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Get a jump on hunting seasons

A love of
LOONS



Fighting back with Buster

An unintentional experiment in population management.

Dan Colton

While I didn't realize it at the time, hunting Tom Hawe's fields was exactly what I needed as a boy. The death of my father when I was very young had been, for too long, a black cloud above me. Hunting got me out from under that shadow.

The fields were named for an old neighbor who had his own hunting preserve and farm. My Uncle Dave led guides through Hawe's fields. When I was old enough, I was allowed to help with the farm's workload doing mostly odds-and-ends, and hunt Hawe's fields with my uncle.

One spring when I was about 10 years old, my uncle and I decided to start a pigeon raising project to enhance our hunting experiences. What we didn't realize at the time, is that we were embarking on an experiment into the importance of finding balance in an ecosystem to maintain healthy animal population numbers.

The "experiment" was Uncle Dave's idea and I eagerly jumped on board. I was an enthusiastic boy, eager to experience adventure and challenge. The experiment took place over two years and began with constructing pigeon roosts. Our goal was to raise pigeons we could then use to train Hawe's dogs in the fields for pheasant hunting.

We scoped out an old barn on the prop-

erty that had two levels — both stories in disrepair. The upper story was cluttered with junk: broken washing machines, lawn mowers, discarded gas cans, that sort of stuff. But the bottom floor was dark and cool, with empty stalls for cows and thin dry straw scattered across the floor.

This barn was unused and mostly forgotten; it was the perfect place for an uncle to teach his young nephew how to raise healthy birds and train bird dogs.

We assembled the roost inside the barn and brought in live pigeons. We waited, crossed our fingers, and hoped the flock would stick around. Our hopes were reinforced when the birds

came back the next evening. Soon, hens laid eggs. Protected inside the barn from the cold outside, the pigeon flock grew.

For a while, anyway.

But then, for no apparent reason, pigeons began to die. We feared disease had found its way into the flock. But that suspicion proved false when bro-



Colton with Uncle Dave after a successful hunt.

PHOTO SUBMITTED BY DAN COLTON

GOOGLE IMAGES



Rats are to blame.



Pigeons are at the center of the experiment.

© STEPHEN J. LANG

ken eggs began to appear on the floor. The flock was under siege by something more mysterious. We suspected that raccoons were behind the crime. So we boarded up all the possible entrances that a raccoon might use.

Still, pigeons were killed and their eggs destroyed.

Finally, it was the curiosity and tenacity of a small dog named Buster who solved the mystery for us and cleared the raccoons of any blame. Buster was a terrier bred by a local Amish family. The breed was said to be specialized in pest control, hence the breed's name: rat terrier. Buster proved to be a splendid supporter of his breed's name.

One day I was standing inside the barn filling the pigeon feeders with crushed corn when I heard Buster begin to bark and circle the barn. Curious, I poked my head outside the door to see what the commotion was. When Buster came back around the corner and into view, I saw that he was running down a massive rat. It was astonishing — the rat was nearly as big as Buster! Around and around in a circle they ran until, with a final snarl, Buster lunged and took the rat between his teeth.

My uncle had also seen the chase and he immediately put two and two together. The rats were to blame for the pigeon deaths. It made perfect sense. If rats lived inside the barn, then they had easy access to the cooped up pigeons.

The rat population was destructive for several reasons, the most obvious being a taste for pigeons and their eggs. Additionally, if the rat population grew larger (thanks to the addition of pigeons as an abundant new food source), the rodents would eventually spread and could reach the perimeter leading to the pheasant pens. Rats also will raid feed barrels and there is an added concern over

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Buster comes to the rescue and finds the culprit.

PHOTO SUBMITTED BY DAN COLTON

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© Stephen J. Lang

BACK COVER: The steep slopes at Wyalusing Hardwood Forest State Natural Area high above the Mississippi River in Grant County. INSET: Red-bellied woodpecker. For more information, or to order a guidebook to State Natural Areas for \$15.00 (postage paid), contact the State Natural Areas Program, Bureau of Endangered Resources, DNR, P.O. Box 7921, Madison, WI 53707 or visit dnr.wi.gov and search "SNA".

Thomas A. Meyer, DNR

© Herbert Lange [inset]



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Editor-in-chief Natasha Kassulke
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Printing Schumann Printers



PUBL CE-013
ISSN-0736-2277

Wisconsin Natural Resources magazine (USPS #34625000) is published bimonthly in February, April, June, August, October and December by the Wisconsin Department of Natural Resources. The magazine is sustained through paid subscriptions. No tax money or license fees are used. Preferred Periodicals postage paid at Madison, WI. POSTMASTER and readers: subscription questions and address changes should be sent to Wisconsin Natural Resources magazine, P.O. Box 7191, Madison, WI 53707. **Subscription rates are: \$8.97 for one year, \$15.97 for two years, \$21.97 for three years. Toll-free subscription inquiries will be answered at 1-800-678-9472.**

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THE



This bird, whose ancestors roamed the earth 65 million years ago, can be found on Wisconsin's northern lakes in the summer.

UNCOMMON LOON

VOLUNTEERS AND WILDLIFE BIOLOGISTS WORK TO CONSERVE A REMARKABLE BIRD.

Glenda C. Booth

The haunting, melancholy call of the common loon has long enchanted those who love to be near the water. The call can be a wobbly, liquid chortle or an eerie yodel, sounding almost unearthly, especially when it ripples through the quiet wilderness or echoes across a tranquil lake. Known as the “spirit of the wilderness,” the common loon (*Gavia immer*) actually has four calls: the wail, yodel, tremolo and hoot. Common loons breed and raise their young in Canada and northern U.S. states, including Wisconsin, every summer.



There are many Native American stories about loons. The Ojibwe (Chippewa) Indians called the loon “Mang” or “the most handsome of birds.”



Loons don't spend much time on land, except to nest. Their nests are made of weeds and grass and are usually located in grass along the lake shoreline. A loon may use the same nest year after year.



Both male and female loons take turns sitting on the eggs. The eggs hatch in about one month.



Soon after birth the chicks are in the water swimming with their parents. Swimming in the cold water is hard on the chicks, so from time to time they hitch a ride on their parent's back. This also protects them from predators like snapping turtles and muskies.

PAUL LUEDERS

Some good news

Wisconsin has some good loon news. Breeding loon numbers are rising and the total state loon population, according to LoonWatch, has grown from 3,017 in 1995 to 4,010 when estimated in 2010. LoonWatch is a program of the Sigurd Olson Environmental Institute that protects common loons and their aquatic habitats through education, monitoring and research.

"Wisconsin has an increasing loon population whose growth rate has increased by over 25 percent in 15 years," says Michael Meyer, wildlife toxicologist and research scientist for the Department of Natural Resources. "We are seeing higher densities of nesting pairs on lakes and we are seeing loons using lakes that they haven't used for decades, plus there is a suggestion they are expanding southward."

And rates of mercury exposure in Wisconsin's loons are not as high as rates in the loons of some northeastern states.

What is a loon?

Loons are listed first in North American bird field guides because they are the most primitive bird, having existed long before humans. Adults have a black velvety head, red eye, sleek torpedo-

shaped body, black-and-white checkered back, a white "collar" on the back of the neck and a pointed bill that they hold parallel with the water. In winter, their plumage turns dark gray. Loons' legs are short and set far back so they cannot walk well. They weigh between six and 12 pounds.

Loons swim low in the water because their bones are heavy. Excellent divers, they can vanish underwater to find food or escape danger without leaving a ripple and reach depths of 200 feet or more. Their large webbed feet act as propellers, enabling fast travel underwater. The record diving time for the common loon is three minutes. The average diving time is 42 seconds, according to Darwin Long, avian biologist and aviculturist with the Audubon Nature Institute. A scientist who has conducted dive feeding studies, Long can pinpoint when a loon is about to dive.

"Watch him slim down. He exhaled," Long told a group of volunteers who were studying loons in the Gulf of Mexico last winter.

To take flight, loons may run as far as a quarter of a mile on the water's surface to build enough speed to get aloft. In the air, they have a rapid wing beat and can fly up to 75 miles per hour.

Loons preen to stay attractive, enable flight, protect against the elements, reposition feathers and to remove parasites, dirt and oil from their feathers. They collect oil from a large oil gland on top of the base of the tail and spread it over their feathers to make their bodies water-repellent.

Loons are sexually mature at age three and, on average, obtain their own breeding territory around age five. A pair always builds a nest near water, preferring islands to avoid predators, but also anchored to the mainland in wetland areas. Nest sites are somewhat open so they can see intruders. The female usually lays two eggs, which the parents-to-be take turns incubating 30 to 32 days. Loons are considered to be very territorial; they aggressively defend their nests and young. Adult loons have been documented to live over 25 years in the wild.

Meyer, who has studied loons for more than two decades, says the number one reason loon nests fail in Wisconsin is predation.

"Nest abandonment due to personal watercraft or nest flooding due to wake action does occur," Meyer says, "but much less frequently than predation."

Loon chicks are semi-precocial, they leave the nest within two days of hatch, locomoting behind the adults or riding on their backs. The parents do feed them nearly exclusively for the first eight weeks.

Migration

In late October and early November before lakes freeze, loons fly south to coastal seas, with some traveling 3,800 miles. Loons are one of the few birds found in both freshwater and salt water, from northern lakes to southern marine environments.

Loons migrate south their first autumn and do not return to their breeding area for three years on average, says Andrew East, who has studied loons as a field biologist in Wisconsin and other states. Scientists are trying to understand where loons go during that time.

From mid-January to February, adults have a "catastrophic" molt, losing all feathers and becoming flightless for three to four weeks.

"Winter is stressful for loons because new feathers are growing and they are having a complete molt," explains Jim Paruk, director of the Center for Loon Conservation at Maine's Biodiversity

Research Institute.

Loons return to northern lakes and rivers sporting their distinctive plumage usually in April or early May to breed and raise their young. Most migrating loons will return to the same area within 30 miles of their birthplace, East maintains.

Loon conservation research

Several Wisconsin-based scientists are probing multiple mysteries of this iconic bird.

Among those mysteries is migration. Kevin Kenow, a research wildlife biologist with the U.S. Geological Survey (USGS), studies common loon migration by tracking the birds' movements with satellite telemetry. Recently, he implanted 15 satellite transmitters on loons that breed and spend their summers on Wisconsin waterways. The transmitters are programmed to provide location information for about one year, but usually last around two years so he can monitor a loon's movements that long. During the fall and spring migration, the transmitters send information every day; in the winter and during the breeding season, every three or four days.

In the summers of 2010 and 2011, Kenow put transmitters on 31 adult loons in Wisconsin, Minnesota and Michigan's Upper Peninsula. The loons he tracks winter in the Gulf of Mexico off the Florida coast and in the south Atlantic off the Florida, Georgia and Carolina coasts. A few loons wintered on reservoirs in Kentucky and Indiana.

"This study will help managers better understand how loons fare as they head to their wintering grounds along the Gulf of Mexico and Atlantic coasts," said Kenow. "Right now, little is known about movement and habitat use along their entire migratory routes."

You can track the movements of individual loons during their migrations by logging on to the USGS website: umesc.usgs.gov/terrestrial/migratory_birds/loons/migrations.html

Kenow is also contributing to a study on type E botulism in water birds, including common loons, using the Great Lakes. Outbreaks of type E botulism have become more common since 1999, he has found, resulting in troubling die-offs of fish and fish-eating birds.

From 2000 to 2010, in all the Great



PHOTO SUBMITTED BY KEVIN KENOW

USGS biologists Kevin Kenow and Jeff Wilson band an adult loon on a northern Wisconsin lake.



JACK SULLIVAN

DNR Secretary Cathy Stepp and field toxicologist Doug Killian with an adult loon implanted with a satellite transmitter.



DOUG KILLIAN

Loon citizen scientist Judith Bloom with a loon chick soon to be banded.

Lakes, 49,500 mortalities of fish-eating water birds were attributed to botulism. Half of these were common loons. By documenting movements of loons and use patterns on the Great Lakes, Kenow hopes to contribute to a better understanding of the ecological and physical factors that lead to botulism outbreaks.

Understanding the loons' feeding patterns and exposure routes is critical to understanding their exposure to botulism. Type E botulism commonly affects fish-eating birds and is caused by the ingestion of neurotoxins produced by the botulism bacterium. The botulism toxin is produced when spores germinate under conditions of low oxygen, certain temperatures and rich nutrients and the bacteria are actively growing.

Kenow has been focused on loons in Wisconsin since 1996, initially developing radio-marking techniques.

On botulism, he says, "Outbreaks of type E botulism have produced die-offs of fish and fish-eating birds in the Great Lakes since at least the 1960s."

Results of his work are being used by scientists with the USGS Great Lakes Science Center in Ann Arbor, Mich. to guide their work in looking at botulism in sediments, invertebrates and fish.

"This type of research helps us better understand habitats loons use during migration and on wintering grounds and points out vulnerabilities in their life cycles to problems like disease outbreak, contaminant exposure (like oil spills) and habitat loss. All this contributes to a better understanding of knowing where bottlenecks are," he says.

His work has been funded largely by the Great Lakes Restoration Initiative, a project of USGS and the U.S. Environmental Protection Agency. Past loon research efforts have been funded by the Wisconsin Department of Natural Resources.

Meyer studies mercury

Meyer has studied Wisconsin loons' exposure to mercury for 22 years. Of wild-life species tested, common loons have the highest level of exposure because they spend all of their time on the water except when incubating eggs and in most habitats, they almost exclusively eat fish.

"Fish magnify the methyl mercury," Meyer says.

Mercury is a naturally-occurring element; however, its level has increased in Wisconsin aquatic systems over the past



Look for the loon on your tax form. You can donate to help Wisconsin's endangered species. Each dollar from citizens who donate funds by checking a line on their income tax form or who make a direct contribution is matched by a dollar from the state's general purpose fund.



STEPHEN J. LANG

LoonWatch is one program that trains volunteers to help protect loons and their habitats, track loon populations, and educate people about loons. It also sponsors research and education about loons.

100 years due to industrial activity such as coal burning for electricity and incineration of industrial wastes. Mercury in the air settles into water or it can be washed into water from the land. Micro-organisms can change it into methyl mercury, a highly toxic form that can build up or bioaccumulate in fish and animals that eat fish.

In one study, he and colleagues examined mercury in lakes in four northern Wisconsin counties — Vilas, Oneida, Forest and Iron. They found that concentrations in the blood of Wisconsin loons declined between 1992 and 2000 and increased from 2002 and 2010.

Meyer attributes the increase in mercury concentrations to a change in lake hy-

drology because of an ongoing drought in northern Wisconsin that could have resulted in increasing the rate of methylation of mercury that had already been deposited. He notes that this phenomenon may be more a consequence of regional hydrology, not necessarily more mercury entering the environment.

"A small portion — less than 10 percent — of our loon population is exposed to levels of mercury in their food that poses a toxicity risk. This differs from New England and the Canadian Maritimes where larger proportions are exposed to levels associated with reduced reproduction," he explains.

Some studies have found negative effects of certain mercury exposure levels



STEPHEN J. LANG

on common loon reproduction, hatching rates, immune function, behavior, oxidative stress and neural histology.

Wisconsin and the neighboring states of Minnesota, Michigan and Illinois have imposed mercury emissions reduction rules. Wisconsin coal-burning electric utilities are required to cut mercury emissions by over 70 percent by 2015.

As for future research, Meyer will synthesize his and others' work on a multitude of stressors that impact loons breeding in Wisconsin, including botulism, lead fishing tackle, climate change, mercury and development on lakes, with the goal of identifying which factors are most important to loon conservation. Fifty loon citizen scientists, a group comprising the Northwoods Loon Protection Program, assist Meyer in his research. The citizen scientists help monitor loon productivity on over 75 lakes in northern Wisconsin and identify critical nesting habitat.

Visit <http://dnr.wi.gov/topic/wildlife/habitat/research/citizenmonitoring.html> for more information.

Unraveling other loon mysteries

Scientists at the Loon Project are searching for answers to other questions. Dr. Walter Piper studies the territoriality of common loons. Dr. Jay Mager analyzes yodels used for territory defense. They and others are researching topics like territorial takeover, fatal fighting and prospecting by non-breeding loons.

In a study of artificial nesting platforms, they found "a dramatic increase

in hatching success among loons using platforms compared to loons using shoreline sites, chiefly because raccoons and other egg predators rarely swim out to floating platforms to consume loon eggs." But they also found "higher rates of aggression and territorial takeover on territories with platforms, indicating a greater likelihood of eviction for breeders on such territories."

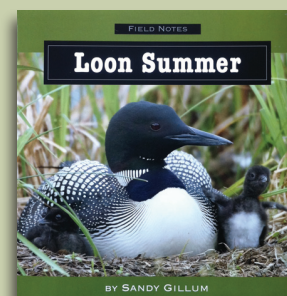
Why do scientists study loons?

"Loons are a good indicator of a lake's ecotoxicology and health. By observing loons' behavior, we can monitor a lake's health because loons feed almost exclusively on fish," says East. "They are effectively at the top of the food chain and represent everything that's going on below, including the effects of chemical compounds like PCBs and mercury that pile up in fatty tissues, organs, muscle, blood and feathers. When a loon eats fish, the loon is ingesting compounds that biomagnify as they move through the ecosystem."

Loons also intrigue non-scientists.

"People associate loons with the Northwoods. People in Wisconsin have an affinity for beauty," says East. "Loons sing loudly in the night unlike mergansers that don't do much more than grunt. People have a truly emotional connection to loons because they are very alluring. They are a symbol of the north." ■

Glenda C. Booth is a freelance environmental writer from Alexandria, Va. She became interested in Wisconsin loons after studying the effects of the BP oil spill disaster on loons along the Gulf Coast.



Loon Summer: Field Notes

If you enjoy learning more about loons and love loon photography, check out Sandy Gillum's book, *Loon Summer*. The book follows a territorial pair of common loons who spend their summers on a northern Wisconsin lake and go to extraordinary measures to protect their chicks. Woven into the tale is the thread of responsible stewardship. Gillum, an ecologist, writes, "My year does not begin January 1st, but begins with the first calls of the loon in springtime. What a wonderful new year celebration!"

The book was published in 2008 by Field Notes Press in Eagle River (ISBN: 978-0-9801201-0-3).

Learn more about loons

- Visit websites for The Loon Project <http://www1.chapman.edu/~wpiper/index.html> and the Biodiversity Research Institute, briloon.org
- There are five loon species in North America: The common, red-throated, Pacific, yellow-billed and Arctic. For more information, visit audubonbirds.org/ and search "loon."

Learn more about mercury and its effects on the environment

Visit epa.gov/mercury/about.htm

Help loons

Visit the LoonWatch website at northland.edu/sigurd-olson-environmental-institute-loon-watch-sigurd-olson-research-award.html

Visit the Earthwatch Loon Project in the Gulf of Mexico at earthwatch.org/exped/paruk.html

Loon calls

http://www.allaboutbirds.org/guide/Common_Loon/sounds

http://blog.syracuse.com/indepth/2008/07/audio_hear_the_calls_of_the_co.html



Lisa Gaumnitz

CAVE

State bat scientists go underground this winter to search for a deadly bat disease that is closing in on Wisconsin caves and has already killed between 5.7 to 7.7 million bats in the eastern United States and Canada. White-nose syndrome, so-called because the fungus leaves a powdery white fuzz on hibernating bats' noses, ears and wings, kills 90 to 100 percent of bats in contaminated caves.

Keeping Wisconsin bats healthy.

Starting this month, Jennifer Redell, Heather Kaarakka and Paul White will squeeze through critter-sized cave openings, belly crawl through pitch black tunnels, and paddle through water in mines in search of a deadly bat disease that's getting ever closer to Wisconsin.

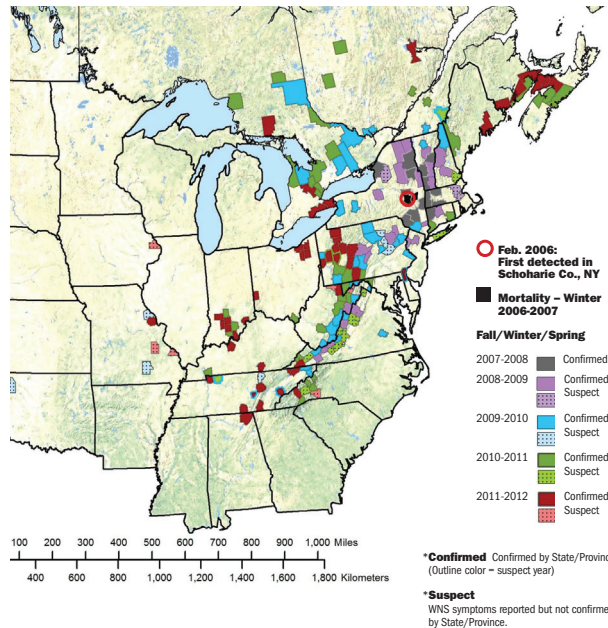
DRAMA

Coming upon clusters of hibernating bats, they'll look for fuzzy white noses — a tell-tale sign of the disease, white-nose syndrome — photograph the bats, and leave the way they came. They and fellow staff of the Department of Natural Resources' Wisconsin Bat Program will repeat this routine most days through February and March, searching dozens of caves and mines in Wisconsin.



DNR FILE

WHITE NOSE SYNDROME (WNS) OCCURRENCE BY COUNTY/DISTRICT IN 2012* (OR PORTIONS THEREOF)



It's a mission not for the faint of heart nor for the claustrophobic — but one bat crew members take on because they know they are in a race to save Wisconsin bats. White-nose syndrome has killed 5.7 to 7.7 million bats in the past five years in the eastern United States and Canada. The fungus causing the disease was documented in 2012 within 30 miles of Wisconsin in a popular cave in northeastern Iowa. The disease has no known control nor cure though researchers are working furiously to find both.

"The disease is unprecedented and unbelievably devastating," says Redell, DNR's cave and mine specialist. "We are seeing the most precipitous decline in Northern American wildlife in recorded history."

High stakes at home and around the globe

"We stand to lose half of our bat species," says Paul White, a DNR conservation biologist. "And that is a horrific prospect, not just for bats, but for the health of some of our most sensitive ecosystems and for the agricultural and forest industries that depend on the free pest control that bats provide."

Bats are voracious insect eaters — a single female who is nursing can eat up

but also regionally, and increasingly, globally.

"Wisconsin has three of the largest little brown bat hibernacula in the world because populations in the eastern United States have plummeted since the arrival of white-nose syndrome in 2006," White says.

The discovery in Iowa underscores that the fungus is still on the move, says Richard Geboy, Midwest regional white-nose syndrome coordinator for the U.S. Fish & Wildlife Service. And the fact that the fungus was detected prior to the onset of white-nose syndrome "should serve as a warning to all of us that the fungus could be anywhere and is still on the move to new locations."

The good news for Wisconsin, Geboy says, is the state is among the places where exciting research into the disease is occurring, and the state has taken "proactive" efforts to protect its bats. These efforts include categorizing the disease as an invasive species, a designation that allowed the state to act quickly to enact steps aimed at slowing the introduction of the disease here.

"Our first efforts must be to do everything within our capabilities to prevent it from arriving," Geboy says. "Fortunately, Wisconsin has very strong poli-

cies preventing the introduction via human transmission. Also, Wisconsin has been involved in the preparation of the National Plan for managing white-nose syndrome, and DNR employees have been active participants on a number of committees at the national level."

to her body weight in insects every night — and help keep flying crop and forest pests and mosquitoes in check. A recent national study estimated the insect-eating services that bats provide are worth between \$658 million to \$1.5 billion alone for Wisconsin's agricultural industry.

Wisconsin has one of the highest concentrations of hibernating bats in the Midwest, with up to 300,000 bats — some from the neighboring states of Illinois, Indiana, Minnesota, Iowa and Michigan — spending their winters here. So any disease affecting Wisconsin's hibernacula has far reaching impacts on the summer landscape here

cies preventing the introduction via human transmission. Also, Wisconsin has been involved in the preparation of the National Plan for managing white-nose syndrome, and DNR employees have been active participants on a number of committees at the national level."

When being awakened early can be deadly

White-nose syndrome is named after the powdery white fuzz that can develop on hibernating bats' noses, ears and wings after infection with the fungus *Geomyces destructans*. Bats hibernating near cave entrances where it's colder or bats flying around outside at night are other signs of the disease.

The disease causes bats to awaken more often while they are hibernating, thus burning up the critical stores of fat they need to make it through winter. Bats can burn 30 to 60 days-worth of fat if they are woken up or disturbed.

The disease has been found to spread bat-to-bat and cave-to-bat. The fungus/



Since it was first discovered in 2006, WNS has infected seven species of insect-eating bats in the northeastern and southern United States. White-nose syndrome poses a serious threat to the survival of cave bats in Wisconsin and to the state's ecosystems and economy.

MARVIN MORIARTY/USEFWS



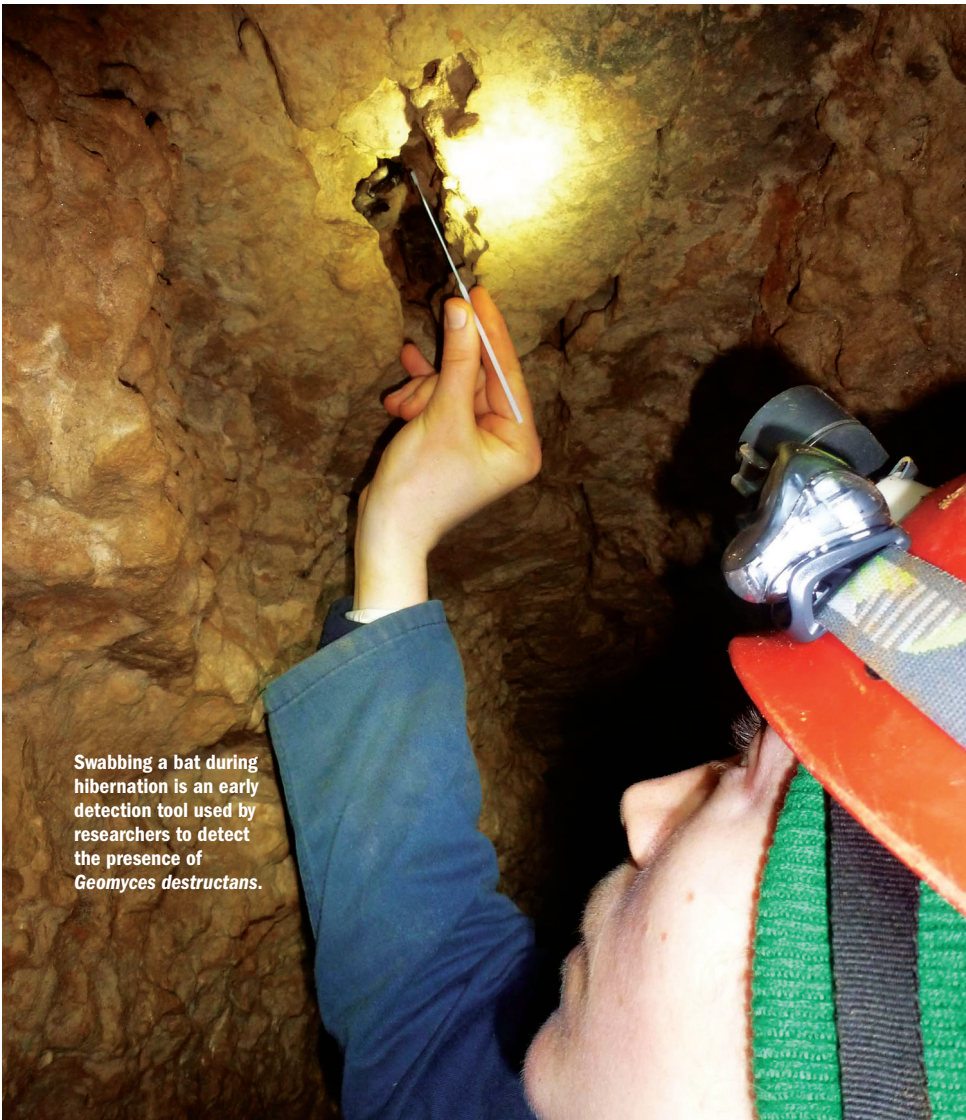
Gathering baseline data on healthy Wisconsin bats may be key for understanding how Wisconsin bats respond to the disease and could inform possible recovery efforts.

DNR FILE

spores persist in the soil and on rock surfaces of bat hibernacula, which is why Wisconsin has strict decontamination measures for caving equipment and clothing to minimize the risks of unintentional human transmission. Since white-nose syndrome was detected in Albany, N.Y., in 2006, the disease has infected 19 states and four Canadian provinces.

DNR's bat crew, in addition to working regionally and nationally on the disease, has put in place a comprehensive effort to learn more about Wisconsin bats, to keep the disease from being introduced here, to slow its spread if it arrives, and to rebuild bat populations if the disease pushes colonies or species to extinction. The work is all the more impressive because they have done this on a shoe-string budget, patching together federal grants and funding.

They've built working relationships with landowners of mines and caves and have helped them take actions to keep the disease at bay, like limiting human access to cave sites and training people



Swabbing a bat during hibernation is an early detection tool used by researchers to detect the presence of *Geomyces destructans*.

DNR FILE



DNR FILE

DNR works with landowners to identify caves for closure at times to prevent human traffic and keep disease at bay.

how to clean equipment and gear that have been in or near a cave or mine.

In June 2011, Wisconsin added another important layer of protection when it added four cave bat species to the state threatened species list. The new listing makes it illegal for people to kill, transport or possess bats without a valid permit. The Department of Natural Resources also has put in place administrative rules that give the department authority to manage bats and establish disease prevention and control options.

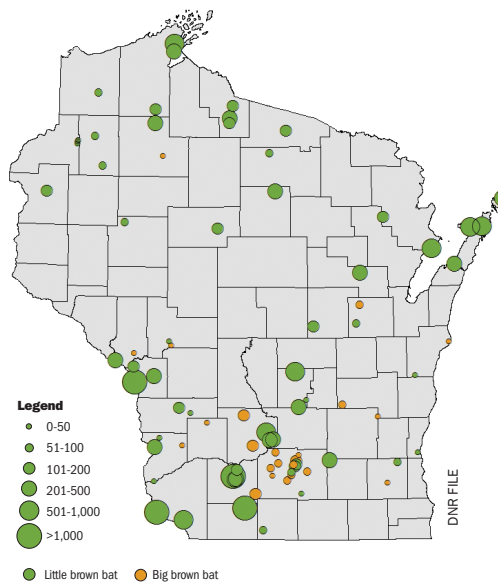
Citizens to the bat rescue

"Perhaps most importantly, the Wisconsin Bat Program reached out to volunteers for help, and to property owners whose barns, attics and caves are harboring bats, and enlisted them in the fight to save Wisconsin bats," Redell says.

Volunteers have helped the bat crew locate the bat houses, barns, attics and other sites where bats roost over the summer. They also use special hand-held ultrasound equipment and GPS technology to help "listen" for bats and record their numbers and locations.

Since 2010, more than 400 people have told the Department of Natural Resources of roosts on their property, or roosts they know of, adding more than 100 new monitored sites to the existing bat

WISCONSIN BAT ROOSTS



roost database, Kaarakka says.

In addition, more than 1,000 people have gotten acoustic survey training and used the equipment to help detect bats.

"In addition to gathering baseline data about bats in Wisconsin, summer roost monitoring is important because the availability of summer roosting habitat limits populations of bats," Kaarakka says.

Other outreach efforts have included sponsoring a bat festival in May in Madison that has drawn hundreds of people to get a close up look at bats, build bat houses, and learn more about the world's only truly flying mammal.

"We've tried to do a lot of education and outreach in the last two years," Redell says.

With so many roosts to monitor and few staff to conduct counts, volunteers are crucial to gathering the needed data to help understand Wisconsin's bat populations, and their habitats and habits. Soberingly, their information will be critical for helping the state proceed with recovery plans should white-nose syndrome arrive

and lead to the collapse of Wisconsin cave bat colonies.

On the leading edge of WNS and research

The Department of Natural Resources has been closely involved with researchers and other state biologists throughout North America in order to maintain and incorporate the most current knowledge of the disease and update the state's response plan. The National Wildlife Health Center in Madison and the University of Wisconsin-Madison have played big research roles as well; the health center, in fact, determined *Geomyces destructans* as the cause of white-nose syndrome.

Data collected by DNR's bat crew and volunteers over the last few years is starting to pay dividends in the lab and on the ground. The bat crew's survey of 120 sites last year for signs of white-nose syndrome yielded a clean bill of health for the bats and also information including the number of bats in a hibernaculum, temperature and humidity and other conditions within that hibernaculum.

UW-Madison wildlife ecology researchers are plugging that data into computer models to help predict how and which Wisconsin hibernacula will be reached by the disease, depending on whether the fungus advances from the north, from Canada, or from the south, from places like Iowa.

That information, along with our baseline data, will help us determine where to focus our disease management, and conservation and recovery efforts, Redell says.

The Department of Natural Resources is partnering with the USGS National Wildlife Health Center and other states in research to help determine temperature and humidity conditions in underground bat hibernacula that allow the fungus to thrive. The information will help the Department of Natural Resources assess which hibernacula may support development of white-nose syndrome in hibernating bats and whether manipulating conditions within certain hibernacula may work to keep the disease at bay, or reduce the number of bat deaths, Redell says.

The Department of Natural Resources also is partnering with the University of California-Santa Cruz and other states



Volunteers review the acoustic monitoring manual at training.

LICIA JOHNSON/NORTH LAKE LAND DISCOVERY CENTER

to better understand how and when the fungus spreads and how it affects different bat species. Such results will help the department understand the impact on bats in Wisconsin and the risk of local extinction or extirpation as well as how effective certain management actions are, including closing caves and treating bats, Redell says.

And bat crew members, in research with the federal wildlife agency, an environmental consultant and other states, will be placing metal bands on the wings of bats to allow for easier tracking over time and to assess how such handling affects the bats. Collectively, such information will help DNR staff track bats that survive white-nose syndrome, and also understand how stressful being handled during hibernation is for the bats.


Next steps if WNS is found

The Department of Natural Resources' exhaustive survey in 2010 of 120 possible hibernacula for signs of white-nose syndrome turned up nothing, as did last year's search of 120 sites where bats were most likely to be found.

If white-nose syndrome is found, DNR staff and the landowner will work together to implement a management strategy specific to the site and based on a variety of factors. Management options vary and include decontamination, cave and mine access management, rehabilitation of sick bats and disease treatment, Redell says.

"If we find it, we have an implementation strategy to guide us," she says. "A science advisory committee as well as stakeholders will look at the different variables before making recommendations. We may respond differently if it shows up at an isolated site in northern Wisconsin, or a tourist cave with only 20 bats. We've developed a suite of potential management and control options but won't know exactly what we're going to do until we know what we're facing."

Bat crew members have been expecting to find the disease every year since 2009.

"We go in every year hoping for the best but prepared for the worst. Every year we don't find it allows time for more research to help get ahead of the disease," Redell says. 

Lisa Gaumnitz is a public affairs manager for the Wisconsin Department of Natural Resources.

IN MEMORIAM

Dave Redell became the Wisconsin Department of Natural Resources' first bat ecologist in 2004, created Wisconsin's Bat Program and worked to enact vanguard regulations to protect Wisconsin bats. He also developed a plan that will guide the state's response to white-nose syndrome, a disease devastating hibernating bat populations in North America.

The Bat Program includes statewide data collection using citizen scientists, surveillance for the deadly bat disease white-nose syndrome, monitoring of maternity roosts and a comprehensive education and outreach effort. Redell contributed his own money to start the Wisconsin Bat Conservation Fund, an endowment to support these bat conservation efforts into the future.

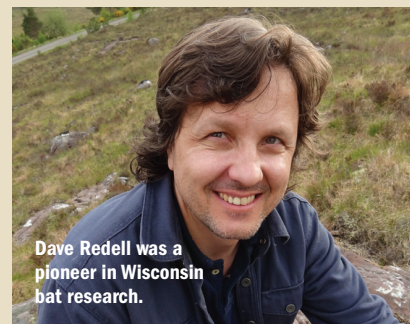
He was highly regarded by national, regional and local partners, served as vice president of the Midwest Bat Working Group and recently initiated the first Wisconsin Bat Festivals. Redell was recently honored with the prestigious Silver Eagle Award from the U.S. Fish & Wildlife Service and with a Lifetime Achievement Award from the Midwest Bat Working Group.

Though he lost his life to brain cancer in August 2012, Redell did not want to be recognized as a person battling cancer. Instead, he lived the years since his 2002 cancer diagnosis with an intensified passion for his work and a heightened sense of urgency to accomplish what he could, given a shortened timeframe.

He had a unique gift for inspiring instant camaraderie with people and those who interacted with him went away with a new appreciation for bats. Redell's passion, dedication, outside-the-box approach, warmth and humor impacted and inspired those who knew him. It is the hope of his family and friends that his legacy will continue to wing its way across evening skies in the little bodies of bats long into the future.

Contributions to the Bat Conservation Fund are tax-deductible and can be made through the Natural Resources Foundation of Wisconsin, Attn: Wisconsin Bat Conservation Endowment Fund, P.O. Box 2317, Madison, WI 53701 or by donating online at wisconservation.org

– Jennifer Redell



Dave Redell was a pioneer in Wisconsin bat research.

JENNIFER REDELL

GET INVOLVED

Help save Wisconsin bats! Here are critical needs to help keep cave bats flying in Wisconsin's night sky and keep agricultural and other winged pests in check. Find more information about all of these opportunities at wiatri.net/inventory/bats/ or dnr.wi.gov/topic/wildlifehabitat/bats.html

- Help boost the shoestring budget for bat work: Limited public dollars are available for efforts to save bats from white-nose syndrome, which makes private contributions for such work even more important. Separate funds have been set up to meet short-term and long-term needs.

The Bat Conservation Fund is an endowment; about 10 percent of the endowment goal of \$2 million has been raised. Donations are tax-deductible and can be made through the Natural Resources Foundation of Wisconsin, Attn: Wisconsin Bat Conservation Endowment Fund, P.O. Box 2317, Madison, WI 53701 or by donating online at wisconservation.org

The Bat Conservation Society of Wisconsin, Inc. is an annual membership where groups and citizens can support bat projects that need immediate funding. Specifically, these funds will be used for white-nose syndrome research, landowner support in white-nose syndrome prevention and control, surveillance, inventory, monitoring, applied management, and education about the benefits of bats. Donate to this fund by sending a check to the DNR/Endangered Resources Bureau, 101 S. Webster St., PO

Box 7921, Madison WI 53707-7921. Write "Wisconsin Bat Society" in the memo line.

- Volunteer to monitor bats: Learn how to use a bat detector to help bat biologists count and locate Wisconsin bats, or watch a known bat roost in the summer to help state researchers get a better handle on bat colony numbers and locations of bat roosts.
- Build a bat house: Get easy-to-follow instructions to build a bat house that will help provide a summer roost for bats while helping keep a check on insect pests in your yard and summer garden.
- Keep bats out of your buildings: As their roosting habitat declines, bats may seek refuge inside your house, bell towers or other buildings. Get tips on getting them out of your house safely and avoid doing this work between June 1 and Aug. 15, when bat pups are born and nursing in their roosts. State law prohibits activities to try to shut bats out of buildings during this time.

– Lisa Gaumnitz

2013 WISCONSIN HUNTING AND TRAPPING SEASONS

Get your regulations faster!

Visit dnr.wi.gov to view and print regulations up to one month before they are available in hard copy. Some seasons may be subject to change. Consult the hunting regulation pamphlet(s) or dnr.wi.gov before going hunting.

DEER*

Bow	Sept. 14 - Nov. 21 & Nov. 23 - Jan. 5, 2014
Youth Deer Hunt	Oct. 5 - 6
Gun	Nov. 23 - Dec. 1
Muzzleloader	Dec. 2 - Dec. 11
Statewide Antlerless Hunt	Dec. 12 - 15
CWD Holiday Hunt	Dec. 24 - Jan. 5, 2014
Gun Deer Hunt for Hunters with Disabilities ▲	Oct. 5 - 13

* Check the 2013 Wisconsin Deer Hunting Regulations for a complete set of dates and unit designations.

▲ More information is available at dnr.wi.gov, keyword: "disabled deer hunt."

GAME BIRDS

Pheasant

Statewide	Oct. 19 (noon) - Dec. 31
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Bobwhite Quail

Statewide	Oct. 19 (noon) - Dec. 11
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Ruffed Grouse

Zone A	Sept. 14 - Jan. 31, 2014
Zone B	Oct. 19 - Dec. 8.

Sharp-tailed Grouse

Oct. 19 - Nov. 10

Hungarian Partridge

Statewide*	Oct. 19 (noon) - Dec. 31
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* Closed in Clark, Marathon and Taylor counties

Crow

Statewide	Jan. 18 - Mar. 20
	Sept. 14 - Nov. 21

MIGRATORY BIRDS

Woodcock

Statewide	Sept. 21 - Nov. 4
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Mourning Dove

Statewide	Sept. 1 - Nov. 9
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WATERFOWL

Canada Goose

Early Goose Season	Sept. 1 - 15
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Waterfowl

Season dates for waterfowl vary annually. Duck and regular season goose regulations will not be available until August.

TURKEY

Youth Turkey Hunt

Open Zones

Spring

Apr. 6 - 7

Period A	Apr. 10 - 16
Period B	Apr. 17 - 23
Period C	Apr. 24 - 30
Period D	May 1 - 7
Period E	May 8 - 14
Period F	May 15 - 21
Statewide	Sept. 14 - Nov. 21
Zones 1-5	Dec. 2 - 31

Fall



BEAR

Zone C where dogs are not permitted:

- Sept. 4 - Oct. 8
- with aid of bait
- with all other legal methods not utilizing dogs

All other zones where dogs are permitted:

- Sept. 4 - 10
- with aid of dogs only
- Sept. 11 - Oct. 1
- with aid of dogs
- with aid of bait
- with all other legal methods
- Oct. 2 - 8
- with aid of bait
- with all other legal methods not utilizing dogs

WOLF

Hunting and Trapping

Oct. 15 - Feb. 28, 2014 (in zones)

SMALL GAME

Cottontail Rabbit

Northern Zone

Sept. 14 - Feb. 28, 2014

Southern Zone

Oct. 19 (noon) - Feb. 28, 2014

Squirrels (Gray and Fox)

Statewide

Sept. 14 - Jan. 31, 2014



PROTECTED SPECIES

Hunting protected species, such as badger, woodchuck, jackrabbit, moose and flying squirrel, is prohibited. See 2013 *Small Game Regulations* for more details.

Continued on page 17 →

Get in the game!

Mentored Hunting Licenses

Adults and youth age 10 or older who have not completed Hunter Education are eligible to hunt through the Mentored Hunting Program. Visit dnr.wi.gov, keyword: "mentored hunting" for more information.

Reduced License Fees

Youth ages 10 and 11, first-time hunters, and those who have not hunted in the preceding 10 years are eligible to purchase hunting licenses at a reduced fee. Hunters who recruit three first-time hunters, trappers, or anglers are also eligible for reduced fees.

FURBEARERS

Coyote

Hunting	Continuous open season
Trapping	Oct. 19 - Feb. 15, 2014

Beaver

Trapping Only

Zone A (Northwest)	Nov. 2 - Apr. 30, 2014
Zone B (Northeast)	Nov. 2 - Apr. 30, 2014
Zone C (South)	Nov. 2 - Mar. 31, 2014
Zone D (Mississippi River)	Day after duck season closes to Mar. 15, 2014

Mink

Trapping Only

North Zone	Oct. 19 - Feb. 28, 2014
South Zone	Oct. 26 - Feb. 28, 2014
Winnebago Zone	Oct. 26 - Mar. 15, 2014
Mississippi River Zone	Day after duck season closes or Nov. 11, whichever comes first, to Feb. 28, 2014.

Muskrat

Trapping Only

North Zone	Oct. 19 - Feb. 28, 2014
South Zone	Oct. 26 - Feb. 28, 2014
Winnebago Zone	Oct. 26 - Mar. 15, 2014
Mississippi River Zone	Day after duck season closes or Nov. 11, whichever comes first, to Feb. 28, 2014.

Fox (Red and Gray)

Hunting and Trapping	Oct. 19 - Feb. 15, 2014
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Bobcat

Hunting and Trapping - Permits required

Period 1	Oct. 19 - Dec. 25
Period 2	Dec. 26 - Jan. 31, 2014

Fisher

Trapping Only - Permits required

Various zones	Oct. 19 - Dec. 31
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Otter

Trapping Only - Permits required

North Zone	Nov. 2 - Apr. 30, 2014
Central Zone	Nov. 2 - Mar. 31, 2014
South Zone	Nov. 2 - Mar. 31, 2014

Raccoon

Hunting and Trapping

Resident	Oct. 19 - Feb. 15, 2014
Non-resident	Nov. 2 - Feb. 15, 2014

Opossum, Skunk, Weasel, and Snowshoe Hare

No season limits, bag limits, size limits, or possession limits, but a license is required.



Permit Application Deadlines

Horicon Zone Goose Season	August 1
Fall Turkey	August 1
Sharp-tailed Grouse	August 1
Bobcat	August 1
Otter	August 1
Fisher	August 1
Wolf	August 1
Spring Turkey	December 10
Bear	December 10

Timing of Drawings

Horicon Zone Goose Season	Late August
Fall Turkey	Late August
Wolf	Early September
Sharp-tailed Grouse	Mid-September
Bobcat	Mid-September
Otter	Mid-September
Fisher	Mid-September
Spring Turkey	Late January
Bear	Early February

To check your drawing status go to:
dnr.wi.gov

Questions?

Contact the DNR Call Center toll-free

1-888-WDNR INFO (1-888-936-7463) • local 608-266-2621

Staff are available 7 days a week from 7:00 A.M. until 10:00 P.M.

or visit the website at:

dnr.wi.gov

Spanish and Hmong are spoken

Txhais lus Hmoob thoj hu tus xovtooj 1-888-936-7463. Muaj txhais lus Hmoob txhua hnuv, Monday txog Sunday, 7:00 sawv ntov 10:00 tsaus ntuj.

El personal también está disponible para asistir a clientes de habla hispana en nuestro número gratuito. El personal que habla español está disponible 7 días a la semana a partir de la 7:00 de mañana hasta 10:00 p.m.

The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240.

The Department of Natural Resources is committed to serving people with disabilities. If you need this information in an alternative format, please call 608-266-8204.

AVOIDING WINTERKILL

A person wearing a tan jacket, blue jeans, and a black beanie is bent over, operating a blue aerator on a frozen lake. The aerator has a motor and two large white pipes. The lake is covered in snow and ice, with a line of trees in the background.

**Keeping fish
alive during
the harshest
season.**

Story and photos by Kevin Harter

On a clear, cold mid-winter morning Brian Spangler, DNR fisheries technician and a crew of DNR workers and Chetek Lakes Protection Association volunteers trudge across frozen Prairie Lake on the 20th annual rescue mission to install aerators and create open water before oxygen levels plummet to the point that fish suffocate under the ice.

"Some lakes, well, you just know are going to winterkill," said Spangler as augers and chainsaws cut into six inches of ice and ATVs pulled three, 3-horsepower, 230-volt surface aspirating aerators into place.

"Smaller, shallow, fertile lakes create the perfect storm for winter fish kills," Spangler said.

Prairie Lake, which has been aerated since 1992, is one of them. It is part of the Chetek Lakes Chain, a 3,764-acre impoundment fed by a large, mostly agricultural watershed, which forms the headwaters of the Chetek River in north-



Left: Brian Spangler, DNR advanced fisheries technician, and Travis Holte, DNR fisheries technician, pull the first aerator into place before anchoring it with cement blocks, plugging it in and turning it on.

Right: Terry Lee, of Chetek, one of several Chetek Lakes Protection Association volunteers, places one of the poles used to string the rope fences with reflectors to warn people of the aerator and open water.

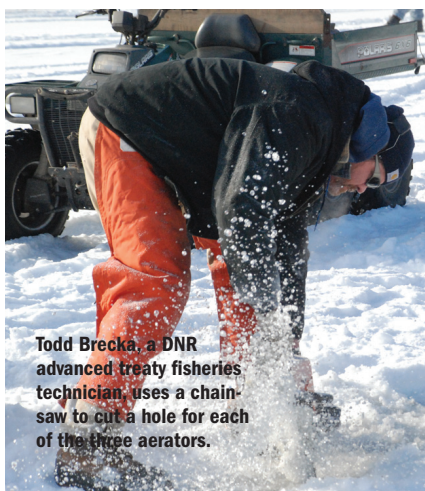
west Wisconsin. The 1,619-acre lake is the largest in the chain, whose depths range from 12 to 22 feet.

"What we are doing here today will add oxygen to the water all winter and help prevent winterkill of fish and other organisms," Spangler said.

Winterkill is a natural process occurring when fish don't have enough oxygen. In ice capped winters, most of this oxygen comes from aquatic plants. However, when the ice and snow cover is thick, plants cannot get the sunlight needed, and instead of producing oxygen, die and decompose.



Mark Stanley, DNR fisheries technician, drives while Randy McDonough and Ron Komro, both DNR advanced wildlife technicians; lay down the safety barrier rope to cordon off a section of Prairie Lake where three aerators were installed.



Todd Brecka, a DNR advanced treaty fisheries technician, uses a chain saw to cut a hole for each of the three aerators.



Fish kills follow. How many and how fast depends on the depth of the lake and the types of fish it contains.

Trout require the most oxygen, followed by bluegill, largemouth bass and walleye, according to DNR fisheries managers. Crappies, carp, northern pike and yellow perch can tolerate less oxygen. Bullheads and fathead minnows require the least amount of oxygen to survive.

Statewide, the Department of Natural Resources works with, and grants permits annually to cities, lake associations, park districts and similar groups

to install and maintain aerators on some lakes.

Increased pressure on large, recreational lakes has also had a domino effect, Spangler said. Because of it, more people have looked to "marginal" lakes for their cabin and fishing pleasure.

Aeration improves the quality of life on and around those lakes. Since it began in the northwest region in 1977, aeration has successfully been done on 19 lakes in Barron and Polk counties, totaling more than 3,000 acres.

"It's a big thing we do to increase angling opportunities and improve recreational opportunities," Spangler said. "Aeration has greatly reduced or eliminated winterkill and improved the sport fishing opportunities."

Kevin Harter is the public affairs manager for the DNR's Northern Region.



One of several warning signs located at all Prairie Lake landings.

OPEN WATER

Outdoor enthusiasts, including skiers, snowshoers and snowmobilers who frequent aerated lakes should take note and proceed with caution on aerated lakes. Such lakes are clearly marked — as required by state law — at public access points and the open water is cordoned off with fencing, rope and reflective tape.

Story and photos by Lee Fahrney

LET'S DO BRUNCH

OR IS IT BRUSH?

LET'S HEAR IT
FOR GOATS FOR
BRUSH CONTROL!

When it comes to preservation of Wisconsin's natural resources, one doesn't often think of goats as great protectors of the environment. But as the participants in the Goats for Brush Control Field Day at the Yellowstone Lake State Wildlife Area (SWA) discovered, these guys are enthusiastic about sweeping away all manner of noxious weeds and woody invaders.



Kiko and Boer goats enjoy a woody lunch at the Yellowstone Lake State Wildlife Area near Blanchardville in Lafayette County. The goats are selected for hardiness, good mothering instincts and an ability to survive on grass and brush only.

A research project, spearheaded by Professor John Harrington of the University of Wisconsin-Madison Department of Landscape Architecture – School of Natural Resources, aimed to explore the use of goats to reverse the negative impact of unwanted vegetation in oak openings and woodlands.

The Yellowstone Lake SWA presented as a prime candidate for the study. After the 2,000-acre property was logged in 2007 in an attempt to restore oak savanna, extensive growth of woody vegetation led property managers to explore ways to ensure the viability of the effort.

Harrington offered background information noting that oak savanna once covered 27-33 percent of Wisconsin, most of it concentrated in the southern part of the state. He told the group of approximately 50 people that the combination of fire and grazing is especially helpful.

"When fire and grazing is removed, brush takes over," he told the group. He pointed out the combination of the two methods can help landowners improve the value of their property. "This allows property owners to expand their range," Harrington opined, stating that "hundreds of thousands of acres in Wisconsin" would benefit.

Wisconsin Department of Natural Resources wildlife biologist Bruce Folley said Scottish Highland cattle were once used to deal with the brushy vegetation that was taking over.

"They worked just fine but were harder to care for than goats and were also harder on the land," he said. "I think the ultimate would be a combination of different animals due to their different habits."

There were 86 goats on site, according to Ben Robel of Vegetation Solutions LLC, who provided the animals for the project. He refers to his animals as "meat" goats, most of which are of the Kiko breed.

"I like the Kiko because of its hardiness, good mothering ability and ability to survive on grass and brush only," Robel said.

Robel likes the grazing concept because he views it as a natural process in ecosystems.

"They can get into hard-to-walk areas, thrive on unwanted vegetation and circumvent the need for chemicals," he said. "The practice also allows for a gradual process instead of a drastic change with chemicals, chainsaws or forestry mowers."



Ben Robel of Vegetation Solutions watches over a herd of goats at the Yellowstone Lake SWA. The goats are part of a UW-Madison and Wisconsin Department of Natural Resources research project to determine the best way to control invasive weeds and woody plants on oak savannas and other sensitive habitats.

Participants in the field day experience brought with them myriad perspectives. Ron and Sally Niemann of nearby Blanchardville had provided some of the Scottish Highland cattle for the earlier phase of the grazing project.

"We know that land and the goal of the project," said Sally. "I'm always interested in seeing what the goats can do."

The former owner of a herd of milking goats, Niemann declared that goats are a good fit for the Yellowstone project for their ability to climb and go almost anywhere. "That particular area is quite steep," she said. "They would be ideal around bluffs."

Niemann also noted that goats do a good job keeping unwanted vegetation in check, including some of the least attractive plants for a grazing animal, such as multiflora rose.

"Goats are terrific browsers," she said.

Goats will scour the countryside for any number of shrubs from which they derive up to 80 percent of their diet, according to UW-Madison graduate student Katie Baumann. In addition to multiflora rose, other tree and shrub species attractive to goats include American elm, basswood, blackberry, dogwood,

honeysuckle and prickly ash. Baumann said goats will also dine on invasive weeds such as garlic mustard and wild parsnip.

Robel noted that goats have a large liver which allows them to better tolerate toxins. However, the goats do have their culinary limits; they turn up their muzzles at walnut trees!

The protocol requires five replicate blocks of four acres each. Each block contains three "paddocks," said Baumann, divided into heavy graze, light graze and one control area.

"It takes 30 days to rotate through the paddocks," she concluded. "Fire is used only once during the year."

Elizabeth Lamb of New Glarus brought her two young daughters, Alivia and Brynna, to the event. She hoped to gather information about natural ways to manage the restored prairie on the family's property near New Glarus. As for 5-year-old Alivia, she was most impressed by, well, "the goats."

Catherine Bruner, field manager of the Lakeshore Nature Preserve on the UW-Madison campus, echoed Lamb's intentions. Rather than private property, however, she is caretaker of public land where she and her colleagues believe goat grazing has potential in managing the preserve — both for continued research potential and to reduce reliance on chemical and fossil fuel-powered equipment.

Folley is pleased with the outcome.

"I have a strong commitment to show public and private landowners and our neighbors what takes place in the wildlife area and to show them tools they can use to manage their lands," he said. "Once the research is done, producers can help to maintain grasslands and still turn a profit."



Professor John Harrington of the UW-Madison Department of Landscape Architecture discusses the value of grazing in promoting the succession of oak savanna.

Lee Fahrney is a freelance writer from Iowa County. He also serves as secretary of the Wisconsin Conservation Congress.



Have some winter

Wisconsin's state parks and forests take on a special beauty when covered by winter's white blanket of snow. Enjoy the winter scenery, get healthy exercise and have some fun by cross-country skiing on nearly 700 miles of groomed trails. Many clubs, ski teams and youth programs use Wisconsin's parks and forests to practice for races such as the American Birkebeiner.

Plus support green businesses while you do it!



Shelly Allness and Lisa Marshall

Photos submitted by Wisconsin Department of Tourism

Lifelong residents of Wisconsin know that an extended winter is all part of living in a four season Midwest state. The good news is that Wisconsin does winter right; celebrating the natural beauty of snow-covered trails and trees, taking advantage of frozen lakes for ice fishing, and safe passage on skis from shore to shore. Winter hiking and snowshoeing in a quiet forest takes on a peaceful and serene quality this time of year.

fun

Visitors and residents seeking outdoor silent sport recreation keep the state's tourism industry humming January through March. Most travelers discover that a winter escape also means lower prices and smaller crowds compared to the peak summer season. In addition, silent sports enthusiasts will find they share a deep appreciation for the state's natural resources with the more than 365 Travel Green Wisconsin (TGW)TM-certified tourism businesses. Read on for highlights of just a few TGW



Wisconsin ranks third in the nation for snowboarding and provides over 30 snowboarding facilities.



Take steps snowshoeing and lessen your carbon footprint when you travel.



The Pinehurst Inn in Bayfield is one of several Travel Green lodging options in Wisconsin.



Frozen waterfalls form the front door to this ice cave.

businesses anxiously awaiting your visit.

For travelers seeking rest and relaxation away from home that is easy on the environment, Travel Green Wisconsin™ makes that pursuit an easy one. For the past six years, TGW has been leading Wisconsin's tourism industry towards a more sustainable future. TGW encourages and recognizes tourism businesses that are taking steps to use less energy, reduce waste, protect our fish and wildlife, and keep our air and water clean. All while providing visitors with excellent customer service and a fun and memorable vacation experience.

Wolfsong Adventures in Mushing is one such winter tourism business. Located in Bayfield, Wolfsong has been providing premier dog sled tour experiences since 1997. Adventures range from a four-hour hands-on dog-focused experience to weekend or overnight camping trips. Learn to drive your own team or ride along with one of the guides.

Bayfield is the perfect escape for travelers who want a vacation that keeps the environment in mind. More businesses are Travel Green Wisconsin™-certified in Bayfield than any other community in the state. Not bad for a town of about 600. Local lodging properties such as the Pinehurst Inn, Hauser's Bayfield Cabin, and Artesian House set the gold standard for the tourism industry with their high scores reflecting their many and innovative green practices.

Many Travel Green Wisconsin™-

certified lodging properties throughout the state embrace winter, some even hang their hat on it by offering activities and rentals to keep guests outdoors, active and playing in the snow. Heartwood Conference Center and Retreat in Trego offers 20 kilometers of cross-country ski trails, snowshoe rentals and sledding. This historic property recently completed a new 20-room hotel to add to their five two-bedroom lake cottages, 10 four-bedroom duplexes and conference center.

In Sparta, Justin Trails is not only eco-friendly, they are also pet friendly. If skiing is your winter sport, this Sparta inn is your place. Bring your own dog or coax George, their Siberian Husky, on the 2K dog trail groomed for either skiing or skiing with your dog off leash.

Or consider Spur of the Moment Ranch in Oconto County located inside the Nicolet National Forest. Just as its name suggests, this property uses innovative practices to maintain its eco-credentials including the use of a large scale VermiComposting Center handling up to 200 pounds of compostable manure at its stables.

Skiers can find 22 kilometers of groomed trails at the Lakewoods Cross Country Ski Course just a few miles up the road. Nature centers also keep their doors open for visitors throughout the winter season, imparting a far different perspective on the state's native wildlife, plants and landscape from what some-



Cave of the Mounds has been a Travel Green member since 2006.

one might find in July or August. At the Kickapoo Valley Reserve, another Travel Green Wisconsin™-certified attraction, visitors can take an Ice Cave Hike (February 9) to rarely visited ice caves and frozen waterfalls. Guides treat participants to background on the Kickapoo Valley Reserve's geology, biology and history.


At Cave of the Mounds in Blue Mounds, nature's own heating system keeps this National Natural Landmark at a constant comfortable temperature, about 50 degrees, despite the freezing temperatures above ground. This cave is over one million years old, so grab your camera and head underground to the winter warmth. Cave of the Mounds has been a proud member of Travel Green Wisconsin™ since it was initiated in 2006. Bring your skis or snowshoes because nearby Blue Mounds State Park offers 10 miles of groomed trails to explore.

Wisconsin State Parks have long been a home for learning and nature conversation. Currently 65 state parks,

forests and trails have attained their TGW certification. They also happen to be a great source for some of the best groomed trails for cross-country skiing in the state. On February 9, strap on your skis and snowshoes and hit the candlelit trails at Lake Kegonsa State Park, Kohler-Andrae State Park and the Kettle Moraine State Forest.

New to cross-country skiing or snowshoeing? Rent first as a low-cost alternative to try it out. The newly TGW-certified Navarino Nature Center in Shiocton rents skis and poles for \$5 for those under 15 years and just \$10 for adults. With over 12 miles of groomed ski trails you're sure to get the fever for this exhilarating winter sport. Snowshoes are also available for rent at the center. Take them for a spin and experience silent sports at their best. The entire wildlife area is open to snowshoeing.

Skiers and hikers both will find the Travel Wisconsin snow conditions report to be a helpful tool to track the conditions of trails throughout the state. Winter in Wisconsin is a time to get out

and enjoy the gift of the state's changing seasons and the fun that a few feet of snow and a drop in temperature bring. Make it a win-win for the tourism industry and the state's natural resources by supporting Travel Green Wisconsin™-certified businesses. To find out who they are, visit TravelWisconsin.com 

Shelly Allness and Lisa Marshall work at the Wisconsin Department of Tourism.



Several state parks properties host candlelight ski nights throughout the winter.



Avoid the crowds and experience the Lake Superior shoreline from a different vantage — the ice — in the winter.



Enjoy winter by taking a walk on the wild side.



At your service

Stop by in person at a service center. Or save yourself a trip and call a DNR customer service representative toll free 1-888-936-7463 seven days a week from 7 a.m. to 10 p.m.

ROBERT MANWELL



The author, Crystal Caputo.

Day in the life of a customer service representative.

PHOTO SUBMITTED BY CRYSTAL CAPUTO

Crystal Caputo

"Department of Natural Resources, this is Crystal. May I help you?"

That's the start of a wonderful relationship I am about to have with a customer. One of the biggest rewards of my job as a customer service representative for the Wisconsin Department of Natural Resources is to know that by the time our relationship is over, my customer will have received the best service I can provide. And that's the way I treat every customer, every day.

My work day begins when I log in to the statewide call center system, put on my ear piece and the phone rings. It is a typical November day as hunters from around the state (and the nation) are calling to find out the latest about this year's deer hunting regulations. It doesn't matter to the customer that I am sitting in Oshkosh today. He just wants to know what he can harvest this year from his hunting land, wherever that may be.

I respond with a question. "What county and unit are you hunting in?"

"I'm in Crawford County hunting at an apple orchard," he replies.

So, here I am sitting in the northeast part of the state and Crawford County is in the southwest. I look up the deer management unit map and note that Crawford County is divided into two deer management units and the dividing line is Highway 61.

"So, are you east or west of 61?" I ask.

"I hunt at an apple orchard. You know, down the dirt road," he tells me.

"Do you live in Crawford County? What roads do you take to get to the apple orchard?" I ask.

"No," he says. "I live up north and I take the highways to the dirt road that takes me to the apple orchard."

In the meantime, I have been looking online for apple orchards in Crawford County. I discover that there are many. I start reading some of the orchard names off to him. None sound familiar. He then offers that the property is in his brother's name.

"Maybe I'll have to check with him and see if he knows the unit," he says.

I ask for his brother's name and type it into the Crawford County GIS land records database. I find a property and read him some of

the surrounding roads and cities.

"Yes," he says. "That's it!"

With his location established we are able to find the regulations for the area. He's excited to learn he can harvest a buck and an antlerless deer. As we end the conversation, he says, "Boy that is good because those three apple trees I planted 10 years ago have really grown up and the deer are in there all the time. So maybe I'll get a chance at one this year!"

Hmmm. No wonder I couldn't find the place – a three-tree apple orchard?

With that call cleared I am ready to move onto the remittances from the previous day's over-the-counter work and I have to get the counter ready for the day.

Before long my computer task bar starts flashing indicating that I have an internet chat to answer. Through our statewide CCAnywhere phone system, we receive typed chats/questions from all over the state. This time, a man is asking about hunting at Hartman Creek State Park. Using the DNR website I search "hunting in a state park." I copy the link for the park map so he can view it or print it out. I tell him that he needs to buy a state park vehicle admission sticker if he plans to park a vehicle in the park. State park stickers can be purchased at the parks, DNR service centers and at hunting and fishing license vendors around the state.

"Okay! Thanks for the info. I'm so glad you have this option to chat online. Love it!" he writes as he signs off the chat.

As the doors to the service center open a woman walks in holding a plastic container.

"I don't know what it is but I found it in my bathtub this morning," she says.

An investigation is underway and I search online for "brown hairy bug with many legs." It works. We find a photo that looks just like her capture. It's a silverfish, which is common in Wisconsin. Mystery solved.

I grab a stack of deer registration stubs that have just arrived. They are from the archery season. Each stub is hand entered into a computer program that stores the information in the customer's record. Excited deer hunters filling out a registration stub means smeared, dirty and unclear numbers that I have to decipher.

Next, I'm on to reading emails regarding new firearm transport laws. In between phone calls, I read and highlight information so I am familiar with the law changes before the questions

start coming in. I also need to add these changes to my regulation pamphlet so I can easily see the changes when questioned about the laws.

At this time of year the calls keep coming, as do the chats and customer visits. The art of multitasking comes into play.

The mail arrives. It contains batches of ATV, snowmobile and boat applications. When someone mails in an application, the application is bundled as part of a batch that could be sent anywhere in the state to be entered into the computer system. I'm expected to work on entering batches in between answering phone calls, chats and meeting face-to-face with customers. When we have deer registration stubs and batches, we really need to manage our time wisely so that we can keep up with both and make our completion deadlines.

The next call comes from someone asking about manure spreading. She thinks it is illegal to spread manure in her area and she saw someone doing it. She is across the state from where I am working so I am not familiar with the local ordinances. I assure her that I will help to get her in contact with the right staff person. I also refer her to our website and together we read the information posted regarding manure spreading and runoff. She is shocked to find out the wealth of information that is posted on the DNR website.

I give her the contact information for the agricultural runoff management specialist in her area. At the same time, I send the specialist an email giving him a heads up that she will be contacting him. Shortly after, I receive a return email that says he has already looked into the situation and can confirm that the person spreading the manure does have all the necessary permits to do so. I relay that to the concerned caller who is very thankful for the quick response.

As the day progresses the service center sees a steady stream of customers coming in to buy deer licenses and share their "up north" adventures. The customers usually take time to look around the office and see the animal mounts on display. They page through publications that are available and that usually sparks additional questions.

A couple stops by the office on their way north. They want to buy their gun deer licenses and find out what they need in order to burn a small brush pile.

We have a pamphlet for just that question (and information available online). I show them how to find the daily burning restrictions in their area by calling or checking online. It turns out that they live in a county that requires a burn permit, so I bring up the burning permit application online, fill it out for them, print out their permit and they are all set to go.

The woman says she hopes there is still some leaf color left when they make it to their northern destination. I look up the Department of Tourism's Leaf Color Report at travelwisconsin.com. On the report we see that peak color has passed but there are still reports of some good color in the area. The couple leaves satisfied and astonished by how much information they gleaned during their visit.



ROBERT MANWELL

To find a DNR service center near you visit the DNR website at <http://dnr.wi.gov/Contact/SSbyCounty.html> and use the drop down menu.

I take a few minutes and continue editing the fishing regulations. I'm part of a group of customer service representatives who reads through the regulations before they are printed. We look for grammatical errors and provide suggestions on how to reword confusing content.

At the end of the day, I close everything up and run the daily totals. I bundle the deer registration stubs and batches we entered so that they go out in tomorrow's mail to the office where they are stored.

Before I log out I see that on average staff at this office answered about 70 calls, 11 chats, entered 300 deer stubs, completed a batch, and helped about 100 customers at the counter today.

And sometimes our days don't end there. There's a pretty good chance that when I stop at the grocery store on the way home, I'll run into someone who recognizes me and says, "Hey, you work for the DNR. Do you know anything about (insert your issue)?"



Crystal Caputo is a lead customer service representative for the Wisconsin Department of Natural Resources. She now works at the Fitchburg Service Center.

BAD AND GOOD NEWS ABOUT ROUND GOBY

You've probably heard of invasive species such as zebra mussels, Quagga mussels and sea lampreys, but have you heard of round gobies? Originating from the Black and Caspian seas, round gobies were introduced through ships emptying out their ballast (weighted stabilization tanks) water in the Great Lakes. Although round gobies are not as publicized as other invasive species, they have had equally devastating economic and ecological impacts on the Great Lakes.

Ever since their discovery in the St. Clair River in 1990, round gobies have wreaked havoc. Native fish populations have plummeted as round gobies dominate spawning sites and compete with native species for food. Additionally, round gobies eat the eggs and young of other fish.

However, fish are not the only creatures suffering from the gobies' presence. Round gobies eat zebra mussels, which can carry botulism, a bacterial infection that cripples

the nervous system. When birds eat round gobies, they ingest the botulism toxin and may become paralyzed.

The situation is dire, but the good news is every Manitowoc County resident can do something to fight round gobies. You can identify it and kill it when you see one.

Round gobies are seven inches long or less, greenish-gray with brown splotches, and have bulging eyes. If you catch one, the quickest and most humane way to kill it is to throw it on the bank, and then throw it in the trash. Whatever you do, do NOT throw it back. You can also call Sea Grant or another wildlife conservation agency to report a sighting. You can prevent spreading them to other areas by: removing foreign substances from fishing supplies, dumping any water that accumulates after you go boating or fishing immediately,



The round goby is invasive to Wisconsin.

ILLINOIS SEA GRANT

COMMENT ON A STORY?

Send your letters to: Readers Write, WNR magazine, P.O. Box 7191, Madison, WI 53707. Or email letters to dnrmagazine@wisconsin.gov. Limit letters to 250 words and include your name and the community from which you are writing.

rinsing anything that contacted the water with a high-pressure hose, throwing away unused bait, and putting an animal back into the original body of water you found it in.

Elizabeth Scheibl
Kiel

NO ACCESS TO THE WEB?

Don't have access to a link we mention in a story? Let us know when you want to follow a link we list. We'll do what we can to get you a copy of the material if it is available free of charge and is relatively short in length.



NATURE'S TOP GUNS

This past week I was treated to an impressive display of flying and avian combat over the Menominee River in Marinette County. Having been a forward air observer, and having watched Air Force and Navy pilots "windmilling" over a target, and having done it myself, I was impressed with the response of four crows to an attacking peregrine falcon. The falcon attacked one crow and had hold of it when all three of the other crows dived and knocked the peregrine off of the other crow. As the falcon would go after one crow, the other three windmilled and one was always in position to hit the falcon just as it got to the selected crow, then the other two would come in and knock it off. After 10-15 minutes of this, the falcon escaped into a tree, but the crows persevered, and chased him from tree to tree along the riverbank, until the falcon finally made an exit through the woods. One crow would attack, and the four of them would continue to hit the falcon. Watching with binoculars, the falcon's beak was open and it was gasping for air. Given a choice, I would have bet on the falcon, but I was certainly surprised. Maybe Top Gun School should invite the crows!

Bruce Solberg
Green Bay

WHITE FINCH

Could you possibly identify this white bird? First time we ever saw it. Doesn't sit still very long, but with the sunflower seeds it did.

Deb Haensgen
Mount Calvary



Andy Paulios, coordinator of the Wisconsin Bird Conservation Initiative, replied: *The bird in the photo is most likely a leucistic or albino house finch. It's hard to tell by the photo. Both are characterized by reduced pigmentation in the feathers and/or body parts. The difference is that leucism is caused by a reduction in any form of pigment whereas albinism is specifically about lack of melanin. Typically albino birds are a pure white or yellow with red eyes and bill. Leucistic birds can look very white or have white patches but generally have normal colored body parts. A tip for birdwatchers, when you see an obviously white bird or a bird with white patches, look at the body structure (head shape, posture, bill shape) to determine if it's possibly a leucistic bird. In this case, compare it to the house finch next to it and you'll see they are the same except for color. Happy birding!*

REVERSE-ACTION PADDLE?

Several months ago one of your articles ("Trapping memories," August 2012) described a reverse action oar-lock for a duck boat. I went to visit the gentleman [who wrote the story] and the mechanism was interesting. It had two round gears with the top portion of oar fastened to one and the bottom section fastened to the other. The rower would face the front of the boat and as he would pull on the oar, the bottom end would propel him forward. I have several friends who would like to canoe with me, but only have the use of one arm. I believe a similar device could be used as a paddle in a canoe. My reason for writing is to see if any readers are aware if such a device is commercially available and where they could be obtained.

Gerald Dorscheid
Arenia

CLARIFICATION

The August 2012 article on State Park Innovations ("State parks get innovative accessibility upgrades") should have credited Julie Hein-Frank and Blue Raven Creative for the DiscoveryPen™ technology innovation featured in the story. Interpretive panels were illustrated by Tricia Peterson.



LADD BAKALIK

FISH FOOD: Recipes for a healthy freshwater fare.

The following recipes were submitted by Wisconsin anglers for an online cookbook, Healthy Dishes with Wisconsin Fishes. These unique and creative recipes along with others will be featured in an online cookbook available later this spring. Learn more at <http://dnr.wi.gov/topic/fishing/consumption/index.html>

Panfish Tacos

Submitted by: Larry Sperling of Madison

Serves: 4

Recommended species for this recipe: Perch or bluegills (any firm panfish)

Ingredients:

- 1-½ pounds panfish fillets, rinsed
- Fajita seasoning (your favorite brand or make your own)
- 4 tablespoons olive oil, divided
- 1 lb. bag of coleslaw mix (no dressing) or freshly grated cabbage
- Juice from one lemon
- Mango salsa or picante sauce
- Sour cream
- Sharp cheddar cheese, shredded
- 1 avocado, sliced
- 8 corn tortillas
- Salt and pepper

Preparation and cooking instructions:

- Preheat oven to 325F.
- Toss coleslaw mix with two tablespoons of olive oil. Add the juice from one lemon and salt and pepper to taste. Set aside.
- Warm the tortillas for 10-12 minutes in the oven.
- Pat the fillets dry and sprinkle both sides with fajita seasoning. Heat two tablespoons of olive oil in a nonstick pan and sauté the panfish for about three minutes per side, until the flesh is opaque. Do not overcook.
- Place two small fillets on a taco. Add cabbage mix, salsa, a dab of sour cream, an avocado slice, and a little cheese. Enjoy!

Recommended side dishes: Spanish rice, fresh fruit salad

Thai Spicy Drum

Submitted by: Ladd & Busara Bakalik of Mauston

Serves: 4

My wife Busara brings the spicy taste of Thailand to grilled Wisconsin fish. Grilling fish over an open fire or on a barbecue grill is a healthy and very tasty alternative to deep frying. Freshwater drum can be caught from many of Wisconsin's larger rivers and impoundments and is the best fish for grilling. It is a firm fish with large bones that are easily removed. When properly cooked, the bones will almost fall off.

Recommended species for this recipe: freshwater drum

Ingredients:

- 4 freshwater drum
- 1 fresh lemon

Spicy Thai Sauce:

- 2 jalapeno or serrano peppers
- 3 garlic cloves

- 1 fresh lime
- 6 tablespoons Thai fish sauce (such as NamPla)
- 1 teaspoon sugar (optional)

Preparation and cooking instructions:

- Scale freshly caught drum thoroughly, remove entrails and gills, let soak in very cold water.
- Prepare a fire using oak wood or a grill.
- Insert a lemon slice into the fish cavity and pin in place with a toothpick. Lightly salt the fish on both sides before grilling. Grill until the flesh is opaque.
- Prepare spicy Thai sauce: Finely chop peppers and garlic. Put in a small bowl, then cut the lime in half and squeeze juice and pulp into the bowl. Add 4 to 6 tbs of Thai fish sauce to taste. Add sugar, if using, and whisk until dissolved.
- Lightly sprinkle the Spicy Thai Sauce on the fish and rice. ENJOY!

Recommended side dishes: Thai jasmine rice and fresh vegetable salad

The Best Grilled Salmon (or Trout)

Submitted by: Kurt Welke of Madison

Serves: 4

Our family's fishing season starts in May with stream trout and continues through fall Mississippi bluegills. We love the places where fish are found in the most beautiful state, Wisconsin. Our good fortune has been to include fish as an important part of our dining experience.

Recommended species for this recipe: Salmon or trout

Ingredients:

- 1 cup maple syrup
- ¼ cup soy sauce
- 1 teaspoon lemon juice
- 2 tablespoons coarse ground black pepper
- 4 - 4 oz salmon fillets or 2 - 10" trout fillets, rinsed

Preparation and cooking instructions:

- Mix together first three ingredients to create a marinade. Place fillets flesh side down in 9x9 baking dish. Pour marinade over fillets, making sure all sides are coated. Marinate overnight for best results or for at least 4 hours.
- Preheat a grill.
- Remove fish from marinade, pat dry. Sprinkle or grind black pepper onto the flesh side of the fillets to your preferred density.
- Coat a fish basket with oil to prevent fish from sticking. Place fillets securely in the basket and grill 2-3 minutes on each side over very hot grill (no more than 5 minutes per inch of thickness).

Recommended side dishes: Grilled zucchini or eggplant and couscous or jazzed up rice (i.e. rice with onion, peppers, mushrooms or other savory bits)

Fighting back with Buster

Continued from page 2

rat-borne diseases.

Our conclusion? We needed to stop the rat problem before it became any bigger.

Considering all the dogs and birds who roamed the property, widespread rat poison and traps were out of the question. We did what we could and set a few traps around the barn. But those traps had only limited success and the pigeon population continued to suffer.

But there was Buster. We had him on our side and that made all the difference. After his initial encounter with the supersized rodent, he was on constant patrol for more action.

One day, angered by more pigeon kills, I took a .22 Winchester rifle with a box of 25 rounds and called Buster into the barn. He darted inside with one goal: To find as many rats as he could. Fearlessly, he leaped into the tangled hoard of rusted appliances and hobbled tires, and barked with excitement. The narrow crevasses and small openings were no problem for him.


I could tell he was on a scent. Suddenly, a huge rat bolted up along a rafter towards the ceiling. I fired a shot, a miss. Quickly I reloaded. The rat reached a high cross-beam and scampered across. Again I eased my finger on the trigger, and the rat dropped. With a similar method, Buster and I worked as a team throughout the day. By sunset 11 rats were dead.

Sadly, the next winter was especially harsh. The barn suffered a partial roof collapse. After the cave-in, the pigeons no longer returned to the roost. As a result, I was never able to see the extended results of the serendipitous population management experiment.

But the experiment did show me the importance of keeping balance and that in order for nature to achieve balance, there is often a period of turbulence where the natural order must be sifted out.

Too much of one species can reduce another. In life, as in an ecosystem, cooperation is required for peaceful coexistence. If one species is highly skilled at acquiring resources, and greedy with them, competing species may be phased out. This was the threat that the pigeon flock faced from the rat population.

In the case on Hawe's preserve, the balance (or imbalance) was related to the way an introduced species altered the rats' ecological niche. The pigeons gave the rats an easy and reliable food source, thereby creating an imbalance.

I challenge others to pay attention to the balances or imbalances that occur around them. Getting out hunting is the perfect opportunity to do so. And if you can find a buddy like Buster to join you along the way, all the better. 

Dan Colton is a student at Madison College pursuing a journalism certificate. He enjoys visiting the old Hawe's property when he is on break from his studies.

Comforts

Kids and pets: Compatible or catastrophe?

Johanna Schroeder

Welcoming a new pet into a home can be a wonderful experience. But it can also be stressful for a family and the pet. Especially if there are children involved. Too many furry, scaly, or feathered friends end up abandoned or surrendered due to lack of proper knowledge or research, leading to a sad ending to what started off as a joyous occasion. Taking some simple steps and doing your homework, though, can help prevent an unfortunate ending to welcoming a new pet (or child) into your home.

If you decide to adopt a pet from a shelter, be sure to ask lots of questions. I first adopted a pet from the humane society when my oldest daughter was 2 years old.

Most shelters are wonderful places to find a pet because the staff works closely with the animal and usually is aware of the animal's disposition, background and the situation it was in prior to arriving there. Staff also knows if the animal is not adoptable, preventing any possible injuries or harm to the owner or other individuals.

We saw many strays and surrendered animals when making our decision to adopt. The pets that had been surrendered had detailed descriptions of why the pet ended up there, any bad habits they had, and whether they were compatible with children or not. This information was extremely helpful.

We decided on a very sweet 6-month-old cat. But before we were able to take him home, we had to have two "meetings" with him. The meetings were intended to make sure that we were as suitable for him as he was for us. At both meetings, our daughter was



NATASHA KASSULKE

present, and in the end the cat ended up coming home with us and was a very wonderful addition to our family, even as other kids started coming along.

I highly recommend the adoption process. But if you decide to buy a pet from

a store or breeder, it's still important to ask questions and research the breed ahead of time. Is the pet you are looking at high energy, needs space to run or more frequent walking? Do you have space for a larger breed or would you be better off with a smaller breed? Are you looking at a more territorial animal that might lead to future behavior issues if they are not raised in the right environment for them? Is the breed compatible with children?

But what happens if you are introducing a new child to a pet that has already been established into the family? That situation poses a new set of challenges.

First, make sure the baby's things are separate from the area where your pet chooses

to sleep, rest, eat and play. As strange as it may sound, talk to your pet about the baby, the baby's things and that there will soon be a new member joining the family. Dogs, for example, understand more than people may think and they certainly can sense when a significant change is occurring in the home.

Allow your pet to explore the baby's items, but watch to make sure "bad behaviors" do not start (for example, going to the bathroom where they shouldn't, aggression issues, etc.). And it is recommended that after the baby is born, when mom and the newborn are in the hospital, take a blanket or article of clothing home every day with you with the baby's scent on it and let your pet smell the item, explaining that the new arrival will be home soon.

As your children grow, it is important for parents to teach children how to properly approach and handle animals gently and respectfully.

Encourage them to give your pet space when eating. Teach them gentle petting and touching techniques, or the signals a pet may display when "they have had enough." Teach them to not approach unknown animals without asking permission first or without an adult present. Most importantly, teach them to love and respect all creatures, whether inside or outside of their home.



KRISTIN BALOUSEK



KRISTIN BALOUSEK

Johanna Schroeder works in the Water Quality and Watershed Bureau at the Wisconsin Department of Natural Resources. When not working, she keeps busy maintaining peace and harmony between her four kids and two cats, which is a fulltime job itself, but one she wouldn't trade for anything.

Traveler

Great Valentine's Day adventures.

Ellen C. Corso

Valentine's celebrations vary worldwide. In Norfolk (eastern England), "Jack" Valentine knocks on doors and leaves sweets and presents for children. In Wales, people celebrate St. Dwynwen's Day, commemorating the patron saint of Welsh lovers. Closer to home, Wisconsin also offers adventures to embrace the season of devotion. Take time to get outdoors and enjoy the Valentine's season with loved ones.

Shape up your heart with **Seroogy's Valentine 15K Run/5K Walk** on Saturday, February 9. The course begins and ends at Seroogy's Chocolates on Broadway at 144 N Wisconsin Ave, De Pere. Race starts at 8 a.m. Participants receive a long sleeve shirt, Seroogy's chocolate meltaway bar, coffee and hot chocolate. Call (800) 429-8044, (920) 338-8741, or (920) 562-1885 (evening). Visit midwestsportsevents.com/valentinerunwalk.html

Kick off your New Year's resolution to do your heart some good at **The Valentine's Heart Throb Run/Walk** (5

Ski or hike the two-mile cross country trail lit by almost 200 tiki torches. Please, no pets, snowshoes or sleds. Vehicle admission sticker is required. Stop at the office for a map: Kohler-Andrae State Park, 1020 Beach Park Lane, Sheboygan. Call (920) 451-4080 or visit wiparks.net

Head to Hartford for the **Pike Lake Unit-Kettle Moraine State Forest Candlelight Ski/Hike** with over 300 luminaries lighting two 0.75 mile trail loops from 6 to 9 p.m. on February 9. Skiers, hikers and snowshoers will share the trails. Members of the Northern Cross Science

Foundation will share telescopes with visitors. If there is no snow, a candlelight hike will be held. Call (262) 670-3400, email friendsofpikelake@gmail.com or visit dnr.wi.gov/topic/parks

Take part in the sweeter side of

Valentine's Day traditions at **Death by Chocolate**. Downtown Appleton becomes a dessert lovers' paradise as local restaurants feature chocolate treats. From 4:30 to 8:30 p.m. on Thursday, February 14

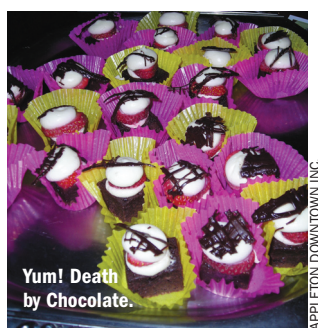


Run for your heart.

LA CROSSE AREA FAMILY YMCA

mile fun, 5K run/walk) on February 9. Race starts at 8 a.m. at 400 Mason Street, Onalaska. Entrants receive a long sleeve shirt. Call (608) 782-9622, email ahuppert@laxymca.org or visit laxymca.org. Light up your evening by heading to the **Sheboygan Valentine Candlelight Ski & Hike** 6 to 9 p.m. on February 9.

Ellen C. Corso is WNR magazine's Circulation Manager.



Yum! Death by Chocolate.

APPLETON DOWNTOWN INC.

sample desserts whipped up by some of the area's best chefs. Buy a ticket to allow you to taste a treat at each location. For more information contact Anne Wiegman by email at anne@appletondowntown.org or call (920) 954-9112.

If that doesn't sweeten you up, head to Brillion for the **Wine, Cheese, Beer and Chocolate Tasting** 7 to 10 p.m. on Saturday, February 16. Sample some of the area's finest from local vendors. There is a fee to attend. The event is held at Cobblestone Creek, 740 W Ryan St., Brillion. Call (920) 875-0125.

The **Madison Winter Festival** has something for everyone to love February 16-17. Enjoy ski races, snowboard and ski competition, Frosty 5K Run & Walk, Cyclo Frost Cyclocross Race and the Frosty 1 Mile Dog Jog, as well as snow and ice sculpting, sled hill rides, winter-themed museum

tours, snowshoeing, disabled sit ski programming and more. Over 90 truckloads of snow will transform the Capitol Square into a race and recreational venue. Call (608) 385-8864, email info@winter-fest.com

MADISON WINTER FESTIVAL

com or visit winter-fest.com.

Bring your cowbells to show you have caught Birkie Fever in Hayward. The **40th Annual American Birkebeiner Cross Country Ski Event** runs February 21-23. It is North America's largest and most prestigious cross country ski marathon and includes ski equipment demos, music and more. Skiers of all ages and nationalities participate. Call (715) 634-5025, email birkie@birkie.com or visit birkie.com

History lovers won't want to miss **Echoes of the Past-Historical Trade Fair**

February 23-24 in Oshkosh. See historical clothing, books, firearms and more. Seminars are topped off with a Military Unit History and Parade of Uniforms, civilian fashion show and more. Admission is \$5; free for children under 10 with an adult. Location: Sunnyview Exposition Center, Winnebago County Fair Grounds. Call Brian Bradley at (920) 233-5332, email bradley@bradleycompanyofthefox.com or visit bradleycompanyofthefox.com

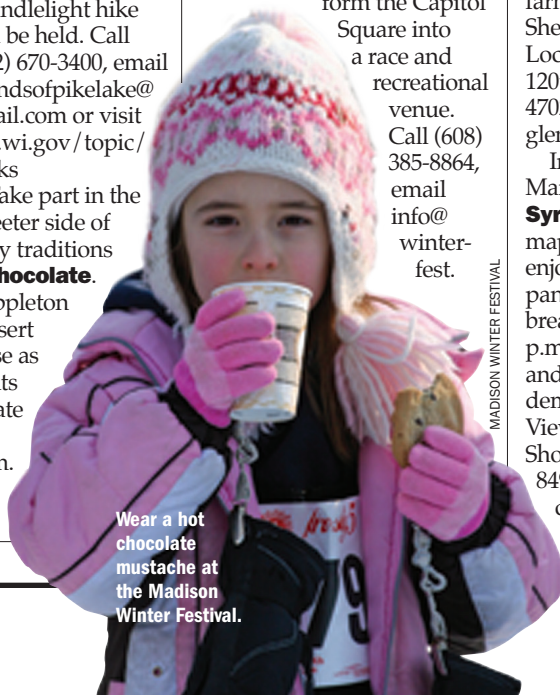
Fall in love with spring at **Maple Fest** March 23-24 in Amery 9 a.m. to 3 p.m. Sample free pancakes, "sap to syrup" farm tour and petting zoo. Food Shelf donations will be collected. Location: Glenna Farms, 1333 120th St., Amery. Call (715) 268-4702 or (800) 310-5050, or visit glennafarms.com/aboutus.htm

In Chilton on Sunday, March 24 celebrate **Maple Syrup Sunday** by tapping a maple tree, collecting sap and enjoying pure maple syrup on pancakes or ice cream. Pancake breakfast is served 9 a.m. to 1 p.m.: \$3 ages 6-12; \$6 ages 13 and up. Sugar bush tours and demos are free. Location: Ledge View Nature Center W2348 Short Road, Chilton. Call (920) 849-7094, email LedgeView@co.calumet.wi.us or visit ledgeviewnaturecenter.org



Pottery from the past.

ECHOES OF THE PAST-HISTORICAL TRADE FAIR



Wear a hot chocolate mustache at the Madison Winter Festival.



TO SUBSCRIBE CALL **1-800-678-9472**
OR VISIT OUR WEBSITE **WNRMAG.COM**

Wisconsin, naturally

WYALUSING WALNUT FOREST STATE NATURAL AREA

Notable:

Wyalusing Walnut Forest lies on the north face of a steep, 500 foot-high bluff overlooking the confluence of the Wisconsin and Mississippi Rivers within Wyalusing State Park. The view of the river floodplain and rugged topography of the Driftless Area from the bluff top is stunning. Wet forest of silver maple and cottonwood lies at the base of the bluff, with dry forest of white oak and black oak at its summit. The middle slopes contain rich soils supporting a diverse flora of spring wildflowers under a canopy of red oak, sugar maple, hackberry, and black walnut. Limestone cliffs provide habitat for rock-dwelling plants like Canada yew, Sullivan's cool-wort, jeweled shooting-star and a diversity of ferns, including the unusual walking fern. The natural area and surrounding park are great places for watching birds, especially during spring and fall migrations. More than 250 species have been recorded here, including the rare cerulean warbler, Acadian flycatcher, Kentucky warbler, and red-shouldered hawk.



How to get there:

Within Wyalusing State Park, Grant County. Obtain a park map at the park contact station upon entry and payment of the park admission fee. The natural area lies north of the Wisconsin Ridge Campground. The Bluff and Sentinel Ridge Trails provide access to parts of the site. Visit dnr.wi.gov and search "Wyalusing Walnut Forest" for information and a map.

