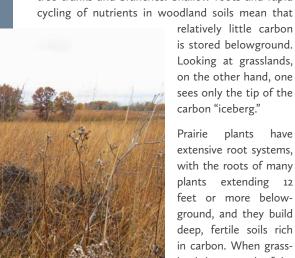
> It's no coincidence that the world's best agricultural soils are found on former grasslands. Wetlands also store large amounts of carbon below the surface because high water tables produce anaerobic conditions that decomposition of organic matter. Many wetland soils can be made agriculturally productive with artificial drainage. On the other hand, in the eastern US, forests that once were cleared for agriculture have largely been abandoned and allowed to revert to woodland because of their limited productivity.

Prairie and wetland restoration alone isn't going to store enough carbon to solve the climate crisis, but it is one weapon in the arsenal. Perhaps more important is the role these efforts play in rebuilding the diversity and extent of natural areas that will be needed to adapt to rapid changes in climate.

The place we call Wisconsin is no stranger to climate change. In the past our ecosystems have adapted. As the last glaciers melted, animals, plants and microbes followed the retreating ice northward and reassembled into stable communities. But there are some big differences this time around: The pace of change may be much faster and temperatures much higher, especially if we don't aggressively eliminate our net emissions of global warming gases; the size and diversity of populations available for restocking have been radically reduced; and species on the move will need to navigate around large areas of inhospitable space in the form of cities, suburbs and farmland.

Through Madison Audubon's sanctuary efforts we are addressing each of these factors even as we protect and restore some of the most endangered ecosystems on the planet. The prairies, savannas and wetlands at our sanctuaries remove carbon from the atmosphere; they help stabilize and enhance wildlife populations and restore genetic diversity; and they provide more and larger islands of critical habitat in the sea of human development.

Roger Packard, president



Faville Grove: Prairie and savanna are two of the most endangered habitats on Earth.

It turns out that trees aren't the only carbon storage pros around: Despite the periodic smokey fires, treeless grassland and wetland ecosystems store large amounts of carbon as well. When it comes to carbon and woodlands, what you see is what you get. Carbon is stored largely aboveground in tree trunks and branches. Shallow roots and rapid

> relatively little carbon is stored belowground. Looking at grasslands, on the other hand, one sees only the tip of the carbon "iceberg."

> plants have extensive root systems, with the roots of many plants extending 12 feet or more belowground, and they build deep, fertile soils rich in carbon. When grasslands burn, much of the aboveground carbon is returned to the atmo-

sphere, but not all. That black layer that settles on the ground following a burn is composed of charred stems and tiny bits of charcoal that work their way

Federal Protection Sought for Monarch Butterflies

On Aug. 26, the Center for Biological Diversity, the Center for Food Safety, the Xerces Society for Invertebrate Conservation and monarch researcher Dr. Lincoln Brower petitioned the U.S. Fish and Wildlife Service to have the monarch butterfly listed as federally threatened. The Madison Audubon board of directors voted recently to support the proposed listing.

Monarch numbers have declined dramatically in recent decades, due largely to a loss of habitat, specifically the loss of milkweed, their host plant, throughout their Midwest breeding grounds. The loss of milkweed is due primarily to more intensive mowing of roadsides and changes in agricultural practices, with larger farm fields and fewer weedy fencerows, as well as increased use of herbicides. Other threats to monarchs include climate change and related severe weather events, logging in overwintering sites, widespread use of systemic insecticides, disease, and predation.

At Goose Pond Sanctuary, in addition to creating habitat and collecting lots of milkweed seed to share with others, we have joined with MonarchWatch on a citizen-science project to tag migrating monarchs and help track their populations and movements. Between Aug. 27 and and Oct. 11 we tagged 366 monarchs at Goose Pond and seven other sites.

Thanks to the 165 people, including classes from DeForest and Montello schools, 4H Questars, and students from the UW Wildlife Society Student Chapter, who helped tag butterflies and learn about their ecology.

Volunteers have also been busy this fall collecting and cleaning milkweed seed. We have plenty of common milkweed seed for anyone interested in establishing monarch habitat.

Mark Martin, Sue-Foote Martin and Tony Abate Goose Pond resident managers and land steward goosep@madisonaudubon.org





Monarch Winter Populations Decline 96.5% in 17 Years

Estimatd overwintering population of monarch butterflies:

1996—1997: One billion 2013—2014: 35 million

What You Can Do

- Plant milkweed! Contact us if you need seed: goosep@madisonaudubon.org
- Learn more about butterfly gardens and register your yard as monarch habitat at:
 MonarchWatch.org
- Sign the petition to list the monarch as a threatened species at:
 CenterforFoodSafety.org



Monarch tagging at Goose Pond Sanctuary: Photos by Arlene Koziol





Field Trips

Sunday, Nov. 2: 6:30 a.m. to 5 p.m. Lake Michigan Birding

Saturday, Nov. 15: 7 a.m. Mississippi River Waterfowl

Saturday, Dec. 7:30 to 11:30 a.m.
Birding Madison Lakes

Thursday, Jan. 1: 6:55 a.m. New Year's Sunrise over Faville Marsh

First Sunday every month: 1:30 p.m. Cherokee Marsh Walk

For complete details, visit *madisonaudubon.org* or call 608.255.2473

Christmas Bird Count

The 115th annual Christmas Bird Count begins on Sunday, Dec. 14, 2014 and runs to Jan. 5, 2015. Watch for details on local counts at *madisonaudubon.org*

The Christmas Bird Count provides critical data on avian population trends and proved invaluable in National Audubon's recent climate change report (see pages 1 and 8).

New Legacy Society Members

Outgoing executive director, Gary Funk, and his wife Jana have joined the Madison Audubon Legacy Society in a sign of their continuing commitment to the organization. Also, in honor of Gary's many contributions, and in particular, his establishment of the Legacy Society, board members Galen Hasler and Topf Wells, along with their wives, Grace and Sally, have also pledged estate gifts to Madison Audubon, bringing the number of family or individual members of the Legacy Society to 20.

Please contact Matt Reetz, executive director, at 608.210.1441 if you would like to discuss a planned gift or have already included Madison Audubon in your estate plans.

New School Year, New Education Programs

Madison Audubon's conservation educators love fall: Beautiful trees, great bird watching opportunities, and our in-classroom presentations and after-school programs are up and rolling again! With the help of many volunteers, Madison Audubon's educators, Rebecca Ressl, Brianna Duran and, recently, Carolyn Byers continue to build on their successful collabora-

tions with the Dane County Salvation Army Community Center and Vera Court Neighborhood Center, while also creating new, exciting connections throughout south-central Wisconsin.

With the Salvation Army, Madison Audubon is piloting a new curriculum—Wisconsin Wildlife. Over the course of eight weeks, 29 elementary students will learn about native birds, insects, reptiles, amphibians, and bats. Adventures include field trips to

Cherokee Marsh and Governor's Island, meeting a live bat and turtle, completing hands-on activities to learn about metamorphosis and echolocation, and writing and drawing in their nature journals.

At Vera Court, Madison Audubon is leading two programs. *I'm a Scientist!* introduces different fields of conservation science to elementary students. Each week, kids visit a different natural area and use scientific tools like binoculars, magnifying glasses, soil probes, and secchi discs. Topics include ornithology, botany, soil science, and water science. The second program, *Outdoor Adventures*, is a service lagrange account for middle school students. This

The second program, *Outdoor Adventures*, is a service learning program for middle school students. This program is in response to National Audubon's newly released Birds and Climate Change Report indicating the importance of promoting habitat for birds in our community. Activities for 2014-2015 include:

- Collecting native seed to restore Yahara Heights County Park together with Dane County Parks
- Removing invasive species at Cherokee Marsh
- Building bird feeders and houses for Vera Court Neighborhood Center
- Marking stormwater drains to remind residents to dispose of leaf litter and pollutants correctly
- Participating in a variety of citizen-science bird and wildlife counts
- · Creating bird-advocacy videos

Additionally, Madison Audubon is leading programs at community events and in schools. Programs include a migration obstacle-course challenge at Lincoln Elementary School's Health & Wellness Fair, and a bird beak adaptation game at the Friends of Capital Springs Recreation Area's Harvest Moon Festival at Lussier Family Heritage Center. In

September, Madison Audubon spent a fun-filled two days with Highland School District, a Madison Audubon Prairie Conservation Education Grant recipient. After learning how to identify common birds by sight and call, the middle school students trekked out to Governor Dodge State Park to explore with binoculars. An American redstart and pileated woodpecker even made an appearance! School groups have also had a great time visiting our Goose Pond Sanctuary this fall. Classes have



Birding and seed-collecting: two great ways to get kids outside

helped collect and clean prairie seeds and students have enjoyed watching coots, mallards, and canvasbacks search for food in Goose Pond.

Madison Audubon thanks all our collaborators, participants, and volunteers for making these programs a success! If you're interested in making a difference in the community, consider volunteering at one of our upcoming education programs. Contact Rebecca at rressl@madisonaudubon.org for more information.

Madison Audubon Society's conservation education programming is made possible by a generous grant from the Theda & Tamblin Clark Smith Family Foundation. Additional support for our Vera Court Neighborhood Center partnership was provided by the Madison Community Foundation. Thank you!

Many thanks to all contributors!

Madison Audubon Society Donors: July - September, 2014

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Banning DDT: How Citizen Activists in Wisconsin Led the Way

When individuals band together to make change, it is truly amazing what they can do. In his new and compelling book, *Banning DDT: How Citizen Activists in Wisconsin Led the Way*, Bill Berry describes how Wisconsinites led the charge to get DDT banned nationally, a saga that fed the roots of environmental activism in the state and saved many bird species from a terrible fate.

The stage is set when the convenience, simplicity, and immediate applicability of the "miraculous pesticide" DDT led to the "rise of a new breed of scientist: the economic entomologist, whose job it was to save humankind and wrestle control of the earth—including the elm-lined streets of the eastern United States—from insects." But it proved too good to be true. Publication of Rachel Carson's *Silent Spring* fostered another new breed of expert, ecological scientists, who established with growing certainty that DDT was mobile, persistent, and killing birds in droves.

The chemical industry fought back with vigor. Government agencies got involved. University of Wisconsin departments were pitted against each other. The controversy led the Citizens Natural Resources Association of Wisconsin, National Audubon and other groups to petition for hearings on DDT. Citizens and scientists banded together, and created a booming voice for conservation.

These included leaders like UW-Madison wildlife ecology student and future faculty member Joseph Hickey, whose research on DDT and bird deaths was being stifled by his department. It included housewife Laurie Otto, who provided transportation, lodging, meeting rooms, and daily encouragement for women to support the CNRA during the hearings (and who often provided dead robins from her own freezer for effect). And it included a host of other citizen leaders from around the state whom Berry weaves into his narrative with great artfulness.

Berry presents a lively, page-turning history that leads us carefully into the present. Like a crime "whodunit" novel, the story relates "how we got there" with sub-plots, surprises, a diverse cast of players, accidental occurrences and genuine suspense. Published by the Wisconsin Historical Society, it reads like a novel, but it is all true and supported with meticulous footnotes.

In the end, the true punch of Berry's novel is that it shows us that even a small group of birdwatchers and citizens can head off a crisis before it's too late. With the storm clouds of global warming gathering, we citizens of Wisconsin have our work cut out for us.

Review by **Dorothy Haines**



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Please return this form to the address on p. 8 or give online at madisonaudubon.org

Madison Audubon Society and National Audubon Society are tax-exempt, not-for-profit organizations under Section 501(c)(3) of the Internal Revenue Code. When you join, you will receive subscriptions to both the Madison Audubon newsletter, published four times per year, and to AUDUBON magazine, published six times per year. (Please allow six to eight weeks to receive your first issue.) Your membership and gifts to Audubon are tax-deductible except for \$7.50 allocated to AUDUBON magazine for a one year membership.



Annual Board Elections

Three members of the Madison Audubon board of directors have terms that expire in March 2015. The board of directors has unanimously nominated all three to stand for reelection. The three candidates are:

Marcia MacKenzie Roger Packard Mareda Weiss

Call for Member Nominations

Members may nominate additional candidates to run for election by submitting a brief statement from each nominee signed by at least 25 MAS members in good standing as of Nov. 1, 2014. Member nominations are due in the Madison Audubon office by Dec. 12, 2014. Ballots will appear in the Spring newsletter.

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Join Us for a Special Public Presentation

Climate Change: The National Audubon Report presented by Chad Wilsey, Spatial Ecologist, National Audubon

National Audubon recently completed a comprehensive study on the looming effects of climate change on our birds. Audubon ornithologists analyzed 30 years of historical North American climate data and tens of thousands of records from the North American Breeding Bird Survey and the Audubon Christmas Bird Count. Understanding the links between climate and species ranges allowed the scientists to project where birds are likely to survive—and not survive—in the future.

Chad Wilsey, an ecologist with National Audubon Society, will share these results and the implications for bird conservation both nationally and in Wisconsin. The science is clear that climate change is the biggest conservation threat to birds through the rest of the century. As a result, the fate of our birds will depend critically on decisions that reduce the impacts of climate change and the ability of birds to find suitable areas to call home.



Will we allow common loons to disappear from Wisconsin?

Chad uses a range of advanced spatial data and analysis tools to address potential impacts of development and climate change on bird and wildlife populations. He previously studied the vulnerability of wildlife populations to climate change in the Pacific Northwest, dependence of the endangered black-capped vireo on sustained cowbird management, and characteristics of bird communities in agroforests in Costa Rica. Chad also has extensive field experience through wildlife surveys in Wyoming, bird banding in New Mexico, and monitoring of nesting macaws in Peru. Chad earned an M.S. in conservation biology and sustainable development at the University of Wisconsin–Madison and a Ph.D. in landscape ecology at the University of Washington. Join us in welcoming Chad back to Wisconsin to share this important research.

Monday, Nov. 17; 7:30 p.m. Wisconsin Institutes for Discovery, H.F. DeLuca Forum 330 N. Orchard Street, Madison

Visit madisonaudubon.org for more information on the event, speaker, and parking options.

Sponsored by Madison Audubon and the UW-Madison Nelson Institute for Environmental Studies