

Wisconsin Natural Resources

THE WISCONSIN DNR'S GUIDE TO THE OUTDOORS | WNRMAG.COM

READY
OR NOT,
HERE
COMES
WINTER

CELEBRATING 40 YEARS
OF CONSERVATION

HALF-HOUR HIKES
FOR CHILLY DAYS

SUSTAINABLE
HOLIDAY GUIDE

OPENING SHOT



MICHAEL DEWITT

Apostle Islands National Lakeshore, Lake Superior



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CONTENTS

WINTER 2022,
VOLUME 46, NUMBER 4

TIMOTHY HANSEL

Northern cardinal

DEPARTMENTS

- 4** **From the Secretary**
PRESTON D. COLE
- 5** **News You Can Use**
- 6** **Letters to the Editor**
- 7** **Facebook Q&A**
- 46** **Culinary Spotlight**
 Season's eatings
 ANDI SEDLACEK
- 51** **Highlights**
 Hidden Pictures
- 52** **Back in the Day**
 Whooping cranes
 KATHRYN A. KAHLER
- 55** **New York Times Crossword**

48 *Kids Corner* **Winter Birds** ANDI SEDLACEK

FEATURES

- 8** **NHC program is keen on conservation**
ANNA MARIE ZORN
- 14** **Winter camping**
ANDI SEDLACEK
- 20** **State parks in winter**
ANDREA ZANI
- 23** **Half-hour hikes**
ANDREA ZANI
- 24** **Stay in shape for the outdoors**
DANA FULTON PORTER
- 26** **Night skies at Newport**
DANA FULTON PORTER
- 29** **On thin ice**
DANA FULTON PORTER
- 32** **How winter works**
DANA FULTON PORTER
- 34** **Cut the salt, Wisconsin**
KATHRYN A. KAHLER
- 36** **Sustainable holiday guide**
DANA FULTON PORTER AND JADA THUR
- 42** **BOLD skiers**
JONNA MAYBERRY
- 44** **Goats on duty**
DANA FULTON PORTER

FROM THE SECRETARY PRESTON D. COLE



MIKE GORSKI

At the DNR, we celebrate the outdoors in Wisconsin year-round. From sunny summer days on the lake to crisp, clear winter afternoons snowshoeing in the woods, there's a way for everyone to find their own adventure, no matter what they enjoy.

For those who may not love the colder months, remember something author John Steinbeck once wrote: "What good is the warmth of summer, without the cold of winter to give it sweetness."

I believe winter, too, holds a little sweetness, though perhaps a colder, brighter flavor than other seasons. And it may require a little extra effort for each individual to find their own sweet spot.

We know many Wisconsinites are affected by seasonal affective disorder during the winter. It's more common in northern states, where winter means fewer daylight hours. That, combined with the cold weather, can lead to some staying indoors all season, creating a sense of isolation or loneliness that lasts until spring.

Research continues to show that spending time outdoors is an effective way to combat seasonal depression. In general, time in nature is good for your mental health.

I'd like to encourage you to find the bright spot in these darker

months by enjoying all the great winter adventures available in Wisconsin.

This issue highlights quick half-hour hikes across the state to help get your blood moving and warm your soul. If you're seeking a view into the universe this winter, we invite you to visit Wisconsin's only designated Dark Sky area. On a clear night, Newport State Park provides a view into the vastness of the Milky Way Galaxy that will leave you amazed and filled with wonder.

If you're searching for cozier ideas, winter camping can provide a fun opportunity to gather with friends while enjoying smaller crowds at state parks. Get the kids involved with a fun activity to help attract birds to your backyard throughout the year.

And if it gets extra cold this winter, as some forecasts are calling for, you'll find just the thing in this issue to keep your body moving indoors, to prep for the sweetness of hiking as soon as spring rolls around.

In short, don't let the colder weather detour you from exploring the outdoors. This is the season when a little extra time outdoors, with a few extra layers, may be exactly what you need. I hope you see some inspiration in these pages to help you enjoy how special our state truly is. ♡

NEWS YOU CAN USE

BUY STATE PARK VEHICLE STICKERS

Now is a great time to get your 2023 Wisconsin State Park System vehicle admission sticker.

An admission sticker is required on all motor vehicles stopping in state parks, forests and recreation areas.

You can buy annual stickers online, at DNR service centers or at your



favorite Wisconsin State Park System property. For details, scan the QR code or go to dnr.wi.gov/tiny/1256.

CHRISTMAS TREES FROM STATE FORESTS

As you prepare to deck the halls, consider looking in a Wisconsin state forest to help you decorate for the holiday season. Six state forests — Brule River, Black River, Flambeau River, Governor Earl Peshtigo River, Governor Knowles and Northern Highland-American Legion — offer permits for cutting a Christmas tree to take home.

Permits can be purchased in advance through the mail or at each property and are usually \$5 per tree. Generally, a tree harvest cannot be within 100 feet of roads, trails, lakes or a designated recreation area.

A few tips for a perfect harvest:

- Bring a sharp, lightweight saw, as forests will not provide one.
- Wear work gloves to protect your hands from scratches and sap.
- Make it a family affair; many hands make the tree harvest easier.



WISCONSIN DNR

FREE FISHING WEEKEND

Lakes may ice over in winter, but the fish still bite. Try ice fishing on one of the state's 15,000 lakes or dip a line somewhere along the 84,000 miles of rivers and streams.

Free Fishing Weekend, Jan. 21-22, is a good chance to give it a go. Most state waters require no license on those dates, and special events often are planned to get people started. For everything you need to know about fishing in Wisconsin, visit dnr.wi.gov/topic/fishing.



ARENE KOZIOL

Snowy owl

LOOK OUT FOR SNOWY OWLS

Last winter was hot with snowy owls in Wisconsin. Will we see it again this year? It's hard to predict these irruptions — periods of mass movement of a population — so we won't know for sure until it happens.

Snowy owls (*Bubo scandiacus*) make their way to northern Wisconsin every winter, though usually in smaller numbers than we saw last year. They arrive around mid-November and depart by the end of March. They prefer treeless habitats and can likely be found in open areas, especially grasslands, wetlands, shorelines and agricultural fields.

Unlike other owls, which are often nocturnal, snowy owls may be diurnal, meaning active during the day. So it's OK if you see one while the sun is out, as they're most active at dawn and dusk. Adult male snowy owls are almost completely white, while females and immature males are white with black spotting on their feathers.

Scan the QR code to learn more about snowy owls in Wisconsin or check dnr.wi.gov/tiny/1276.



THE GIFT THAT LASTS ALL YEAR-ROUND

Looking for a gift idea this holiday season? Give a subscription to *Wisconsin Natural Resources* magazine, bringing news of the state's beautiful outdoors and ideas for how to enjoy them directly to the doorstep four times a year to highlight every season.

For a limited time, take advantage of a special holiday offer — five issues for just \$5. That's more than half-off the regular subscription price. To buy a gift or subscribe for yourself, go to wnrmag.com, or call 1-800-678-9472.

LETTERS TO THE EDITOR



ONE FINAL FISHING TRIP

On Pine Lake in Mercer, last day of fishing before grandma and grandpa sell their cabin.

Wendy Ripp
Cross Plains



SHARING BEAUTY IN NATURE

Hello from the Northwoods. I'm retired and usually go somewhere each day to enjoy my hobby of photographing nature. It's like fishing — if you're not out there, you're not going to see it. And but for the blood-sucking insects, the air is great up here.

I make a calendar from my photos every year for family and friends. I enjoy that others will see the beauty in nature. Here's a swallowtail in the sun.

Bob Hilbert
Winter

STICKY SITUATION

My wife discovered bird eggs stuck to pine needles, and we are wondering what happened here. There were three eggs in the tree. They seemed stuck on the needles and had puncture holes on top.

I think they are probably tree swallow eggs, as we had a nest box nearby that is now abandoned. We are blaming the wrens, as they also have a nest nearby. Have you seen this before? What do you think happened?

Robin and Lisa Cornell
Amery



Ryan Brady, a bird expert who works for the DNR, responded: "After some discussion with colleagues, we believe the wren, most likely a house wren, removed these tree swallow eggs from the birdhouse and dropped them in the nearby spruce tree. Being stuck on the needles probably happened by chance as the egg fell. The other piercings are from the wren's beak, as that's how they would carry the egg. This behavior of house wrens removing eggs of other species, especially from nest boxes, is well-documented and can contribute to population declines for some species at the local level. With that said, house wrens are native species protected by federal migratory bird laws, unlike house sparrows and European starlings, which are two non-native songbirds that often outcompete native cavity-nesting species."



RACHEL HERSHBERGER

ABOUT THAT LEAF PHOTO

In the Fall issue, the photo of the colorful Wisconsin-shaped leaf on Page 12 ("It's Fall Y'all") merits explanation of how the image was created. No, it wasn't Photoshop or other digital alteration, photographer Rachel Hershberger reports, but her own meticulous use of an X-Acto knife. Hershberger cut the state outline out of a real leaf and mixed it among other fall leaves for the photo.



MORE ON FOOD WASTE

I appreciate what you wrote in "Waste Watchers" (Summer 2022), but I have one big question:

Why did you not deal with garbage disposals in kitchen sinks? It would seem this method of food waste disposal would go a long way toward eliminating the problems you specify — limited room in landfills, which leads to the compression of food waste that, in turn, leads to the anaerobic organisms that finally produce methane. Garbage disposals also happily eliminate the hassles of composting.

Jonathan Rupprecht
Milwaukee

Thanks for reaching out. If your wastewater treatment plant is able to manage food waste that comes from a garbage disposal, it is a better choice for the climate than landfilling. However, it doesn't eliminate the resources used in the first place to grow, transport, process, package and refrigerate wasted food (food waste that was previously edible), which makes up 70% of what we currently landfill in Wisconsin. That's why the article focused on reducing food waste from the start as the best option for reducing the amount of food that ends up in our landfills.

HISTORY OF SCHLITZ BREWING

I enjoyed the article about Wisconsin breweries in the Fall edition ("Back in the Day"). However, I must correct the story on the founding of the Joseph Schlitz Brewing Co. The brewery was founded by German immigrant August Krug in 1849. Following Krug's death in 1856, Joseph Schlitz married Krug's widow. He then changed the name of the brewery to his own. Schlitz was lost at sea in 1875, and the firm ultimately passed into the Uihlein family. My dad worked for Schlitz until it closed in 1981.

Herm Stippich
Grafton



AUTUMN REMEMBERED

I know, as a rule, you don't publish poetry, but maybe you could use this as filler on a page.

*newly tasseled corn
rustles — in wind that veils a
vestige of autumn*

Tom Dunne
Fort Atkinson



You asked, our DNR experts answered. Here is a quick roundup of interesting feedback sent to us on Facebook.



Q: I'm enjoying the Fall magazine but have a question concerning "Saddle Up at State Parks." Many state parks require owners of dogs to clean up after them, and some provide doggy bags. What is required of people with horses riding trails in state parks? If cleanup isn't required, why not?

A: The DNR does not regulate horse waste at state parks or indicate cleanup, as with dogs, because the two types of feces are quite different. Horses are herbivores and have a complex digestive system. Their diet of mainly grass leads to waste that dries quickly, ending up like grass on the trail, and has not been shown to spread zoonotic diseases capable of transmission from animals to humans.

On the other hand, dogs are carnivores. Their diet and digestive process create waste that poses more possible dangers to humans, making it much more important to clean up.

Shared use of trails and other areas at state parks means there are times when picking up horse waste makes sense — on paved parking lots, for example — but overall, horse waste does not fall in the same category as dog waste. As with all park use, the more considerate different user groups can be of each other, the more enjoyment all will take from the experience.



RIDERS UP

I wanted to thank the DNR for providing off-road bike trails in our local state parks. I had a great time riding them this summer, and every time I go, I wish there were more. The trails are challenging, provide great exercise and also create access to areas of the park where there are no walking trails. I noticed a steady increase in riders this summer, so I hope you will continue to expand them.

Chris Haroldson
Hudson

Write in by sending letters to DNRmagazine@wisconsin.gov or WNR magazine, PO Box 7921, Madison, WI 53707.

The American marten (Martes americana), a Wisconsin endangered species, finds prey and protection in mature, dense forests with a mixture of conifer and deciduous trees. Working to preserve and maintain habitats for the American marten and other at-risk native species has long been a focus of the DNR's Natural Heritage Conservation program.

**FOR 40 YEARS, THE DNR'S NATURAL
HERITAGE CONSERVATION PROGRAM
HAS WORKED ON BEHALF OF WISCONSIN'S
THREATENED AND ENDANGERED RESOURCES.**

KEEN ON *CONSERVAT*



TION



Trumpeter swans

ANNA MARIE ZORN

A mussel, a snail or an orchid: These might not spring to mind when thinking of plants and wildlife in Wisconsin, but every day they preoccupy the DNR's Natural Heritage Conservation program — the bureau that oversees the protection of the state's at-risk species.

The NHC program, celebrating 40 years of service this year, manages state natural areas and finds and protects endangered resources across Wisconsin. Or, as NHC bureau director Drew Feldkirchner summed it up, "We do whatever we can to save all the parts."

By "all the parts," Feldkirchner means rare plants and wildlife species that aren't hunted, fished or trapped, plus many of Wisconsin's special places. All fall under the purview of the program.

It's a big job. With nearly 700 state natural areas over 16 different eco-

logical landscapes encompassing 400,000 acres, not to mention other areas where vulnerable species might exist, the program quite literally has a lot of ground to cover. The work takes dedication and time, but it's important for Wisconsin's ecology and economy.

"Look at our pollinators," said Armund Bartz, an NHC ecologist who specializes in the state's Driftless Region. "They're super-critical for agriculture like the cranberry marshes and blueberry farms. Those crops depend on pollinators."

With pollinators declining worldwide, NHC knows the responsibility for protecting their Wisconsin habitats will only become more critical in the coming years.

PARTNERSHIPS PAVE THE WAY

This also means more challenges as the bureau confronts invasive species and climate change while drumming up funding for work that can sometimes be overshadowed by other species, Feldkirchner said. "Work to conserve nongame species is difficult

to fund, so state programs like ours rely heavily on grants and donations."

While a snail might be less flashy than a black bear, nongame species are important to the ecosystem. Funding NHC helps game species, too.

Knowing this, the program believes the trick to staying afloat is cooperation. By partnering with other agencies, universities, nonprofits and many others to get the work done, NHC staff have secured a stable, if scrappy, existence.

"We find as many win-wins as we can," Bartz said. "And the good news is we always find a way."

That determined commitment has led to some successes that make the team particularly proud.

Take, for example, trumpeter swans. After being locally extirpated for decades, trumpeter swans were reintroduced in Wisconsin in 1989 with help from the department. By 2009, they were removed from the state endangered species list.

MILESTONES FOR NATURAL HERITAGE CONSERVATION

1970

Wisconsin DNR creates Endangered Species Committee to address conservation needs of the state's most vulnerable animal and plant species.

1972

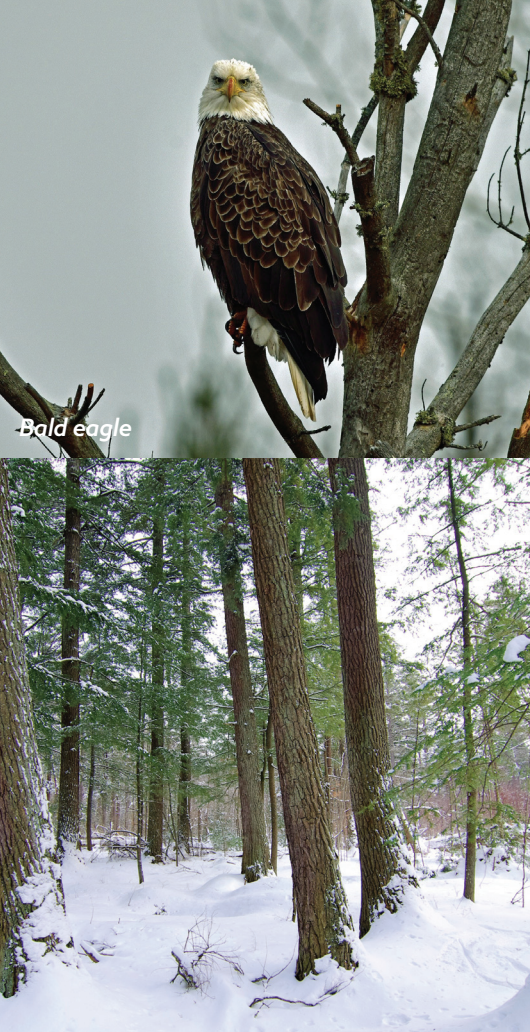
Wisconsin passes State Endangered Species Act.

1973

Congress passes Federal Endangered Species Act.

1978

Wisconsin creates Office of Endangered and Nongame Species.



ROBERT HILBERT

THOMAS MEYER

Germain Hemlocks State Natural Area in Oneida is named for Clifford E. Germain, the first ecologist hired for the Scientific Areas program (now State Natural Areas program) in 1966. Germain died on Sept. 26 at age 99.

Or consider the Karner blue butterfly, a federally endangered species that's thriving locally in the state.

"Wisconsin has most of the global population of Karner blue butterflies," Feldkirchner said. "We have a big responsibility for that species."

HABITAT IS KEY

Although conservation of rare and threatened species comprises much of the bureau's work, habitat management of state natural areas is a big

part of what NHC does, and they've been doing it for a long time.

"Our system of state natural areas is the oldest in the country," Bartz said.

Without NHC stepping in to manage these important habitats, Wisconsin could have lost some of its more inconspicuous yet critical native plants or animals. Habitat management is key to many conservation efforts.

The team also collaborates with industries like energy and timber to find ways to conserve species, Feldkirchner noted. The program provides data, tools and guidance used for thousands of projects each year.

In certain cases, NHC has stepped in to get plants and animals out of harm's way. In 2012, for instance, the bureau relocated an entire population of rare freshwater mussels so a bridge could be built across the Wisconsin River. Half of Wisconsin's mussel species are at risk, partly due to habitat loss and pollution.

FOR FUTURE GENERATIONS

As NHC reaches its 40th anniversary, celebrating this winter looks like any other year: documenting the year's findings, working with partners, conducting prescribed fires on bluffs surrounded by snowy ground and eliminating woody growth that might choke out native plants next spring.

Threats like invasive species and climate change mean the workload sometimes increases faster than they can keep up, but dedicated staff continue to protect Wisconsin's natural habitats and conserve the biodiversity of the state for future generations.

"It's what our bureau's name is," Bartz said. "It's all about our heritage."

Anna Marie Zorn has background as a science writer and is communications manager for the National Wildlife Federation's Great Lakes Regional Center.

HOW YOU CAN HELP

Private donations have helped restore trumpeter swans, ospreys and bald eagles in Wisconsin and have protected and managed the nation's largest system of nature preserves, our state natural areas.

Your gift will help safeguard the state's natural treasures and fuel Wisconsin's next conservation success. There are several ways to give:

- Donate to Wisconsin's Endangered Resources Fund on your income tax form.
- Buy an endangered resources specialty license plate.
- Make an online donation.

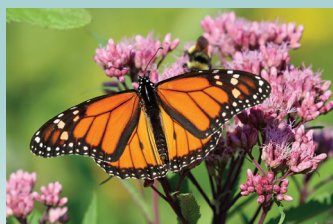
For more about the work of the DNR's Natural Heritage Conser-



vation program, including how you can help, scan the QR code or check dnr.wi.gov/tiny/1266.

CHEERS FOR VOLUNTEERS

From the Bumble Bee Brigade to Karner blue butterfly monitoring to the Wisconsin Frog and Toad Survey, volunteers play a vital role in collecting data for numerous projects and protecting the state's threatened and endangered resources. If you are one of the thousands who help, thank you for your dedication. If you'd like to learn how to contribute, check the Wisconsin Citizen-based Monitoring Network website, wiatri.net/cbm.



RYAN BRADY

1982

DNR's Bureau of Endangered Resources begins work.

1983

Wisconsin creates tax checkoff option for Endangered Resources Fund donations.

1985

State Legislature creates Natural Heritage Inventory to assess and track Wisconsin's native plants and animals, natural communities and geological features.

FIELD NOTES

DNR contract biologist Daryl Christensen searches for the black-necked stilt (inset) at Horicon National Wildlife Refuge.

SUMNER MATTESON



ARLENE KOZIOŁ

When it comes to protecting Wisconsin's most vulnerable animal and plant species, DNR conservation biologists, partners and volunteers are working to protect and enhance these vital resources. Here are just a few highlights of this important and wide-ranging work.

BLACK-NECKED STILT

Who is this elegant black-and-white shorebird, 13 to 17 inches tall, with the long, pinkish legs? The black-necked stilt (*Himantopus mexicanus*) was considered an "accidental" species in Wisconsin until the state's first confirmed breeding record occurred at the Horicon National Wildlife Refuge in 1999.

In 2019, the DNR and U.S. Fish and Wildlife Service began monitoring black-necked stilt nesting pairs in Horicon. Biologists documented 43 pairs this year. Now, Horicon may contain the largest concentration of nesting black-necked stilts in the Midwest and perhaps one of the largest of any site east of the Mississippi River.

More efforts are in the works to better inform biologists about black-necked stilts at Horicon, including a possible 2023 study with UW-Madison focusing on habitat conditions and nesting success. We hope these

magnificent birds will continue to return to Wisconsin from their far-southern coastal wintering areas and become a permanent fixture of our avian diversity.

— Sumner Matteson,
DNR avian ecologist



RYAN BRADY

CONNECTICUT WARBLER

Connecticut warblers once numbered in the thousands in Wisconsin. Today, recent DNR surveys indicate only a handful of breeding pairs remain. In response, the DNR's Natural Heritage Conservation program is taking action on several fronts.

Work is underway with private and public partners like the Bayfield County Forest to protect and enhance breeding habitat in mature jack pine stands. The DNR also has increased its investment in the Neotropical Flyways Project. This project works to identify and conserve critical migratory bird habitats in Central and South American wintering areas, where deforestation may be driving declines.

How can you help Connecticut warblers (*Oporornis agilis*) and other migratory birds in your area?

- Landscape with native plants.
- Keep cats indoors.
- Reduce window collisions.
- Turn lights out at night.
- Drink shade-grown coffee.
- Donate to the Bird Protection Fund through the Natural Resources Foundation of Wisconsin, wisconservation.org.

— Ryan Brady,
DNR conservation biologist

1994

Wisconsin introduces gray wolf endangered resources license plate.

1997



WISCONSIN DNR

State Legislature creates Aquatic and Terrestrial Resources Inventory.

2004

Wisconsin Citizen-based Monitoring Network is established.

2005

Initial Wisconsin Wildlife Action Plan is approved to focus on conservation of rare and declining species.

2006

DNR creates Landowner Incentive Program to help private landowners create and manage habitat for vulnerable species.

RAINBOW MUSSEL

Rainbow mussels, a rare species observed in only two Wisconsin streams since 2009, have been confirmed in one new southeast Wisconsin stream. Researchers from Carroll University were sampling a site on the White River, recording several mussels of various shapes and sizes, when students uncovered the buried treasure.

The discovery of the rainbow mussel (*Villosa iris*) is part of a larger effort by the Wisconsin DNR, Illinois Natural History Survey and other federal, state and local partners to examine mussel populations and identify the most significant remaining mussel assemblages in the Fox River watershed. Genetic sampling and propagation activities also are underway to aid in rainbow mussel conservation.

— Jesse Weininger,
DNR conservation biologist

WILD RICE

The Spur Lake Working Group of DNR and partner stakeholders is continuing efforts to address climate change and hydrology impacts and bring back wild rice (*Zizania palustris*), also known as manoomin, to Spur Lake in Oneida County. Spur Lake, a Climate Adaptation Demonstration Site of the Northern Institute of Applied Climate Science, historically hosted a robust wild rice bed of biological and cultural significance, but that declined in the early 2000s.

This past summer, the Spur Lake Working Group took on a pilot restoration experiment, removing perennial vegetation from identified plots and seeding wild rice. The plots will be monitored for the next three to five years, with results informing future management efforts.

— Carly Lapin,
DNR conservation biologist

WOOD TURTLE

The DNR and West Virginia University are teaming up for turtles with a USFWS Great Lakes Fish and Wildlife Restoration Act grant. In 2021 and 2022, standardized population monitoring of the wood turtle (*Glyptemys insculpta*) was completed at 41 sites on tribal, state and federal lands in Wisconsin's Great Lakes Basin, with environmental data also collected. Ongoing work with this crucial data will help predict species occurrence and guide future habitat restoration actions.

— Andrew Badje and Carly Lapin,
DNR conservation biologists

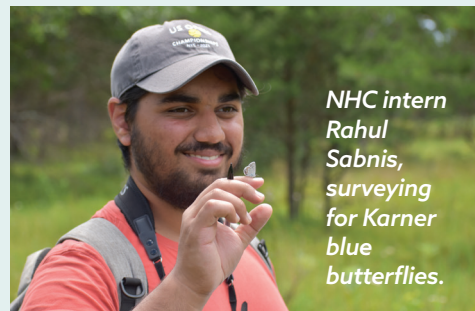


EASTERN PRAIRIE FRINGED ORCHID

The federally threatened eastern prairie fringed orchid (*Platanthera leucophaea*) reappeared in a state natural area near Oshkosh in 2022 following DNR and volunteer management at the site. It's another shining example of what can be accomplished when DNR staff and volunteers unite.

After orchid numbers dwindled at the site, DNR and volunteers began habitat restoration, hoping the orchids would return. When volunteers discovered a single plant, a local conservation partner was able to cross-pollinate it with a nearby population in an effort to improve genetic diversity and long-term viability of the species.

— Kevin Doyle,
DNR conservation biologist



MEET THE INTERNS

The DNR had numerous interns in 2022 with the goal of introducing new people, especially those early in their careers, into the department by having them assist with high-priority work. Here are three of those interns.

Rahul Sabnis

- NHC biotic inventory intern; sophomore at Lawrence University, pursuing a major in biology.

- Internship highlight: Sabnis discovered the first confirmed sighting of the federally endangered Karner blue butterfly in a new area.

Soumika Gaddameedi

- Wildlife Management communications intern; senior at UW-Madison double majoring in zoology and environmental studies with a certificate in sustainability.

- Internship highlight: Attending a field day at Sandhill Wildlife Area monitoring Karner blue butterflies.

Edgar Flores Gomez

- NHC bat team intern; first-generation college student and a recent graduate of UW-Stevens Point with a degree in biology.

- Internship highlight: Conducting acoustic bat surveys and bat emergence counts and camping for the first time.



Gaddameedi



Flores Gomez

2010

Wisconsin introduces badger endangered resources license plate.

2013

DNR's Bureau of Endangered Resources is renamed Natural Heritage Conservation.

2015

Wisconsin introduces bald eagle endangered resources license plate.



2021

DNR completes State Natural Area Strategic Plan.

2022

DNR completes Natural Heritage Conservation Strategic Plan.



Find snowy solitude with a winter camping adventure.

Winter WONDERFUL

OFF-SEASON
CAMPING CAN MAKE

MORE THAN 20 STATE PARKS AND FORESTS OFFER YEAR-ROUND CAMPING, INCLUDING DURING THE WINTER MONTHS. FIND YOUR WINTER ADVENTURE IN WISCONSIN — WE'LL HELP YOU WITH HOW TO PACK, BOOK AND COOK SO YOUR WINTER CAMP IS A WONDERLAND.

ANDI SEDLACEK

WINTER CAMPING BASICS

You may need a little more gear for winter camping than you do in warmer months, but that doesn't mean you shouldn't try to go.

First, consider using a tent that's a little bit bigger than you need. You'll want extra space to store your gear, like your backpack or cooking supplies, inside the tent, so you don't have to leave them out in the snow to freeze and possibly get damaged.

In the summer, it's convenient to leave your shoes or sandals outside your tent. But in the winter, bring them inside, too, so they don't get wet overnight and can stay warm with you all night long.

Cold temperatures drain batteries, so keep your smartphone, GPS, headlamps and any extra batteries in your sleeping bag or in your pocket to help keep them warm and their battery lives up. Bring a portable charger if you can.

With fewer people around in winter, Peninsula State Park offers campers plenty of space for a quiet snowshoe outing or other activity.



KATHY HEALEY



LEARN MORE



Scan the QR code to learn more about Wisconsin's state parks or go to dnr.wi.gov/topic/parks.

When it's time to hit the hay, use a sleeping pad or two. Don't sleep right on the frozen ground. Channel your inner "Princess and the Pea," and layer up those sleeping pads if you can. Better yet, invest in a cot or sleeping platform to keep you completely off the ground.

And before you snuggle up for bed, move around a little bit with a few jumping jacks or some running in place to get your heart rate up and your blood pumping. It will help generate extra warmth as you drift off to sleep.

WHAT TO WEAR

What you wear when camping in cold weather is important. Layer up with three layers: Start with a base layer of light- or midweight long underwear made of moisture-wicking polyester or wool; add a middle layer

of insulation like a puffy down jacket and fleece pants to retain body heat; and top it off with a waterproof yet breathable outer layer to keep your other layers dry.

Keep your head warm with a wool or synthetic hat that covers your ears. No need to get fancy — a classic beanie is all you may need.

Gloves or mittens? Whichever you choose, consider a pair that's waterproof, and always bring a backup set.

Cotton socks may be your go-to, but that's not the best fabric choice for winter recreation. Choose wool or synthetic socks and, again, always bring extras.

Once you're dressed, pay attention to your body's cold limits. Some people are more sensitive to cold weather than others, so take care of yourself and throw an extra log on

the campfire, or add that extra pair of socks if you're feeling a chill.

If your fingers or toes get really cold, bust out the hand warmers and stick them in your gloves or mittens and boots.

WHERE TO GO

Wisconsin's state park properties have great options for your winter camping adventure, with at least some campgrounds open at many properties statewide.

For a little snowmobiling to go with your camping experience, head to Kettle Moraine State Forest-Southern Unit, which has about 60 miles of snowmobile trails. It's also ideal for snowshoeing, with several miles of trails not groomed for skiing.

The Ottawa Lake campground is open year-round at the Southern Unit. Backpack camping also is



Kohler-Andrae State Park, on an icy-looking Lake Michigan shore.



WISCONSIN DNR

Sledding and other activities enhance the winter camping experience at Wisconsin's state parks.

available year-round along the Ice Age National Scenic Trail at three of the trail's designated shelter sites.

Kettle Moraine State Forest-Northern Unit is also a nice pick for snowshoeing, with several trails open for the activity. Mauthe Lake campground is open in winter, and five backpack shelters are available year-round for rustic camping along the Ice Age National Scenic Trail.

If you're camping with the family or a large group, Kohler-Andrae State Park plows six family campsites (all with electric hook-ups) and two group sites for winter camping.

See Kohler-Andrae's frozen sights by taking your group cross-country skiing on the one-way loop that travels through the Woodland Dunes Nature Trail, and marvel at the snow-covered dunes that slope gently next to Lake Michigan. For

a slower-paced trek, strap on your snowshoes or lace up your hiking boots and hit the 1-mile snowshoe trail.

Blue Mound State Park is great if you're looking for amazing winter scenery. Climb the observation towers for a great view of the Wisconsin River Valley, Baraboo Range, Driftless Area and city of Madison. You'll have to walk to your campsite from the parking lot in winter, so pack as lightly as possible.

Seeking solitude? Door County's Peninsula State Park beckons. This park's 468 campsites quickly fill in the summer, but it may be easier to snag a winter campsite, with 32 options in the Tension Bay campground. Be active outside in the cooler temps by snowshoeing, cross-country skiing and sledding, and entertain your brain with wildlife viewing.

Pattison State Park in Superior is an excellent pick for cross-country skiing, with 4 miles of trails throughout three linked loops that begin at the campground. You also can snowshoe there on a number of informal trails.

When visiting Pattison, don't miss out on Big Manitou Falls, Wisconsin's tallest waterfall at 165 feet. Little Manitou Falls is no slouch either at 30 feet tall.

When cooler temperatures come in early winter, Big Manitou turns into what looks like a giant root beer float, a must-see. And when winter really sets in and temperatures stay below freezing, both waterfalls freeze with ice from top to bottom, a beautiful sight not to be missed.

When recreating in winter at any of Wisconsin's public lands, remember proper trail etiquette. That means no hiking, snowshoeing or walking your pets on groomed trails or in set tracks.

HOW TO BOOK

All campsites in Wisconsin's state parks are reservable, but not all of them are available during the winter. Reservations can be made at wisconsin.goingtocamp.com or by calling 1-888-947-2757.

When searching the website for winter camping options, sites available during the time period you select will appear green, while sites not open will appear black.

If you're a last-minute planner or inspired by a fresh snowfall to enjoy a campout, you can reserve a campsite on the same day you want to arrive at a park, either by making your reservation online before you go or via phone call when you're at the park.

One more thing to keep in mind: Not all campsites or campground roads are plowed in winter. How will you know what to expect? Look for a message while booking your campsite or contact the property for information on current conditions.

Wherever you go this winter, plan ahead, pack some extras and embrace the winter peace. ❄️

Andi Sedlacek is a public information officer in the DNR's Office of Communications.

Cold-weather Cooking



AROUND THE CAMPFIRE



WINTER CAMPING CALLS FOR MEALS THAT FILL YOU UP AND KEEP YOU WARM. MAKE IT SIMPLE AND DELICIOUS WITH THIS HEARTY STEW AND COZY CINNAMON BREAD.

CAMPFIRE STEW

- 2 pounds boneless beef chuck, cut into bite-size pieces
- Salt and pepper to taste
- 1 large yellow onion, coarsely chopped
- 4 cloves of garlic, minced
- 1 (6 ounce) can tomato paste
- 1 (32 ounce) container of beef broth
- 3 large potatoes, peeled and cut into 2-inch pieces
- 5 medium carrots, peeled and cut into 1-inch pieces
- 2 celery stalks, cut into 1-inch pieces
- 1 teaspoon dried rosemary
- 1 teaspoon dried parsley
- 1 teaspoon dried thyme

1. In a Dutch oven set over hot campfire coals, add beef, season with salt and pepper and cook until pieces are seared on all sides.
2. Move Dutch oven to an area of coals creating a bit less heat, if possible. Add onions and garlic and cook until softened.
3. Add remaining ingredients and stir to combine.
4. Bring to a simmer.
5. Cover and continue to cook, stirring occasionally, until the meat and vegetables are tender, 1-2 hours, depending on the heat of your coals. Be sure not to overcook the meat, as that will make it tough.
6. Remove the lid and continue to simmer until the stew reaches your desired consistency.

Pro tip: Roll up to the campsite with your stew ingredients prepped in a bag or storage container so you can toss them in whenever you're ready to cook. Bag the onions and garlic together and the potatoes, carrots, celery and seasonings together, with the meat ready in a separate container.

CINNAMON PULL-APART BREAD

- ½ cup white sugar
- 1 teaspoon cinnamon
- 1 can of biscuits
- 4 tablespoons cold butter, cut into small cubes
- ¾ cup brown sugar

1. Spray a round 9-inch aluminum baking pan with nonstick cooking spray.
2. Combine white sugar and cinnamon in a wide bowl.
3. Tear each biscuit into four pieces, roll each one in the sugar-cinnamon mixture and put them in the baking pan in one layer.
4. Distribute the butter cubes evenly over the biscuits. Sprinkle the brown sugar on top and cover with foil.
5. Cook on a grate over hot campfire coals for 20-30 minutes or until biscuits are cooked through. Rotate the pan frequently for even baking.

Pro tip: This is a sticky one! Be sure you have plenty of napkins or wet wipes on hand to clean up messy hands.

8 GREAT STATE PARKS FOR SEASONAL FUN

WINTER WORTHY

ANDREA ZANI

Wisconsin's beautiful state parks certainly don't shut down in winter, and neither should you. Here are eight state parks perfect for exploring this season. Bundle up, brave the elements and find your winter adventure.



CHRISTOPHER TALL

Trek the snow-covered trails at Copper Falls State Park.



DANIEL ROBINSON

High Cliff State Park's Red Bird Trail features a statue of Chief Red Bird, Ho-Chunk leader of the early 1800s.

HIGH CLIFF STATE PARK

When the bustle of warmer months subsides, this park on Lake Winnebago becomes a quieter respite, showcasing its unique geology and history. The park draws its name from the Niagara Escarpment's limestone cliffs, formed millions of years ago and later used for burial mounds by early Native Americans. The interpretive Indian Mound Trail sheds light on the park's history. The Red Bird Trail travels atop the Niagara Escarpment, looking at the park's historic limestone quarries plus panoramic views of Lake Winnebago.



WILLOW RIVER STATE PARK

There's just something about a frozen waterfall — it's almost like stopping time itself — and the formations created in winter at Willow River are second to none. Several of the park's trails take visitors to scenic views of Willow Falls, including the Pioneer Trail, featuring a spectacular overlook.

COPPER FALLS STATE PARK

Snow fun is the name of the game at Copper Falls in winter, where annual snowfall totals average nearly 100 inches. Several park trails are groomed for cross-coun-

try skiing, multi-use trails are great for winter hiking and snowshoeing, and visitors can find ice-fishing opportunities on Loon Lake.

MIRROR LAKE STATE PARK

A designated state natural area within the park impresses visitors in every season, but maybe most of all

in winter. Fern Dell Gorge State Natural Area's short and narrow gorge fills with fantastic ice formations once water seeping from the sandstone walls freezes. Pulpit Rock Trail, accessed at the SNA parking lot, features lovely views of the gorge and Mirror Lake narrows.

Frozen falls of Willow River.



JOSHUA KOWALKE

Fern Dell Gorge at Mirror Lake State Park.



PHILIP SCHWARZ

Open water nearby on the Mississippi and Wisconsin rivers makes Wyalusing State Park a great place to spot bald eagles in winter.



DANIEL ROBINSON

Climb to the top of the Lapham Peak observation tower in winter for panoramic views of the Kettle Moraine State Forest landscape through leafless trees.

LEARN MORE



A few things to know about Wisconsin state parks in winter:

- Once winter grooming begins, ski trail conditions can be found at dnr.wi.gov/trailconditions.
- Candlelight ski, snowshoe and hiking events are among the most popular park activities in winter, often hosted by

Friends Groups as fun outings and fundraisers. Nature walks, kids' activities and more also happen throughout winter. The DNR's events calendar is your up-to-date source for winter events, dnr.wi.gov/events.

- Cross-country skiing at most state parks, forests, trails and recreation areas requires a state trail pass for ages 16 and older, \$25 for an annual pass or \$5 daily.
- Snowmobile trail passes (different from the state trail pass) are required and are available through the DNR's licensing system, dnr.wi.gov/permits.
- For information on Wisconsin's state park properties, including buying trail passes and finding places to explore this winter, scan the QR code or check dnr.wi.gov/topic/parks.

NORTHERN HIGHLAND-AMERICAN LEGION STATE FOREST

Three S's sum up winter recreation in the NHAL: skiing, snowshoeing and snowmobiling. Dozens of miles of trails are tracked for cross-country skiing, with plenty of other areas open for hiking and snowshoeing. For snowmobilers, the NHAL features nearly 400 miles of trails maintained by local snowmobile clubs and connecting to area trails.

BLUE MOUND STATE PARK

With numerous opportunities for winter recreation, Blue Mound State Park is a popular "off-season" destination. More than 10 miles of trails are groomed for skiing while snowshoeing and hiking are allowed anywhere away from ski trails. There's a sledding hill near the pool parking lot for even more fun.

KETTLE MORaine STATE FOREST

Snow-making equipment, a variety of terrain and night lights on some trails make the Kettle Moraine State Forest-Lapham Peak Unit the perfect destination for cross-country skiers. Lapham Peak also features a 45-foot observation tower built on Waukesha County's highest point (1,233 feet). The Northern and Southern units of the Kettle Moraine offer skiing, hiking, snowshoeing and ice fishing, plus a combined total of nearly 150 miles of snowmobiling trails.

WYALUSING STATE PARK

Bald eagles congregate around open water in winter, and Wyalusing's location at the confluence of the Wisconsin and Mississippi rivers makes it an excellent spot to see these majestic birds. Bluffs rise 500 feet over the Mighty Mississippi, with several trails providing stunning views of both rivers and opportunities for eagle-watching. 🦅

Andrea Zani is managing editor of Wisconsin Natural Resources magazine.

CONQUER WINTER

WITH THESE HALF-HOUR HIKES

ANDREA ZANI

Let's face it, sometimes winter is just too cold to be outside for long, but that's no reason to shun the outdoors altogether. Even a quick adventure in the icy air can revive spirits and chase those winter blues. Try a short half-hour hike at one of Wisconsin's beautiful state parks to lift your mood and beat cabin fever.

■ BIG MANITOU FALLS OVERLOOKS

Pattison State Park

This short trail offers several views of the falls in winter, traveling under Highway 35 via a pedestrian tunnel from the park's main picnic area.

■ BLACK WALNUT NATURE TRAIL

Perrot State Park

This half-mile self-guided interpretive loop has 20 stops on relatively flat terrain. Find out how Native Americans lived in this area, with guides available at the trailhead.

■ BOARDWALKS AND CORDWALKS

Kohler-Andrae State Park

Short trails are the name of the game at Kohler-Andrae, including: Black River Marsh Boardwalk, a quarter-mile accessible trail; Creeping Juniper Nature Trail, a half-mile cordwalk; Fishing Pond Trail, about a quarter-mile long with benches for resting; Marsh Trail, a half-mile forested trail; and Woodland Dunes Nature Trail, a 1-mile trail loop from the picnic area.



Devil's Lake State Park

■ EAST TRAIL

Lakeshore State Park

The east portion of the trail through Milwaukee's urban state park is plowed in winter, with great views of the city skyline.

■ GROTTOES AND TUMBLED ROCKS

Devil's Lake State Park

While some Devil's Lake terrain has an expert-only feel, there are plenty of beginner options, even in winter. Try the Grottos Trail, about three-quarters of a mile along the south face of the East Bluff, or the Tumbled Rocks Trail, a 1-mile path following the lakeshore.

■ MINNEHAHA TRAIL

Peninsula State Park

This easy trail along the water connects the South Nicolet Bay campground and Eagle Trail. It's a 1.4-mile out-and-back route, with parking available at Nicolet Beach and trail access near campsite 844.

■ NATURE TRAILS

Kettle Moraine State Forest-Northern Unit

Three nature trails make it easy to get outdoors in winter at the

Kettle Moraine: the Moraine Natural Trail, under a mile starting at the Ice Age Visitor Center; the 1-mile Summit Trail; and the 2-mile Tamarack Trail, looping around Mauthe Lake.

■ ORANGE TRAIL

Big Foot Beach State Park

For a quick outing, try the Orange Trail at Big Foot Beach, under a mile on flat terrain, found at the park's east end.

■ PRAIRIE LOOP TRAIL

Yellowstone Lake State Park

Under a mile, this loop travels on rolling terrain through beautiful woodlands and prairies.

■ TOM ROBERTS NATURE TRAIL

Northern Highland-American Legion State Forest

This accessible half-mile nature trail offers an easy hike on a paved path winding through a mixed forest, with an overlook providing beautiful views of Muskellunge Lake. 🐾

Andrea Zani is managing editor of Wisconsin Natural Resources magazine.

STAY IN SHAPE FOR THE OUTDOORS *WITH INSIDE EXERCISE*

STORY BY DANA FULTON PORTER
AND PHOTOS BY NICOLE HANSEN

From snowshoeing to ice climbing, there are plenty of winter outdoor activities to keep you moving. This year's Farmer's Almanac suggests it may be a bit more frigid than usual. So if you'd rather stay warm inside this winter, we understand.

With the help of Peter Kraus, a personal trainer in Mid-

leton, we've got a great bodyweight workout to help you stay healthy this winter. You'll be ready to tackle the great outdoors when the weather finally thaws. 🌱

Dana Fulton Porter is a publications supervisor in the DNR's Office of Communications.



Bodyweight tricep extension

10-15x
each arm

Start on your side with your knees bent and stacked. Hug yourself across the lower ribs with the arm closest to the ground and place the hand of your upper arm on the ground in front of your chest, with your fingers facing your face. Push into the hand on the ground and lift your upper torso. Slowly lower yourself to the starting position.

Push-up

10-15x

Start in a high plank: toes on the ground tucked under your feet, back straight, head neutral, with hands directly below your shoulders.

• **Modify with knees down for an easier movement.**

Shift your weight slightly forward and slowly lower to the ground, keeping your body in a strong, tight line.

Finish at the bottom with hands underneath your chest and elbows only slightly away from your body.

Push back up to the starting position.

• **Avoid "elbow flair," which is the cause of most shoulder, elbow and wrist injuries.**





Single leg glute bridge

15-20x each leg

Start laying on your back with one leg below your butt and the other lifted straight into the air.

Tighten your core and press through the heel of the foot on the ground, lifting your hips into the air.

Slowly lower yourself to the starting position.

• **This is a great one to help you prep for hilly summer hikes!**

Sumo squat

15-20x

Start standing upright with feet wider than shoulder width and your toes slightly turned out.

Slowly lower into a squat position — avoid letting your knees cave in or turning too far over your pinky toe.

Press down through your heels to slowly drive back up into the starting position.

• **This is one of Kraus' favorite exercises.**



Curtsy lunge

10x each leg

Start with feet neutral in a standing position.

Step one foot back and slightly outside the standing leg, then slowly descend into a low lunge.

Keep your back knee almost directly underneath your butt and your front knee at about 90 degrees.

Press evenly off both feet to drive back to starting position.

• **If you have knee issues, keep your feet closer together.**

Side plank

1x each side

Start on your side with legs out straight, feet stacked and your elbow directly underneath your shoulder on the ground.

Press your elbow into the ground, tuck your pelvis and lift your body off the ground so your weight is supported only by your elbow and the side of your bottom foot.

• **Modify by leaving your bottom knee on the ground at a 90-degree angle with your foot behind you for an easier movement.**

In this tightened position, lift your top leg and arm into the air.

Hold for 30 seconds and slowly lower to the start position, then complete on the other side.



Newport State Park in Door County
offers an awe-inspiring night sky experience.

JUST LOOK UP

DARK SKY
DESIGNATION
MAKES
NEWPORT
STATE PARK
PERFECT FOR
ASTROPHOTOGRAPHY,
ESPECIALLY
IN WINTER

DANA FULTON PORTER

Star-filled nights have inspired the hearts of writers and the hands of artists and have helped steer people around the world. It's almost human nature to look up to the sky for guidance.

Unfortunately, modern technology — namely modern lighting — is blocking out much of that experience. There are few places in the country where one can see not just the stars but the bright glow of other planets and the dazzling colors of the Milky Way.

Wisconsin is home to one of those unique places. Aspiring astronomers, curious minds and those looking for an awe-inspiring experience should all add Newport State Park to their winter bucket lists.



JOURNEY TO THE DARK SKY

As you drive north to Newport State Park on County Highway ZZ in Door County, you'll notice fewer and fewer towns. The sparse population means the number of streetlights decreases and the house lights dim. Light pollution is almost nonexistent. It truly feels different, and the International Dark-Sky Association agrees.

ASTROPHOTOGRAPHY TIPS

★ **Daytrip first** — It's good to visit during the day to scout for the best photography spot. Though a map may show a cleared area, boots-on-the-ground may discover otherwise.

★ **Check moon phase and weather** — A full moon or cloudy skies can disrupt a starry sky photo shoot. The best pictures of the Milky Way are snapped when there is a new moon with minimal cloud cover.

★ **Tripod** — Astrophotography requires a long shutter speed, often 20 to 30 seconds. Bring a tripod to ensure your camera is stable the entire time.

★ **High ISO** — Along with long exposure, astrophotography requires a high ISO, or high sensitivity to light. Most cameras will need an ISO setting of 1600 or higher.

★ **Bring a headlamp** — White light is strongly discouraged at Newport State Park. The red light on a headlamp will help protect others' night vision as well as your own.

★ **Avoid shutter shake** — Even steady hands can cause a slight shake in the camera when they press the shutter. Avoid this by setting a timer to take the picture or using an external option like a remote.

★ **Be patient** — Since Newport State Park is a public area, others may be out enjoying the sky on the trails. Give yourself plenty of time and space to plan around others.

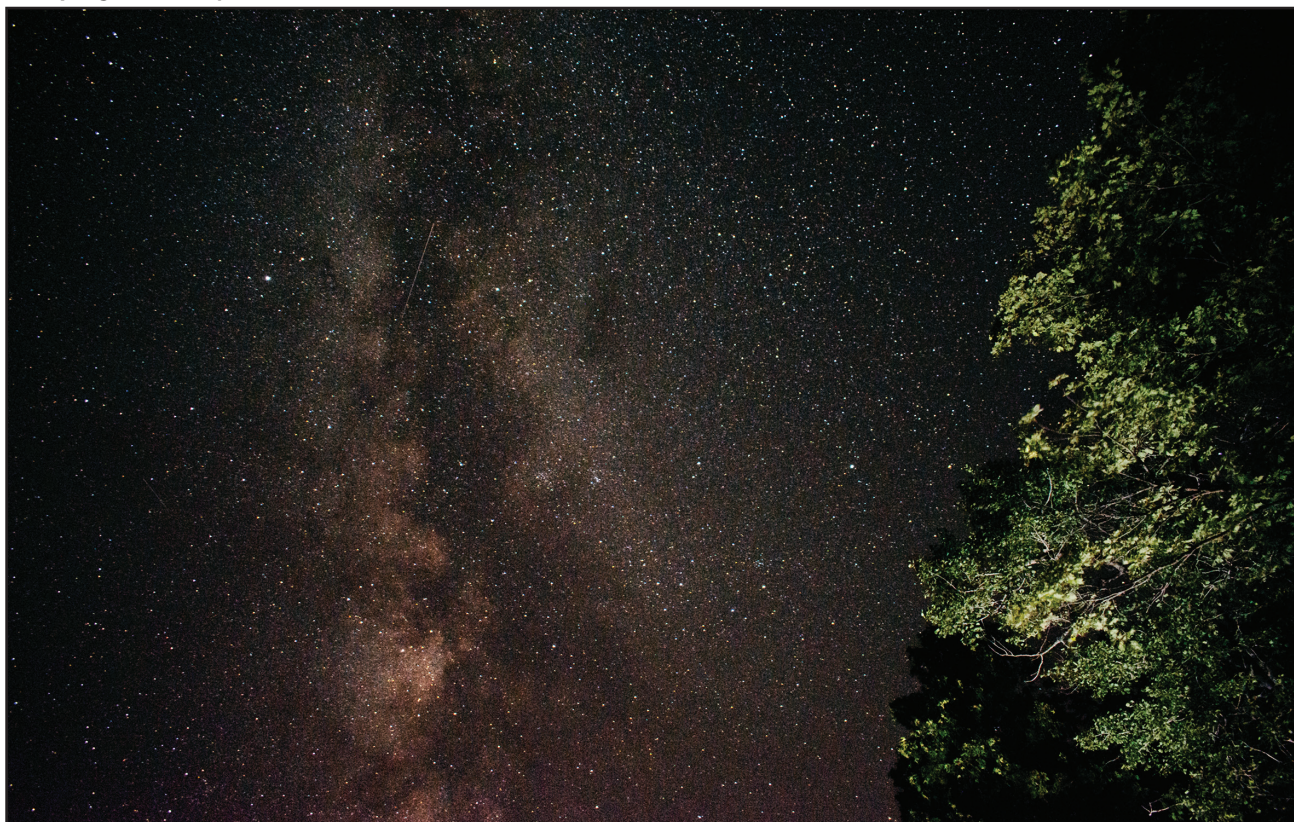
★ **Be creative** — Don't be afraid to change camera settings and angles. A minor adjustment can turn a regular photo into something extraordinary.



DENNY MOUTRAY

Recognized for its nocturnal environment by the International Dark-Sky Association, Newport makes the perfect place for astrophotography any time of year.

Starry night at Newport.



DANA FULTON PORTER

LEARN MORE

Scan the QR code for information about Newport State Park, including its International Dark Sky Place designation, or check dnr.wi.gov/topic/parks/newport.



The IDA focuses on preserving the beauty of a clear night sky by designating International Dark Sky Places that possess "an exceptional or distinguished quality of starry nights and a nocturnal environment."

Its designated areas include pristine natural gems such as Arches National Park, Death Valley National Park, Waterton-Glacier International Peace Park and Wisconsin's own Newport State Park.

"It took our team over five years to get our designation, as it is a rigorous application process," said Beth Bartoli, Newport State Park naturalist and the driving force behind Newport earning the designation. "I was beginning to lose hope that we would ever get it."

The designation brought a wave of relief for Bartoli and her team. With the International Dark Sky Place certification, Newport gets more recognition and resources to preserve the prime nocturnal setting.

"Over 80% of people cannot see the Milky Way from where they live," Bartoli

said. "The 'wow factor' is one of the many reasons Newport's dark skies are worth protecting."

WORTH THE COLD

Winter is a great time to visit Newport, especially for astrophotography. "Newport is a tranquil, magical place in the winter," Bartoli said.

During the day, visitors can enjoy cross-country skiing and snowshoeing through the woods. Once the sun sets, don't be surprised to find photographers along the beach and trails. Those frigid nights make for perfect astrophotography conditions.

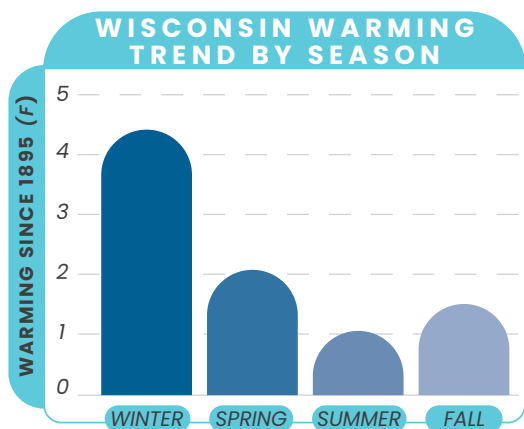
The cold winter atmosphere doesn't hold as much moisture as warm air. The increase in moisture leads to hazier skies in the summer; the drier air gives winter nights a crystal-clear view of the universe.

Make sure to bundle up and bring a warm drink. The crisp nights are worth it. 🍷

Dana Fulton Porter is a publications supervisor in the DNR's Office of Communications.

ON THIN ICE

LAKE DATA PAINTS CLEAR PICTURE OF WISCONSIN'S CHANGING WINTER CLIMATE



DANA FULTON PORTER

It's a similar scene on almost every lake in Wisconsin during the winter: a frozen, white landscape spotted with shanties, anglers on buckets and a few lucky tip-ups with flags in the air. The season is prime time for ice fishing, one of Wisconsin's oldest traditions.

While the air may be frozen, there is warmth in the sounds coming from shanty camps, especially in the voices sharing old fish tales. Stories stretch on about how "back in my day," people were on the ice longer, with the season lasting an extra month.

That isn't a fish tale — in fact, it's pretty accurate. The number of ice-on days in Wisconsin is shrinking.

Along with providing winter recreational opportunities, ice cover serves important functions for lake ecosystems.



THAWING THE DATA

While the DNR does not monitor ice conditions or ice thickness, numerous other groups around the state do and have been for more than a century. Records for ice cover on Lake Mendota and Lake Monona in Madison, for example, are some of the oldest in the country, dating back to the 1850s.

The rich data collection helps to paint a clear picture. Due to climate change, the ice fishing season in Wisconsin is about 24 days shorter than it was in the 1970s.

No lake is immune. The National Oceanic and Atmospheric Administration's Great Lakes Environmental Research Laboratory has documented a significant decrease in ice cover on the Great Lakes — almost 22% less than a half-century ago.

This may sound like an issue solely for the frozen months. However, those icy conditions are essential to a healthy summer season.

"In many lakes in Wisconsin, the winter and corresponding frozen period can act as a bit of a reset in the lake," said Madeline Magee, the

DNR's Great Lakes and Mississippi River monitoring coordinator. "This means that loss of ice cover will affect lake ecosystems in both winter and during the traditionally ice-free period."

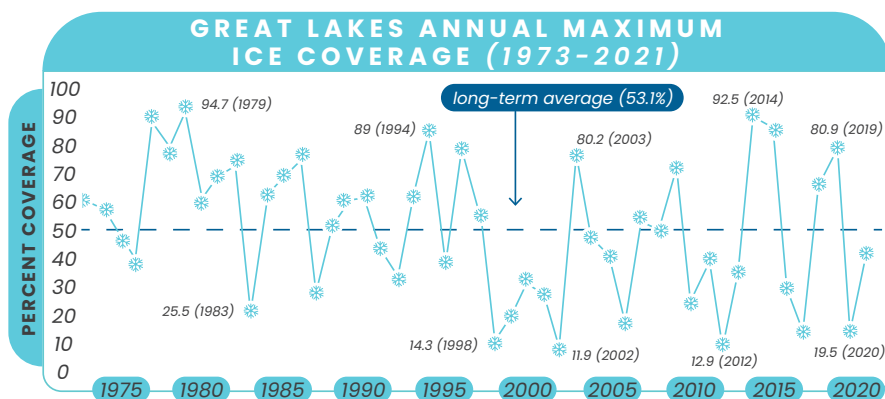
STILL FROZEN

Scientists quickly point out that a warming trend doesn't automatically equal no ice. Winter in Wisconsin is still winter in Wisconsin, for now.

In 2014 and 2019, prolonged periods of well-below-zero temperatures reminded everyone of Old Man Winter's strength. During such cold spells, ice cover is not a concern, at least for a few days. But deep cold weather early in the year has little to no impact on the duration of ice cover once temperatures start to climb again.

Scientists also are concerned about late-season warm-to-cold swings. The sudden variability can be just as harmful as the decline in ice cover.

Changing ice cover patterns from year to year will make it difficult for healthy lakes to continue to thrive, biologically and economically.



HEALTH OF THE LAKES

For the fish

The anglers above and the ecosystem below a lake's surface feel the impacts of fluctuating ice coverage.

"The timing of when a lake thaws in the spring sets up all sorts of conditions for how the lake functions that year," said Alex Latzka, a DNR biologist and member of the inaugural class of the American Fisheries Society's Climate Ambassadors.

Years that bring early ice-off can disrupt the base layer of a lake's food chain. Too-soon warm water can kill the small food necessary for young fish to survive. The consequences can shift the fish population for years due to low survival rates.

The DNR's Bureau of Fisheries Management monitors the health of lakes closely, and the data picks up on negative trends quickly, Latzka noted. Mitigation efforts can then spring into action, from changing regulations to habitat improvements.

For native plants

Ice cover is a defense mechanism against many non-native plants and animals. Invasive southern species can't survive in the harsh environment of an ice-crusted lake.

Without a cold winter, invasive species would be able to take hold in Wisconsin lakes and likely "out-compete native species early in the growing season," Magee said.

For the economy

Out of the water, ice cover impacts ripple into tourism dollars for small shops and local restaurants. A study in Minnesota found that as air temperatures increased, the number of ice fishing tournament cancellations also increased.

Various winter festivals depend on ice-covered lakes, as do other winter activities like snowmobiling. The fewer days with ice covering the lakes, the smaller the impact these activities will have on local economies.

INTO THE FUTURE

Under current warmer climate projections, winter in Wisconsin will look very different by the end of the century.



Warming trends over time could mean a change in the types of fish available for anglers.

"Geneva Lake in southern Wisconsin has had four ice-free years since 1995," Magee said. "Recent studies (show) it may become completely ice-free by the end of the century under warmer climate projections."

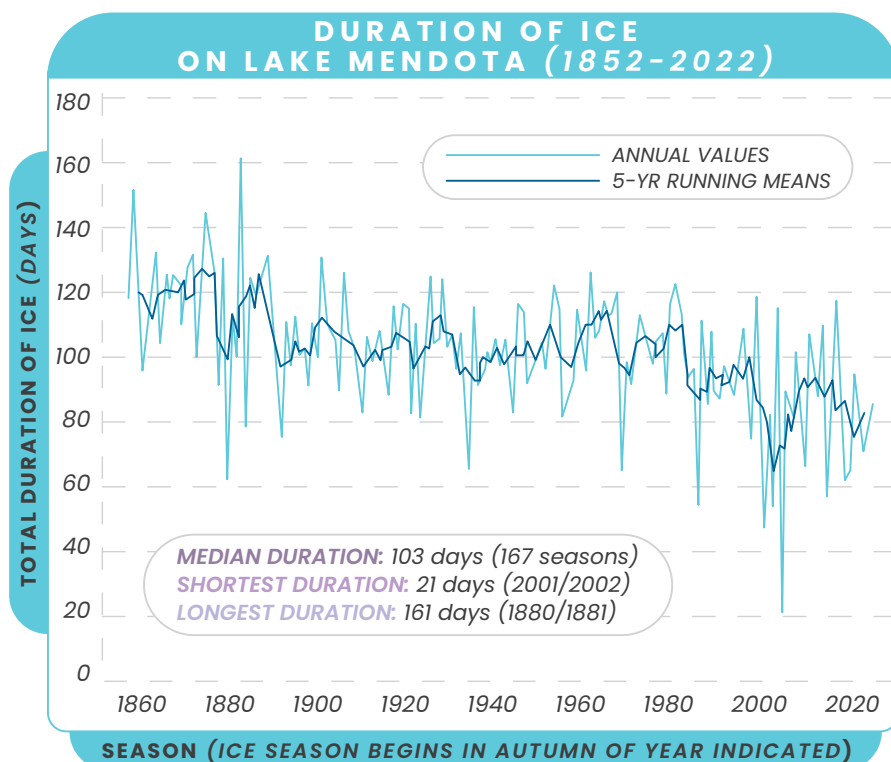
This transition is already happening: Warming trends are leading to waterways dominated by more bass and bluegill and fewer walleye, perch and trout.

Scientists also note that the degree

of the impacts remains unknown, as winter climate change is not as well-studied as summer.

A century from now, waterways will still be a part of Wisconsin, though current climate projections paint a very different picture of the Wisconsin we know and love. 🌱

Dana Fulton Porter is a publications supervisor in the DNR's Office of Communications.

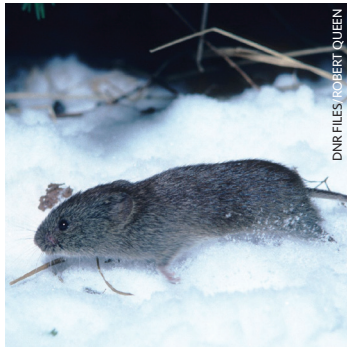


The North American beaver remains active during colder months but adapts to conditions.



ISTOCK/GERALD CORSI

Smaller mammals such as the meadow vole may spend much of winter in the subnivean zone under layers of snow.



DNR FILES/ROBERT QUEEN



LINDA FRESHWATERS ARNDT

Snow cover can impact the mobility of turkeys and other game birds.



LINDA FRESHWATERS ARNDT

Species like the downy woodpecker benefit from a little extra food — even deer meat and fat — to help keep them going in winter.

FROM
WILDLIFE
TO YOU AND
EVERYTHING
IN BETWEEN

DANA FULTON PORTER

HOW WINTER WORKS

Snow day! Those two words can either bring you joy, if you're a kid, or pain, if you're the one shoveling.

Let's take a look at how winter works. If you're the shoveler, maybe it'll give you a rosier outlook on the season.

KNOW YOUR SNOW

If you've ever built a snowperson or been in charge of shoveling the driveway after a large snowstorm, you certainly know the difference between wet and dry snow.

Wet snow is heavier to shovel but perfect for packing. Dry snow is light and airy, the kind of snow you can occasionally use a broom instead of a shovel to clear off the sidewalk.

These different types don't just fall by chance. There's a science to the weight of snow, and it starts high above the ground.

When a snowflake falls through the atmosphere, it encounters different air pockets. If one of those pockets is above freezing, 32 F, the snowflake will melt just a little bit. That extra

moisture stays with the snowflake as it continues down to the ground.

If the snowflake spends its entire journey in temperatures well below freezing, it will never melt and remains light and dry.

"Warmer" snowflakes hold more moisture and size when they land. This is why milder winter days, with temperatures closer to freezing, bring higher accumulating snow events.

WINTER FOR WILDLIFE

Every snow event brings a swirl of challenges to Wisconsin wildlife, with each species handling winter in its own way.

Furbearers

Let's talk torpor — it's a cool strategy many of our furbearers, including skunks and beavers, employ to make it through the season's colder spells.

"It's not a true hibernation," said DNR biologist Shawn Rossler, "but the torpor lowers the metabolic rate to reduce the amount of energy the animal needs to use to stay warm and alive."

Other furbearers, like the beaver, stay active all winter but must adapt to the ice cover to survive. A beaver will enter unfrozen water via a hole in the ice and hold its breath to access its food caches.

"These (caches) were prepared and staged in the late fall, prior to the ice forming," Rossler said.

For smaller mammals, like mice and voles, the subnivean zone is the way to travel.

"The subnivean zone is an area of air pockets and tunnels that forms above the ground and under deep layers of snow," Rossler said.

These tunnels allow smaller mammals to move around and access food, but they also create convenient snack spots for bigger mammals with excellent hearing. Fox and coyote can listen for the smaller mammals traveling through the tunnels and then pounce through the snow to find their dinner.

Migratory birds

"We have some ducks and geese that handle the snow and cold extremely well, while

we have some ducks that are in Argentina by the first frost in Wisconsin," said DNR biologist Taylor Finger.

Though most birds can tolerate the cold, biologists may become concerned if all accessible water freezes or if the snow is too deep to access food. Extended sub-zero temperatures can have a significant negative impact on migratory birds.

Resident birds

For birds such as turkey, grouse or woodcocks, the amount of snow can impact their ability to walk, move and access food. Dry snow often is considered better for birds, Finger said, because it's easier to scratch through for food. When heavy, wet snow falls, it can make movement difficult or impossible.

WINTER AND YOU

Snow and cold weather create challenges for people, too, and we have our unique ways of getting through.

"The human body is amazing, and when it comes to the cold, the body will prioritize key organs," said Dr. Jeff Pothof of UW Health.

This means the body will send blood and heat to the heart, lungs and brain and will not prioritize extremities, which is why you notice your fingers and toes getting cold first.

Shivering may seem subtle, but it's a good way for muscles to generate heat for the body to use.

When it comes to snow amounts, the impact can hit more than just your commute to work. Heavy, wet snow usually leads to more people in the emergency department, according to Dr. Pothof, due to overexertion from shoveling, especially for those with cardio disease.

Unfortunately, snowblower accidents also pop up like "clockwork" with every first snow. The accidents often happen when someone attempts to clear their snowblower by reaching into the auger. Do not try this at home.

And finally, to dispel the popular myth, there is no direct correlation between being in the cold and actually getting a cold. However, being cold stresses your body and hormones, weakening your immune system and making you more susceptible to catching the bug. ❄️

Dana Fulton Porter is a publications supervisor in the DNR's Office of Communications.

FOR THE BIRDS

Want to help our feathered friends in the winter? Include high-energy food such as suet near your bird feeders. Make sure food is accessible — shovel the area around the feeder for birds that feed on the ground. To provide water, maintain a bird bath that does not freeze.



CUT THE SALT WISCONSIN

REDUCING ROAD SALT BENEFITS ENVIRONMENT, ECONOMY

KATHRYN A. KAHLER

Road salt helps keep Wisconsin's highways and sidewalks safer in winter, but using more salt than needed comes at a price.

Research shows that drinking water supplies and freshwater ecosystems are becoming increasingly salty in northern regions around the globe. Just one teaspoon of salt is enough to pollute five gallons of water. This salinization can cause the release of potentially harmful radionuclides and metal ions like radium, mercury and lead into the water.

Salt causes the deterioration of roads and

infrastructure, vehicles and vegetation and can contribute to human health concerns. In lakes and streams, it inhibits plant growth, impairs reproduction in some aquatic species and reduces biodiversity.

But the news isn't all bad. Municipalities around the state have adopted best management practices for salt use that have started to make a big difference.

They may wet salt before application — which keeps salt from bouncing off roads and into ditches — and employ anti-icing techniques.

Anti-icing uses liquid salt brine in advance of winter storms to prevent ice from bonding to surfaces, reducing salt use by as much as 50%.

Other best practices include storing road salt on impervious, covered surfaces to prevent salt from leaching into the ground, and using variable application rates and equipment calibration to avoid over-application of road salt.

WHAT YOU CAN DO

Homeowners can help reduce salt use in several simple ways.

- Clear snow before it turns to ice. Shovel or sweep early and often during a snow event.
 - Use salt sparingly, scattering so there is space between grains. No more than a 12-ounce coffee mug full of salt is enough for a 20-foot driveway or 10 sidewalk squares.
 - Salt only works when pavement temperature is above 15 F, so switch to sand on colder days.
 - Sweep up leftover salt from driveways and sidewalks after it is needed. Dry salt can be reused or, in some communities, dropped off for recycling.
 - If you hire a contractor, encourage them to enroll in a free Smart Salting class through the Wisconsin Salt Wise coalition, wisaltwise.com.
- Wisconsin Salt Wise includes the DNR and other government agencies and nonprofit partners. The group's website is packed with information for homeowners, municipal road crews and maintenance professionals on how to help reduce salt pollution in lakes, streams and drinking water. ♻️

Kathryn A. Kahler is associate editor of Wisconsin Natural Resources magazine.

WATER SOFTENER SOLUTIONS

Every year, tons of salt from water softeners go directly into lakes and streams via sewage treatment plants and into groundwater via septic tanks, contributing to freshwater salinization.

Water softeners are widely used in areas that get their drinking water from groundwater, which is rich in minerals that can form buildup on appliances and plumbing, reducing their efficiency. The softener removes these minerals but creates salted water released as waste.

After passing through a wastewater treatment plant or your septic system, this salted water ends up in our freshwater, making it all a little less fresh. Septic systems can't filter out salt, nor do treatment plants have viable

technologies to remove salt from wastewater.

To help reduce salt use and save money, check your water softener's efficiency. A softener screening tool and other "Be a Salt Saver" tips are available from the Madison Metropolitan Sewerage District; check madsewer.org.

You also can soften less water in your home. If both hot and cold water are softened, work with a plumber to disconnect some or all cold water from the softener.



If you can tolerate some effects of hard water in your home, you can reduce salt use significantly.

Alternatives to regular water softeners also are emerging that use different technologies to prevent hard water scale, said Allison Madison, sustainability and development coordinator for the Wisconsin Salt Wise coalition.

"Technology using electromagnetic fields and template-assisted crystallization are the most promising salt-free alternatives for hard water, the primary reason for water softeners in southern and eastern Wisconsin," Madison said. "If people are managing iron, it's best to go with an iron curtain water filter vs. a salt-based softener."

These alternatives are effective, though not yet mainstream, she added, but they could soon be viable options to help reduce salt use.

— KATHRYN A. KAHLER

HAVE
YOURSELF A
**SUSTAINABLE
LITTLE**

Christmas

HOW TO MAKE YOUR HOLIDAY CELEBRATIONS ECO-FRIENDLY

DANA FULTON PORTER

If you're prepping for the holiday season, know that you're not alone. The National Retail Federation estimates 91% of consumers will celebrate the winter holiday season in some way.

In this time of giving and sharing, it can be easy to get carried away. Between presents, food and decorations, the garbage thrown out increases dramatically during the holidays. The Environmental Protection Agency estimates the volume of household garbage increases by 25% between Thanksgiving and New Year's.

Eco-friendly options for holiday celebrations are now more accessible than ever. Making conscious choices can help the environment, save money and add creativity to the season.

YOU'RE A GREEN ONE

Though no one wants to be compared to the Grinch during the holi-



ISTOCK/SERRNOVIK

days, he has one thing going for him: being green.

We're not encouraging anyone to color themselves green, but focusing on sustainable practices during the holidays will certainly help turn the season green. Revelers should remember the three Rs — reduce, reuse, recycle — as they plan.

It doesn't take much effort to make a difference. Research from Stanford University suggests that if everyone sent just one less card during the holidays, we could save more than 50,000 cubic yards of paper.

Conscious consumers should also be mindful of "green" and "eco-friendly" labeling on packaging. Those claims are legally required by the Federal Trade Commission to be honest and true. The FTC's Green Guides also help businesses make environmental claims on their labels.

After the holidays, recycle wrapping paper and look for opportunities to reuse trees.



ISTOCK/TETIANA SOARES

Getting creative with holiday ornaments, reusing family decorations and shopping at thrift stores can help deck the halls while reducing waste.

DECK THE HALLS

Tinsel, lights, signs, holly, table runners and ornaments — the list never ends! For many homes worldwide, decorating for the holidays is a fun tradition.

Handed-down decorations can bring fun memories and help reduce the amount of garbage going to landfills. Thrift stores and vintage shops also can hold little holiday treasures ready for their second life.

Also, seek out ways to reuse fall decor for the winter season. Paint those pumpkins white and stack them to make a little snowman!

BRING US A FIGGY PUDDING

Food waste is a year-round issue that becomes especially problematic during the holidays. Extra dishes and treats to share can lead to too much food on the table, which turns into too much food in the trash.

If you are hosting a holiday gathering, encourage guests to bring smaller dishes to share and use local ingredients or ethically sourced products. Also, suggest guests bring reusable



containers to pack away leftover food to nibble on later. For more on reducing food waste at home any time of year, scan the QR code or check dnr.wi.gov/tiny/1091.

AND A HAPPY NEW YEAR

After the season winds down, look for opportunities to reuse or recycle. Some unwanted wrapping paper can be recycled, except for the foil type and anything with glitter, but some wrapping paper and bags can be reused next year.

Live trees also can be reused. Check with your local town to see if they'll place the trees somewhere for rabbits and birds to use. You also can save the tree in your yard to chip for mulch in the spring. ♻️

Dana Fulton Porter is a publications supervisor in the DNR's Office of Communications.

12

TIPS FOR A SUSTAINABLE

12 ORNAMENTS HANGING

Seed bells, suet and other edible ornaments look great! And local wildlife will thank you for the holiday present.

11 LIGHTS A BLINKING

Energy-efficient lights can be used inside and out to reduce your energy bill.

8 PRESENTS NEED A-WRAPPING

Bags, boxes and bows can become a fun tradition to reuse.

10 TREES FOR PLANTING

Choose to decorate with native holiday plants, like a balsam fir, that can be replanted and used for years to come.

9 REUSABLE BAGS

While you're shopping this season, remember to pack your reusable bags to cut out extra plastic.

7 PRESENTING GIFTS

Remember: The wrapping can be part of the gift. Place garden tools in a flower pot or spices in a mixing bowl for a unique present display.

AINABLE HOLIDAY

6 TRIPS FOR TAKING

Give fun experiences, like local museums or theater trips, as gifts.

5 DIY GIFT TAGS

Turn the page to learn how to make seed paper for gift tags.

Find me on page 40!

3 E-CARDS FOR SHOPPING

E-gift cards can be a great opportunity to make sure there is no waste, and a person can get exactly the present they want. Make it personal by choosing their favorite store!

4 FOODS FOR GIVING

Breads, jams and nut mixes make yummy presents everyone can enjoy - just check for food allergies first!

2 BOXES SHIPPED

If shipping presents this season, use eco-friendly shipping containers like 100% recycled cardboard or poly mailers.

1 2023 WISCONSIN STATE PARK PASS!



scan me! ↗

ORDER A
STATE PARK
PASS ONLINE!





ISTOCK/THANK



MAY BABCOCK

GIVE NOW, GROW LATER WITH DIY SEED PAPER

DNR STAFF

This year, use gift tags that will continue the giving season well into spring! Create tags from eco-friendly seed paper you can make at home. When the paper is planted in soil, the seeds germinate and grow.



AMY STAFFEN PHOTOS



Contribute to a backyard native plant landscape or other gardening efforts by crafting seed paper to sprout in the spring.

SUPPLIES

- Recycled printer paper or scrap paper
- 2 cups warm water
- Plastic wrap or parchment paper
- Blender
- Mixing bowl
- Packet of native wildflower seeds, or herb or vegetable seeds
- Fan

DIRECTIONS

- 1) Shred printer paper into tiny pieces.
- 2) Place the shredded paper into a blender and add water, about twice as much as the amount of paper. (1 cup of paper needs 2 cups of water.)
- 3) Blend to a pulp, then move to a mixing bowl.
- 4) Using your hands, squeeze the water out of the pulp and drain the water.
- 5) Mix in the seeds by hand. Don't use the blender, as it may damage the seeds. (Note: If using wildflower seeds, remember to choose only seeds from plants native to Wisconsin; learn more at dnr.wi.gov/tiny/1316.)
- 6) Press the pulp onto plastic wrap or parchment paper until flat and shape into gift tags. Cookie cutters also can be used to create fun shapes.
- 7) Let the pulp dry for 12-24 hours, using a fan. Waiting too long to dry the pulp can cause the seeds to sprout.

Easiest. Stocking Stuffer. Ever.

5 FOR \$5!

THROUGH DEC. 26



wnrmag.com

*Visually impaired
skiers of all ages
can learn to ski with
help from Blind Outdoor
Leisure Development,
funded by the Lions Club.*



To **BOLDLY** go

LEGALLY BLIND FIND JOY IN THE OUTDOORS WITH HELP FROM LIONS CLUB GROUP

Visit Sunburst Ski Area in Kewaskum on any given Sunday evening in mid-winter, and you'll likely find Marty Hutchings and his sighted guide enjoying the slopes to the fullest.

Hutchings participates in the Lions Club-run organization BOLD — Blind Outdoor Leisure Development — and is the group's program director and VIP (visually impaired person) liaison.

As a participant since 2001 and group leader in various roles since

2005, including president, Hutchings finds joy in the program and has witnessed many participants light up during their first outing with BOLD.

"I've seen people get on a bicycle who had ridden when young and then lost their sight," Hutchings said. "To witness somebody get on a bike again and rediscover the wind in their face and the freedom is awesome."

While BOLD offers various activities, alpine or downhill skiing is the

Southeast Wisconsin-based Blind Outdoor Leisure Development, or BOLD, enables visually impaired skiers to get out on the slopes with help from certified instructors and sighted guides.



activity that started it all. In 1974, Lions Club member Dick Kapp launched Milwaukee BOLD after being inspired by a blind downhill skiing program in Aspen, Colorado.

Initially, the group had just five blind downhill skiers, but as Milwaukee BOLD grew larger and recruited participants from surrounding areas, the program was renamed as Southeastern Wisconsin Lions BOLD Inc.

TRUST AND FUNDING

Since then, every winter, a dedicated group of certified ski instructors teach people who are blind to ski each Sunday evening during January and February. Blind skiers start small, first skiing on flat surfaces and working their way up to bigger and bigger hills.

The instructors are paired with blind skiers, follow them down the



As the original activity offered by BOLD, downhill skiing remains a popular pastime for VIPs (visually impaired persons) such as Kevin Meyers, left, with ski guide Tina Liu.

slopes and shout directional commands as they speed along. While putting so much trust in an instructor might sound scary, Hutchings said the connection between instructor and blind skier is a beautiful relationship.

One of the best things about BOLD, Hutchings added, is that all activities are fully funded by the Lions Club, so there is no cost for VIPs to get outdoors.

"All of this is possible through the Lions Club," Hutchings said. "They pay for everything — transportation, tickets, fees. Participating is completely free, thanks to them."

PROGRAMS FOR ALL

When the snow melts, there are still plenty of activities to keep all ages of BOLD participants busy. BOLD averages 26 different summer and winter activities. Almost every

other weekend, some event is scheduled for the VIPs.

Hutchings first joined the program to participate in tandem biking. Other activities include hiking, bowling, tours of various sites, excursions to narrated plays and virtual options like bingo.

Seeing kids get involved with the program is his favorite thing, Hutchings said.

"We had an 8-year-old girl start downhill skiing," he said. "She's since moved out to Colorado, but she grew up in the BOLD program as a skier, and seeing her grow as an athlete was cool."

The group encourages parents and guardians of blind and low-vision children age 6 and up to get them involved in the program so they can start learning new skills and have the opportunity to build relationships with other blind Wisconsinites.

All activities occur within the sighted community, a vital integration connecting the blind with the sighted world.

BOLD Kids activities include downhill skiing, picnics, bike rides, swimming, canoeing, snow tubing, water skiing, bowling, roller skating and many more year-round activities. 🐾

Jonna Mayberry is a former public information officer in the DNR's Office of Communications. Ray Tweedale is a Lions Club member and BOLD president.

GET INVOLVED

Blind Outdoor Leisure Development activities are primarily based in southeastern Wisconsin, made possible by about 100 individual Lions Clubs in the region. BOLD is open to all legally blind people, and events are free. For information and to participate, including as a volunteer instructor or guide, visit wisconsinbold.com.

The DNR partners with Regenerative Ruminants to get their goats as part of invasive species removal efforts, including this summer and fall at the Brule River State Forest.



YOU'VE **goat** TO BE KIDDING

INTRODUCING A SPECIAL CLASS OF LAND MANAGERS

DANA FULTON PORTER

YOU HERD IT HERE

A few fun facts about goats:

- Goats are one of the smallest domesticated ruminants but come in various sizes with different hair lengths and colors.
- Goat eyes have a rectangular pupil, like many grazing animals, to help keep an eye out for predators.
- Goat lips help selectively grab leaves.
- Generally, goats are very social and curious.

— Source: Smithsonian's National Zoo and Conservation Biology Institute

Removing invasive species is a challenge in many areas across Wisconsin. To assist in pulling the unwelcome plants and helping our native flora flourish, the DNR brought in a friendly, helpful group to tackle the task.

No, not the summer 2022 interns. We're talking about goats.

In May, the DNR partnered with Regenerative Ruminants, a grazing service in northern Wisconsin. The company uses goats and sheep as a natural alternative to herbicides for removing brush and invasive species.

The hardworking and hungry team was brought into portions of the Brule River State Forest where buckthorn was running amok.

"Buckthorn has been a problem on the Brule River State Forest for a long time," said Dan Kephart, DNR Brule

River State Forest property manager.

The plant invades and thrives in oak forests and prairies. Buckthorn leafs out very early and retains its leaves late into the growing season, giving it a longer growing season than native plants. Buckthorn also creates dense shade, eliminating the chance for tree seedlings to grow.

"We want the forest to be able to regenerate our native species. If invasive species get in the way, it makes

it very difficult to do so," said Mary Bartkowiak, DNR invasive plant coordinator.

"If the invasives outcompete all of the native vegetation, we won't have the sugar maples, red pines or the white pines because they would be overtopped by the invasives."

With that in mind, goats got the job.

GRAZE ANATOMY

The process is called prescribed grazing — when ruminants are placed in specific locations to nibble away.

"Prescribed grazing really thrives and works the best when you've got really dense invasive species," said Brigid Reina Williams, co-owner of Regenerative Ruminants.

Just like the dense buckthorn growing in the Brule River State Forest. The goats rotated throughout the forest several times this summer and fall, feeding on fresh leaves that popped up.

Though the goats are on winter break, the gig isn't over. Like other management methods, prescribed grazing is a long-term treatment.

Since the seeds of the invasive plants remain in the soil for several years, future evaluation will determine if the goats need to return to the Brule or be rotated to other areas.

You can help stop the spread of invasives, too. When visiting parks and forests, be sure to wipe your shoes and clean your equipment before arrival and when you depart. This small effort will help keep our natural Wisconsin plants thriving. 🌿

Dana Fulton Porter is a publications supervisor in the DNR's Office of Communications.

ROLL THE RUMINANTS

Scan the QR code to watch a video of goat grazing at the Brule River State Forest on the DNR's YouTube channel.



WISCONSIN DNR



CULINARY SPOTLIGHT

SEASON'S EATINGS

FARM TABLE
RESTAURANT
EMPHASIZES
YEAR-ROUND
GOODNESS



Sarah
Mittelstadt,
head chef at
Farm Table.

SCOTT STREBLE

and places, so they can keep for several months into the wintertime.

"We can still get a local carrot grown by an Amery farmer two to three months into winter because she keeps them in the proper storage."

VEGGIE TALES

Mittelstadt fosters strong connections with the farmers and wants to pass those connections on to her customers.

"We are trying to, through the food, help our customers get curious about their food and where it's coming from," she said.

"As head chef, I'm hoping when someone sees a purple daikon radish on their plate, and they have no idea a vegetable can be purple, that they ask their server, which they typically do, and that starts a conversation about what it is, where it grows and who grew it."

One conversation she loves to have involves a humble bloody mary garnish: a meat stick.

"In our 'Goat-ober' celebration during October, we use our goat

ANDI SEDLACEK

For Sarah Mittelstadt, "eat local" isn't a catchphrase; it's the guiding principle driving the uber-seasonal menu at the nonprofit restaurant Farm Table in Amery, where she's head chef.

"We work with as many ingredients as we can that are grown within 100 miles of the restaurant," she said. "That means relying a lot on our local farmers and having very seasonal menus."

When you're like Farm Table and committed to getting produce only from your immediate community, the circumstances around food are very different, as is your outlook on them.

It's a challenging way to build menus and operate a restaurant. Still, Mittelstadt sees it as honoring the ingredients and seasons as they come.

"Seasonal eating is one of the most important things for me — getting back in touch with where things come from, what realistically grows in your area and at what time," she said.

MUCH ADO ABOUT WINTER

What does a place like Farm Table do in the winter, when fresh local produce is scant, but diners are eager for the restaurant's beloved scratch food?

To extend the life of summer and fall vegetables, Farm Table pickles and preserves what they can. They turn cucumbers into crunchy dill pickles and roast, puree and freeze pumpkin, drawing from these preserves throughout the cold months.

"In the winter, we rely a lot on root vegetables," Mittelstadt said. "Farmers store them in proper conditions



Sarah Mittelstadt tried her hand at farm work before embracing a role preparing farm-fresh produce in a kitchen.



FARM TABLE

Encouraging diners to get curious about their food is the goal at Farm Table.

farmer's goat meat snack sticks in our bloody marys," Mittelstadt said. "The goal is for someone drinking a bloody mary to ask about it, and then we have an opportunity to share that this amazing product is from a farmer who lives 10 minutes down the road, and she's stewarding the land by practicing rotating grazing with her goats.

"It's all about the conversations and the stories and people behind these ingredients."

Another great conversation is sparked by Farm Table's cheese curds.

"I think we have the most special cheese curds in the area," she said. "They come from this wonderful family who is raising their own cows. They're milking those cows, they're making those cheese curds, and they're delivering them to us day of, fresh-made.

"All of our ingredients tell such a beautiful story."

KNOWING HER ROLE

Mittelstadt's respect for farmers stems from her own farming experience, albeit short-lived.

Originally from Minnesota, she worked in the restaurant industry in Minneapolis. Shortly after finishing her degree in food systems from the University of Minnesota, she moved to Wisconsin to work on a mushroom farm — the same one that supplies Farm Table.

LOADED POTATO SOUP

SARAH MITTELSTADT

(makes 3 quarts or 6 servings)

INGREDIENTS

- 2½ pounds yellow potatoes, peeled and rough cubed; reserve ½ pound for topping
(Food waste tip: Reserve and use your potato peels to make chips for topping rather than chopping the additional half-pound of potatoes.)
- 1 large yellow onion, peeled and roughly chopped
- 2 garlic cloves, peeled
- 4 cups whole milk
- 4 cups water or vegetable stock
- 1 tablespoon salt
- 1 teaspoon black pepper
- 1 teaspoon dried thyme
- 2 tablespoons butter
- 1 cup smoked cheddar cheese, grated
- ½ cup tangy/sharp cheddar cheese, grated
- Neutral oil such as avocado oil for frying topping potatoes
- **Toppings:** Bacon bits, crispy fried potatoes, sliced green onions, shredded smoked cheddar, sour cream

DIRECTIONS

1. Boil the potatoes you are using for your topping for about 10 minutes or until fork-tender and set aside. (Skip this step if using your peels instead.)

2. Add remaining potatoes, onions, garlic cloves, milk, stock, salt, pepper, thyme and butter to a large pot or Dutch oven. Heat over medium to medium-high heat. Simmer for about 15-20 minutes or until potatoes are fork-tender.

3. While the soup simmers, prep toppings:

- Create bacon bits by finely chopping uncooked bacon, then pan fry until crispy brown.

- Salt the potatoes for your topping to taste. Fry in a pan with oil until just golden.

- Slice green onions.

- Grate cheese for topping

4. Once the potatoes in the simmering pot are getting close to fork-tender, add all the shredded cheese.

5. Once the potatoes are ready, and the cheese is melted and combined, chill your soup, then blend smooth. (Note: You can blend the soup while it's hot, but be careful; pressure tends to build in the blender and hot soup can easily be pushed out the top. If you blend it while hot, fill the pitcher only half full and put a rag over the top of the blender as you hold the top down. Alternatively, you could use an immersion blender in the pot to blend the soup.)

6. Reheat and load potato soup in a bowl with your prepared toppings and enjoy!

Mittelstadt started producing mushroom butters and spreads for the farm using the kitchen at Farm Table, then soon realized she didn't have the patience and discipline it takes to grow food.

"I have such admiration for those who have the passion and dedication for growing and raising food, but it was not for me," she said.

When a line cook opportunity opened up at Farm Table, she

jumped at it, leading to her current role as head chef.

"What I love is that amazing part of receiving all the beautiful fruits of (the farmers') labor and honoring it by elevating it into dishes that nourish people," she said. "That is my role in this wonderful system of local, sustainable food." 🌱

Andi Sedlacek is a public information officer in the DNR's Office of Communications.

KIDS
CORNER



Birds that winter in Wisconsin

ANDI SEDLACEK



ARLENE KOZIOL

American goldfinch

LINDA FRESHWATERS ARNDT

Black-capped chickadee

LINDA FRESHWATERS ARNDT

Common redpoll

LINDA FRESHWATERS ARNDT

Dark-eyed junco

Not all birds fly south for the winter. We have plenty of feathered friends in Wisconsin to keep us company throughout the cold months.

Learn how to identify a few of our state's most popular winter birds and help keep them happy and full with the food and seeds they like.

Here are five bird species that winter in Wisconsin. If you see any of these this season, say hello and ensure your bird feeder is stocked with some of their favorite snacks.

1. Northern cardinal — Male cardinals have bright red feathers, making them easy to spot in the winter, especially when their red feathers contrast with white snow. Female cardinals are not as colorful, with yellow-brown feathers and a hint of dusty red. Help keep these colorful birds well-fed during the frosty months by filling your feeder with sunflower and safflower seeds.

2. American goldfinch — In the summer, male goldfinches are easy to see because they're bright yellow with black wings. But when it starts to get cold outside, they turn light brown, which is similar to how female goldfinches look year-round. These cute little birds enjoy thistle seeds and, similar to cardinals, hulled and oil-type sunflower seeds.

3. Black-capped chickadee — Chickadees are another winter-loving bird. Males and females look similar, with small black caps on their heads, little black bibs and white cheeks. Listen for their cheerful call that sounds just like their name: chick-a-dee-dee, chick-a-dee-dee-dee. And if you see one this winter with its feathers puffed up, it's probably trying to keep warm in the cold weather! They love sunflower seeds, too.

4. Common redpoll — Just like their name says, these birds may be quite common in Wisconsin during some winters. They wear a little red crown on their heads and have a black chin; adult male redpolls have a rosy, reddish chest. Redpolls are easily confused with house and purple finches, but those species have more reddish feathers and are bigger. Offer them thistle seed in your feeders this winter.

5. Dark-eyed junco — Sometimes called the "snowbird," dark-eyed juncos in Wisconsin are a sign winter is coming soon. Their dark gray bodies make them easy to identify, and if you see the flash of their white tail when they're flying, you can know for sure it's a dark-eyed junco. These snowbirds like to eat millet and cracked corn in your feeder. 🌾

Andi Sedlacek is a public information officer in the DNR's Office of Communications.

LEARN MORE



Scan the QR code to learn more about Wisconsin's birds, or go to dnr.wi.gov/tiny/1286.

Be sure to fill every space of the pine cone with birdseed.



Pine Cone BIRD FEEDER



Help keep birds full and happy this winter with a simple pine cone feeder.

SUPPLIES

- Birdseed
- Bowl or piece of wax paper
- Butter knife or spoon
- Peanut butter (or use shortening or another type of butter if anyone has peanut allergies)
- Pine cone
- String
- Scissors

DIRECTIONS

1. Pour your birdseed of choice into a shallow bowl or onto a piece of wax paper.
2. Using the butter knife or spoon, spread the peanut butter inside the openings and all around the center and bottom of the pine cone. Try to fill in every space!
3. Roll the pine cone in the birdseed so the seed sticks to the peanut butter. Sprinkle seed into any openings in the pine cone.
4. Tie the piece of string around the top of the pine cone.
5. Hang the pine cone on the branch of a tree or bush in your yard. Look for a spot you can see from inside.

Tip: Make sure your piece of string is long enough and the pine cone hangs down far enough from a tree branch or bush so squirrels can't easily grab and eat it.

SHOW US

Where are you hanging your pine cone bird feeder? What kind of seeds did you use? And who have you seen snacking on it? Share your bird feeder adventures with us at dnrmagazine@wisconsin.gov.

Mice on Ice



butterfly



ladle



spoon



hockey stick



snake



tack



toothbrush



mushroom



boot



acorn



wishbone



artist's brush



sock



needle

BACK IN THE DAY

GROUNDBREAKING EFFORTS LED WHOOPING CRANES ON PATH TO RECOVERY



SAVING WHOOOPER

KATHRYN A. KAHLER

As we celebrate the conservation successes of the last 40 years, one story soars high among the rest: whooping cranes.

Twenty-one years ago, the first ultralight-led flock of whooping cranes took off from Necedah National Wildlife Refuge in central Wisconsin en route to Florida. "History was in the making," this magazine reported of that Operation Migration effort.

"These were the first wild whoopers to fly over Wisconsin in 123 years," the story noted. "They were embarking on the first leg of a 48-day, 1,218-mile journey behind the slow-flying ultralight airplane driven by a costumed pilot they thought of as a parent."

From a low of 15 birds in 1946, whooping cranes (*Grus americana*) have slowly returned, thanks to federal protections and work by the Whooping Crane Eastern Partnership, led by the U.S. Fish and Wildlife Service. The conservation effort yielded what one USFWS official called the

"wildlife equivalent of putting a man on the moon."

TEACHING BIRDS TO FLY

Conservationists created a plan to establish a new migrating flock east of the Mississippi River, a groundbreaking wildlife management program. Suitable nesting and wintering grounds needed to be identified and a migration route established between the two. That's when Wisconsin entered the picture.

In September 1999, Necedah was chosen for nesting, and the Chas-sahowitzka National Wildlife Refuge north of Tampa, Florida, was designated as wintering grounds for the new flock.

The eggs came from captive whoopers at the U.S. Geological Survey's Patuxent Wildlife Research Center in Maryland, where they were hatched and then flown to Wisconsin.

Over the next several weeks, the young birds were nurtured, protected and trained to fly on their own, all while researchers actively avoided the possibility of the birds imprinting on humans. This feat required staff to wear white robes and crane-head

puppets while using small ultralight aircraft to teach them to fly.

The final test arrived on Oct. 17, 2001, when the eight young whoopers took off. Without adult birds to show them the way, the birds were led by three ultralight airplanes during their south-bound flight. They landed in Florida on Dec. 3.

Five surviving birds made their way back to Necedah the following April without the help of the planes, becoming the first wild migrating flock of whooping cranes in eastern U.S. skies in more than a century.

ADAPT TO SUCCEED

Two decades later, recovery efforts for North America's largest crane species have taken a somewhat dif-





DOUG PELLERIN

Whooping crane conservation efforts two decades ago involved captive rearing and ultralight-led flights to teach young birds how to migrate.



EVA SZYSZKOWSKI

S FROM OBLIVION

ferent focus, said DNR conservation biologist Davin Lopez.

"The ultralight flights were some of the biggest efforts ever to save a species from extinction, and they were a monumental achievement," said Lopez, who serves on the multi-agency whooping crane partnership. "But it also used so many costly and artificial techniques that we transitioned to what we hope are more natural methods."

The last ultralight-led flight was in 2016. After that, a transition began, replacing the Whooping Crane Eastern Partnership with the current Whooping Crane Reintroduction Program.

This included another type of captive rearing for this federally endan-

gered species. Both costume-reared and parent-reared chicks are released in areas with wild adults present to teach them how to migrate in the fall.

Slow success has been recorded, but the efforts are not without problems.

"We've seen great adult survival, breeding, nesting and hatching," Lopez said. "But chick survival remains low."

Other issues include the avian black fly, which can disrupt nesting whoopers. Researchers initially introduced a bacteria that kills black fly larvae, Lopez said, but eventually found it better to take eggs from nests, raise the birds and reintroduce them later, forcing cranes to renest when black flies were not as abundant.

"Also, since Necedah is a great breeding ground for black flies, we've compensated by spreading releases over a broader area," Lopez added. "We now include the Horicon National Wildlife Refuge and the White River Marsh State Wildlife Area near Berlin."

HOPE FOR THE FUTURE

While whoopers haven't returned in huge numbers, there has been slow

but steady population growth for the species, which typically mates for life and has a lifespan of up to 25 years in the wild.

"Several years ago, numbers were over 100 (in Wisconsin), but we had to curtail efforts when the COVID-19 pandemic hit," Lopez said. "The wild population dropped to about 75, but we're ramping up again with releases this spring. We hope to release at most 10 parent- and costume-reared cranes."

"That doesn't sound like a lot, but it's certainly a success when you consider there were only about 20 birds when we started. We've literally brought them back from the brink of extinction." 🦢

LEARN MORE

For more about efforts to save whooping cranes, check the International Crane Foundation website, savingcranes.org.

Kathryn A. Kahler is associate editor of Wisconsin Natural Resources magazine.



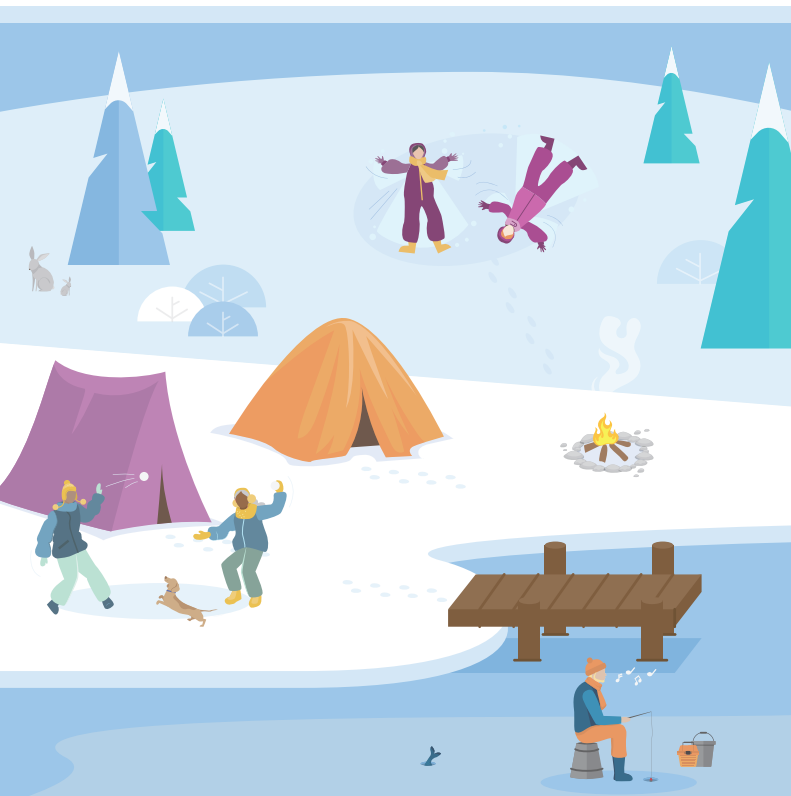
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FALL ISSUE PUZZLE ANSWERS

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ANIMAL	SOCIALS	AGLARE
CINEMA	ALLTHAT	CRIMEA
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RELYON	ISNT	WAIL
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FIVEO	FOURH	TEABAG
TETRIS	NAPA	HUSHHUSH
SPAS	LIMPID	IAM
ELLE	HUMP	TERROR
VOODOO	DOLL	OINOINONE
IBADAN	LAYDOWN	TRIVIA
TONITE	TIMELAG	HONEST
ASSESS	NEWER	SNORES

Highlights Hidden Pictures™ ANSWERS



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BY MICHAEL LIEBERMAN /
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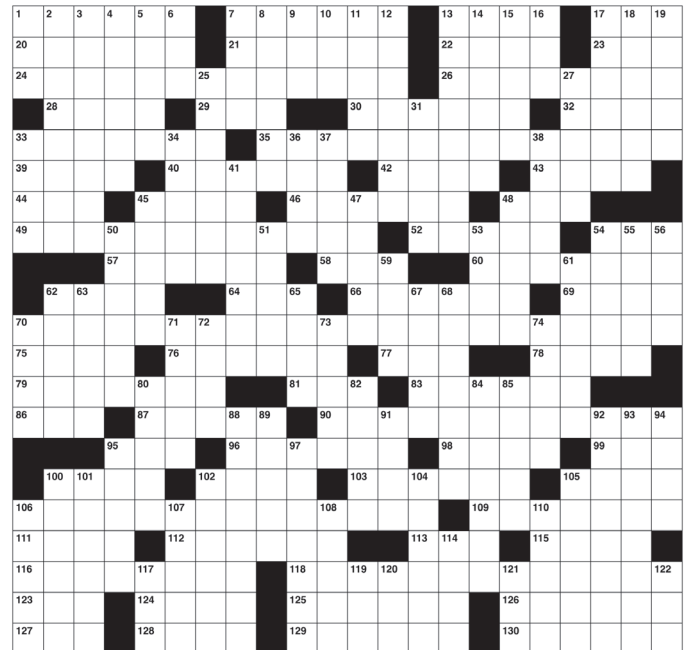
ACROSS

- 1 Opportunities for singles
7 Marbled savory snack from China
13 A boatload
17 "Keep Ya Head Up" rapper, informally
20 Home of the W.N.B.A.'s Wings
21 Talk and talk and talk and talk
22 On the deep
23 Poorly
24 Why the party's about to get less hip?
26 Maker of the Switch console
28 Cremation receptacles
29 Service that's not good?
30 "The ___ Company" (Frans Hals portrait)
32 Pie-crust ingredient
33 Army award attribute
35 Realtor's exclamation about a primary bathroom?
39 Actress Moriarty of "The Boys"
40 "My package arrived!"
42 Landing info, in brief
43 Sorrowful sound
44 "Not gonna ___ ..."
45 Other: Sp.
46 Structure on the continental shelf
48 Take (down)
49 How Shamu acknowledged the crowd's appreciation?
52 Go from 60 to 0, say
54 Grp. regulating global commerce
57 Got by just fine
58 Some N.F.L. linemen, in brief
60 Where someone might fiddle with your dance moves?
62 Flat-topped military hat
64 Ocean State sch.
66 Takes the stage
69 Man's name that spells a fruit backward
70 "Prepare for a sword fight, McKellen, Fleming and all other namesakes out there!"
75 Uncurbed enthusiasm
76 Injury from a fistfight
77 Byproduct of burning tobacco
78 Bread maker?
79 Casino do-overs
81 Like many lifeguards
83 Crews
86 Neurodegenerative disease, for short
87 1990s fitness fad

- 90 Dish cooked to smooth things over after a fight?
95 Cable channel with the comedy/drama "Sistas"
96 TV that's trash, e.g.
98 Pops
99 High point of a trip to Europe?
100 The old you?
102 It's full of hot air
103 One small bite
105 Word with bus or whistle
106 What students in a karate class are often doing?
109 Spiny sea creatures
111 Flatbread made with atta
112 Charge for a tutor
113 Business-card abbr.
115 Hang ominously
116 Place for a lamp
118 Challenge for a court jester?
123 "That's ___" ("You may proceed")
124 ___ film
125 North African stew, or the dish it's cooked in
126 Intimidating in a cool way
127 Flavor enhancer, for short
128 Counterpart of -ful
129 Wears down
130 Contents of a corn maze

DOWN

- 1 Freeware annoyances
2 Where you might order nopales or esquites
3 Less clear, as a memory
4 Support group with a hyphen in its name
5 Ankle bones
6 About 5 o'clock, compass-wise
7 Daly of "Cagney & Lacey"
8 Singer-actress Kitt
9 "Yo te ___"
10 The Tasmanian one has been extinct since the 19th century
11 "Capisce?"
12 Like wind power vis-à-vis natural gas
13 Something a parent might tell you to watch
14 God who was said to be in love with his sister while still in the womb(!)
15 Core position
16 Took a load off
17 Thing to bash at a bash
18 Buzz about space?
19 Thickheads
25 State symbol of Massachusetts



No. 1113

- 27 "Middlemarch" novelist, 1871
31 Showing signs of life
33 Commanding position
34 Located, to a builder
36 Herman Melville's second novel
37 "That's odd"
38 Act unprofessionally?
41 Channel
45 How you might walk after getting great news
47 "Hey, I had it first!"
48 Comedian-actor Ken of "The Hangover" films
50 Skewer
51 Pinkish-red shade
53 It moves one step at a time
54 "Ain't I a ___?" (Sojourner Truth speech)
55 Between, poetically
56 Lead-in to a sale price
59 Lacking emotional toughness
61 Remove from Zillow, say
62 Show submission, in a way
63 "Jumpin' Jehoshaphat!"
65 Still competing
67 Tour de France stage
68 Envelops
70 Pound who wrote "In a Station of the Metro"
71 C sharp equivalent
72 Slowly move (in)
73 Sends unwanted texts to, maybe
74 Utterances of agreement
80 Totally loved
82 Present at birth
84 What's so flippin' easy to cook with?
85 Dinner at which "Dayenu" is sung
88 Fried pastries popular in New Orleans
89 Baby that rarely sleeps at night
91 Kind of high-fat, low-carb diet
92 Unlike π
93 Business magnate who is a Stanford University dropout
94 Actor Omar
95 Electronic toy with a blue "pull" handle
97 "On Juneteenth" author ___ Gordon-Reed
100 Some beachwear
101 Show-off
102 Mournful peals
104 Play opener
105 Rhymes with an eponymous production company
106 Pummel
107 Infuse (with)
108 Joy of TV
110 Sole connector?
114 Potato peeler targets
117 Patella neighbor, in brief
119 One may get in the way of a collaboration
120 Purge (of)
121 Abbr. in a birth announcement
122 Site used by NASA, in brief

Look for puzzle answers in the Spring issue.

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