WISCONSIN NATURAL RESOURCES

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December 2012 $3.50

Get FOCUSED on Great Lakes photos

Dote on the Driftless Area
Take a stock in salmon
Spy on eagles at play

Picture this

Your Great Lakes photo on the cover of a calendar.

JOANN WILL

ANNE FRANK

ROBERT G. STROMBERG

CATHERINE KHALAR

Send us your best photos of Lake Michigan and Lake Superior. The DNR's Office of the Great Lakes is looking for beautiful shorelines, children and adults enjoying the lakes, cultural and historic features, businesses and industries that rely on Wisconsin's Great Lakes and people involved in lake protection or restoration. Photos taken in all seasons are needed. Winning photos will be used in the DNR's annual "Wisconsin's Great Lakes!" calendar and in other DNR publications, presentations, websites and displays.

The photo submission deadline is Feb. 1, 2013.

Entry Categories

- Natural features and wildlife
- People enjoying Wisconsin's Great Lakes
- Historic and cultural features
- Lake protection activities
- Wisconsin's working lakes

Rules and instructions

1. The contest is open to anyone (limit three photo entries). Photos must be submitted electronically.
2. Attach each photo (jpeg format) in a separate email.
3. In each email, please include the photo title, where in Wisconsin the photo was taken, the entry category, your name, email address, mailing address and phone number. Submit to: DNRGreatLakesPhotoContest@wisconsin.gov.
4. Photos must be high resolution, horizontal in orientation and taken in Wisconsin.
5. The Wisconsin DNR reserves the right to obtain an electronic or film copy of any image entered in the contest for noncommercial educational or promotional use with credit to the photographer. For example, photos may be used for displays, slide shows, videos, publications and websites.

More than 350 beautiful photos of Lake Michigan and Lake Superior were submitted to the Office of the Great Lakes' photo contest for 2012-2013. Winning photographs were featured in a calendar distributed at the state fair and at state parks and visitor centers along Lake Superior and Lake Michigan.

Watch a video of the winners at http://www.youtube.com/watch?v=CBcjIXqawdI&feature=youtu.be

If words are your medium

Writers can also help get the word out about how great Wisconsin's Great Lakes are. Share your favorite writings and you may find your words in the Great Lakes calendar or other DNR publications, presentations or displays. (Note: calendar space limit is about 180 words or 20 poem lines.) Email your writing submissions by Feb. 1, 2013 to: DNRGreatLakesWriting@wisconsin.gov.

Please include your name, address, phone number and email address.

For information, please contact:
Jo Temte
Office of the Great Lakes
(608) 267–0555

The Department of Natural Resources' Office of the Great Lakes

WISCONSIN NATURAL RESOURCES

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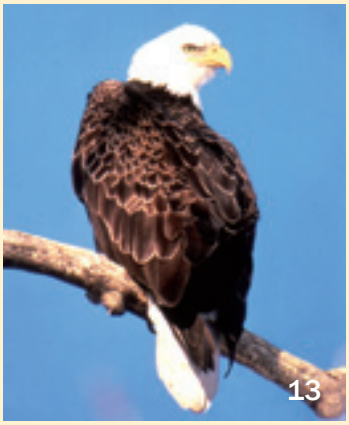
MATTHEW MITRO



HERBERT LANGE

SARA SCHMELZER LOSS

FRONT COVER: The DNR's Office of the Great Lakes invites you to participate in its annual photo contest. Cover photo taken at Rock Island of Erik Lucia, president of Friends of Rock Island.
Melody Walsh

BACK COVER: Coarse woody debris litters the ground at Enterprise Hemlocks State Natural Area in Oneida County. INSET: Pileated woodpecker feeding pattern on dead snag. For more information, or to order a guidebook to State Natural Areas for $18.00 (postage and tax included), 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 "State Natural Areas."
Thomas A. Meyer, DNR

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Carolyn Rumery Betz

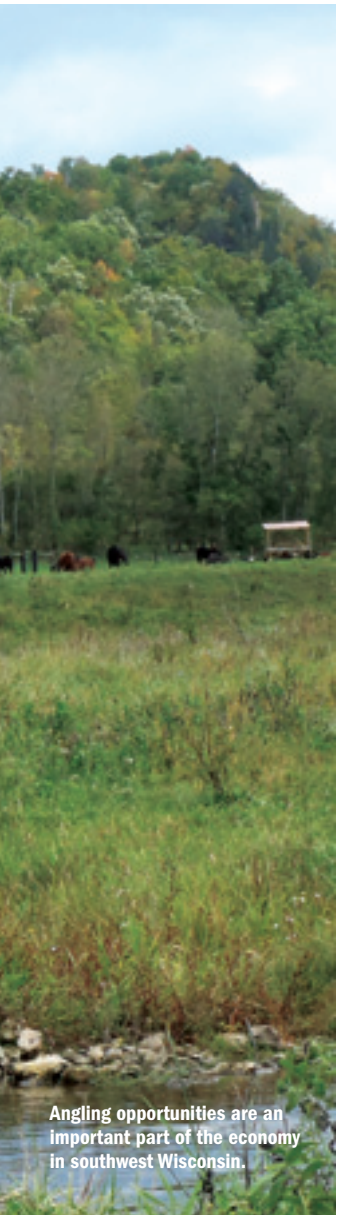
GET HOOKED!

CASTING INTO THE FUTURE OF THE DRIFTLESS AREA.

The Driftless Area — that wondrous southwest part of the state left unscathed by the latest glaciation that affected most of Wisconsin — conjures up images of steep hillsides and narrow valleys, rocky outcrops and hundreds of streams. Anglers flock to the Driftless Area to cast a fly in search of the big one. The region has the highest concentration of trout waters in the Midwest.

The Department of Natural Resources owns thousands of acres of land in the Driftless Area that provide access to anglers fishing for brook trout, brown trout and smallmouth bass. The properties are spread over 23 counties and most are in narrow strips along hundreds of streams. The Department of Natural Resources owns some of these properties outright and holds easements on others.

The agency is in the process of updating its management and acquisition goals for all of these properties in one overall master plan. The plan will describe the agency's land holdings and how they are currently managed. It will also present alternative options for future land acquisition to enhance recreational opportuni-



Angling opportunities are an important part of the economy in southwest Wisconsin.

MATTHEW MITRO

A DNR fish crew uses backpack shockers to survey fish populations in Timber Coulee, Vernon County.

MATTHEW MITRO

Long-term increases in air and water temperatures may lead to an increase in the prevalence of brown trout and a decrease in brook trout populations.

DNR FILE

ties. Access to waters is key to a positive fishing experience.

"This plan will be different from other master planning efforts because there are so many parcels involved," says DNR biologist John Pohlman, one of the team leaders for the planning effort.

The plan will lay out the department's future management of fishing lands as well as where efforts to provide additional public access to streams should be focused. The public is encouraged to weigh in on the various options.

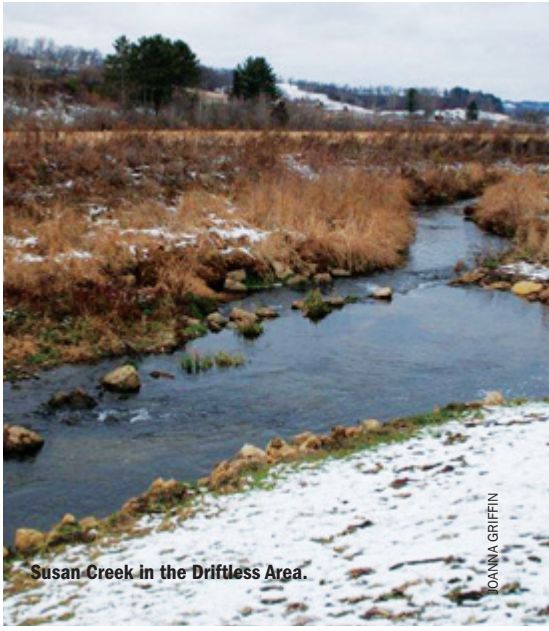
"As part of the planning process, we need to learn what people are concerned about," Pohlman says. "For example, where is there demand for better public

A DNR fish crew uses backpack shockers to survey fish populations in Elk Creek in Richland and Vernon Counties.

MATTHEW MITRO

Public meetings are a place where DNR staff can share plans for the future of DNR properties and solicit public opinions about these lands.

CAROLYN RUMERY BETZ



Susan Creek in the Driftless Area.

JOANNA GRIFFIN

access to streams, or where should we focus in-stream habitat work? We'll incorporate those ideas into our draft plan."

The project is also unique because of its specific focus on fisheries. Long-term planning for fish management is challenging because the environment is constantly changing, from how land is used to long-term changes in the climate.

Urbanization may decrease the quality of the fisheries when water runs off parking lots, driveways and rooftops instead of sinking into the ground and replenishing the groundwater supply. Runoff water from impervious surfaces may be warmer than what coldwater fish can tolerate. Soil erosion can deposit sediment on the stream bed and degrade habitat.

Wisconsin's changing climate will also be taken into consideration when developing the fisheries-focused plan. Warmer air temperatures will increase water temperatures, according to DNR research biologists Matthew Mitro and John Lyons, and long-term drought may reduce cool, groundwater flow into coldwater streams.

WHAT'S YOUR OPINION?

Because the properties are so diverse and expansive, the Department of Natural Resources is asking for input from citizens, property owners, anglers and recreational groups to assure that multiple viewpoints are heard during the planning process and are incorporated into the final plan.

In 2013, the agency will host open house meetings in various communities within the 23-county region. Participants will see how the land areas are currently being managed and will be asked to share their views about the future.

The dates and locations of these public meetings will be posted on the DNR website, dnr.wi.gov/topic/lands/masterplanning/DriftlessStreams/

The website also has a link to sign up to receive occasional newsletters and updates on the planning process. If you don't have access to the Internet, you can call (608) 266-2698, or write to the DNR Driftless Area Master Plan, P.O. Box 7921, LF/6, Madison, WI 53707-7921.

A common scene around these parts — a farm overlooks the Big Spring Branch.

MATTHEW MITRO

Brook trout will be the most vulnerable to these changes because they can endure only a narrow temperature range to thrive and reproduce. In some cases, streams dominated by brook trout may shift to become brown trout streams or even smallmouth bass waters by the mid-21st century. Different fish species require different management practices.

The master plan will present some of the strategies that can be used to adapt to changing environmental conditions. These include land management practices on DNR properties such as planting tall grasses or trees to provide shade to cool surface waters.

Depending on public input and ideas, the Department of Natural Resources may propose acquiring more land to improve fish habitat, enhance ecological objectives and improve recreational uses. The agency only purchases land or easements from willing sellers and would offer a fair market value for the parcel or easement. The Department of Natural Resources pays the property taxes on land they acquire.

"We're looking forward to working with residents, the angling community, and partners like Trout Unlimited and local rod and gun clubs to help us plan for the future," says DNR fish specialist Paul Cunningham, who co-leads the project. "We all need to team up to keep one of the most unique areas of Wisconsin a place where we'll continue to love to fish."

Carolyn Rumery Betz is a natural resources educator for the Driftless Area Master Plan in the DNR's Bureau of Facilities and Lands.

DRIFTLESS AREA STREAMS

MAPS CREATED BY DNR

FISHING LANDS ADD GREAT ECONOMIC BENEFITS

The glaciers didn't just miss the southwestern portion of Wisconsin; they also bypassed northwestern Illinois, northeastern Iowa and southeastern Minnesota.

Recreational trout fishing in the four-state Driftless Area is a billion-dollar industry. A study commissioned by Trout Unlimited in 2008 showed that these four states and their federal and private partners invested about $45 million to restoring more than 450 miles of streams in the area. The region brings in an additional $24.50 for each dollar spent on stream restoration when anglers eat, sleep and fish in the area.

In 2011, tourism brought in $28.8 million to Vernon County alone and provided 469 jobs, according to the Wisconsin Department of Tourism.

"Ecotourism is an important part of our economy," says Susan Noble, executive director of the Vernon Economic Development Association. "Folks travel to our region from across the United States to access the trout streams in our Coon Creek and Timber Coulee watersheds. We even have a business in downtown Viroqua that focuses exclusively on fly-fishing supplies and guiding services."

CAROLYN RUMERY BETZ

Trish Ossmann

Lake Michigan's salmon fishery THRIVES

What that means for future stocking of the "Kings."

Sometimes we hear stories of a program working so well that, in time, it needs to change. The story of Lake Michigan's Chinook salmon fishery is one of those tales. Chinook salmon, also known as "King" salmon, are not native to the Great Lakes. In fact, they were first introduced in 1887 but did not reproduce well and eventually disappeared. In the late 1960s, DNR fisheries biologists from New York, Wisconsin and Michigan gave Chinooks another look and began stocking them as a way to control alewives, an exotic species of fish, and create a new sport fishery.

Jump ahead more than four decades and we find an alewife population that has been drastically reduced. That is partially because of predation by the Kings, but is also the result of invasive species like zebra and quagga mussels that have changed the ecology of the lake. More mussels mean less food for alewives that leads to less food for a now thriving salmon fishery.

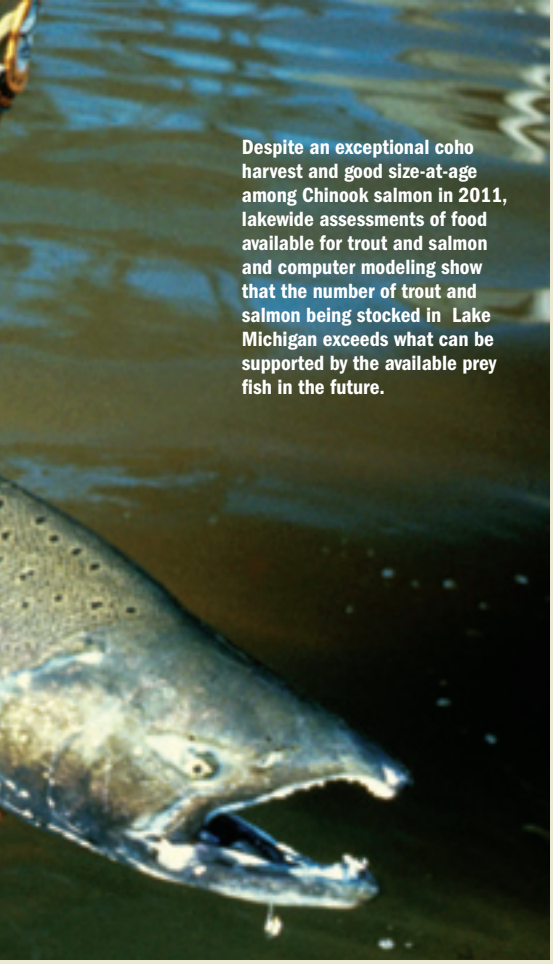
Natural reproduction survey

In 2006, Wisconsin joined Michigan, Indiana and Illinois, as well as tribal resource management agencies and the U.S. Fish and Wildlife Service (USFWS), in a cooperative effort to find out more about the Chinook salmon population in Lake Michigan. More specifically, scientists wanted to know the rate of natural reproduction, how the population is growing and what could be done to make hatcheries more efficient.

"There is so much we want to learn about the Kings," explained Brad Eggold, DNR Lake Michigan fisheries supervisor. "When we know more about their reproduction and movements within the lake, and the Great Lakes region as a whole, we can make a strong fishery even better."

This isn't the first time there has been an effort to take a closer look at the Chinook population. For years, state and federal agencies tried learning more about hatchery and naturally-produced Chinook salmon, but for various reasons the studies did not provide the information required to answer basic questions. In 2006, however, agencies came together and collaborated on a study looking at the contribution of hatchery-stocked Chinook to the entire population of Kings in Lake Michigan.

To do this, the Chinook from hatcheries in Wisconsin, Illinois, Michigan and Indiana needed to be marked. So, from 2006 through 2010, they were given food containing oxy-tetracycline (OTC), a chemical that forms a mark on the bony parts of the fish yet is safe for humans to eat. In 2007, fisheries biologists began collecting tails from Chinook salmon, looking for the mark on the tail bones. Finding a mark proved the fish was stocked from a hatchery and made it possible to estimate the percentage of wild versus stocked Chi-



Despite an exceptional coho harvest and good size-at-age among Chinook salmon in 2011, lakewide assessments of food available for trout and salmon and computer modeling show that the number of trout and salmon being stocked in Lake Michigan exceeds what can be supported by the available prey fish in the future.

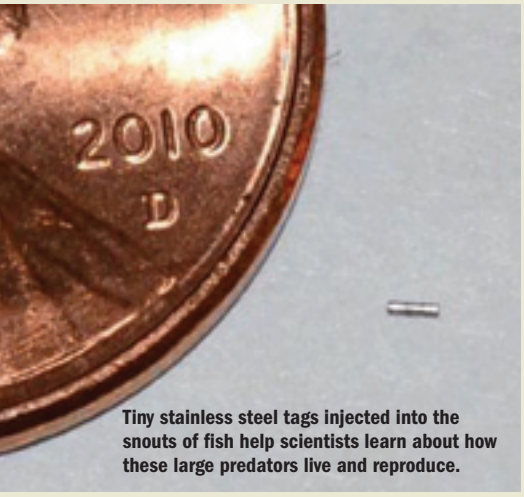
U.S. FISH AND WILDLIFE SERVICE

Wisconsin raises Chinook salmon in fish hatcheries and stocks (releases) the young, called fingerlings, in streams that run into Lake Michigan. You'll find abundant numbers of Chinook in Lake Michigan from Kenosha, to Washington Island, and into Green Bay.

TRISH OSSMANN

Hatchery-stocked Chinook have long contributed to the Lake Michigan fishery.

TRISH OSSMANN



Tiny stainless steel tags injected into the snouts of fish help scientists learn about how these large predators live and reproduce.

TRISH OSSMANN

nook in Lake Michigan.

"The results of that five-year study found about 55 percent of 1-year-old Chinook in Lake Michigan didn't come from a hatchery," said Eggold.

The study was extended until 2013 to further investigate differences in life history characteristics between stocked and wild Chinooks. It's being done at a time when the older year classes of OTC-marked fish are making their way through the population.

Automated tagging

The key to unlocking the mystery of Lake Michigan's Chinook population may lie in a stainless steel tag. While it may be small, only about 1 mm long, it contains a wealth of information biologists hope will help them unravel questions about these large predators.

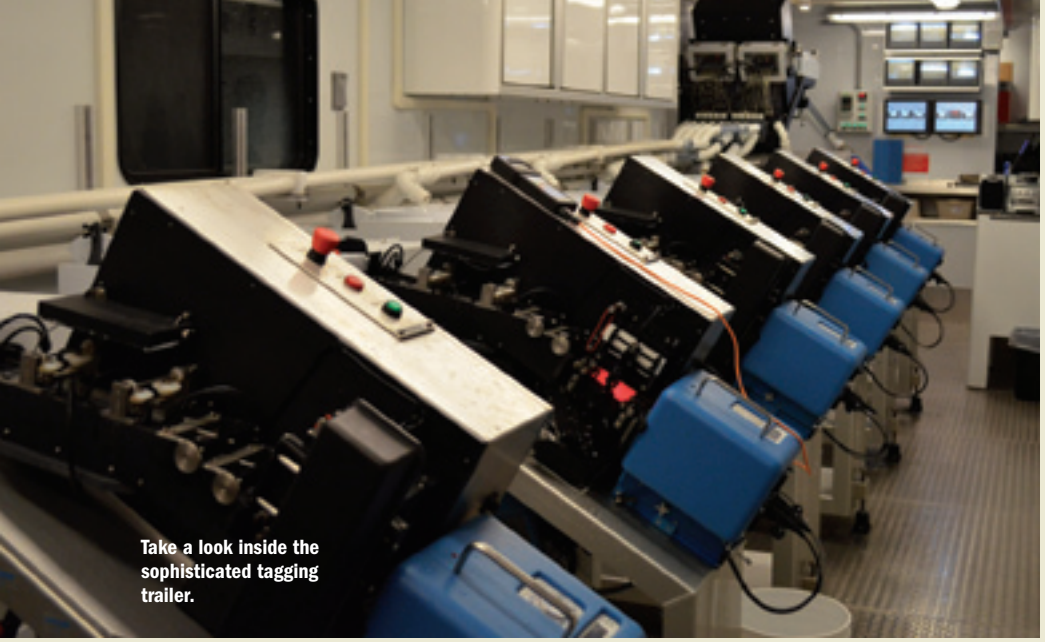
The process of tagging each and every Chinook is an immense undertaking. It is made possible with four massive tagging trailers owned and operated by the USFWS. For the past two years, USFWS staff has coded and wire tagged millions of fish with these computer-operated, automatic, state-of-the-art trailers. Each trailer is capable of tagging as many as 8,000 fish per hour. In addition to implanting the wire tag, the trailer also clips only the adipose fin, the small, fleshy fin just in front of the tail fin. It serves as an external indicator the fish is likely tagged.

Automated tagging has many advantages. First of all, more fish can be tagged in less time, as compared to manually inserting a tag. Secondly, there is a higher rate of success when it comes to the tag going in and staying in the snouts of juvenile fish. Finally, there is a cost savings. The USFWS estimates about an 11-percent reduction in total costs when using the automated system instead of tagging by hand.

In 2012, USFWS trailers tagged more than four million Chinook salmon stocked into lakes Michigan and Huron. In Wisconsin, trailers made stops at three DNR fish hatcheries: Wild Rose, Kettle Moraine Springs and Les Voigt. The trailers also travel among hatcheries in Illinois, Indiana and Michigan to tag Kings. Additionally, roughly five million lake trout are tagged at hatcheries run by the U.S. Fish and Wildlife Service.

Coded wire tags

When you hear "coded wire tags" you probably think of a piece of metal, stamped with a number, which is pinched onto the fin of a fish. The tags we are talking about today are much smaller. They are made of patented alloy steel that is injected into the snout of a fish.



Take a look inside the sophisticated tagging trailer.

TRISH OSSMANN

Despite their size, these tags provide the potential to collect a lot of information about the fish when it is captured.

Each tag is engraved with a number (the "code") that corresponds to a batch of fish. When the fish is caught, the tag is removed from the snout and examined. The number is recorded and, when combined with other tag returns, provides researchers with information about the age of the fish, where it was reared and where it was released.

The idea behind the tags is simple. Regardless of where the fish travels, if it is caught, state or federal biologists will be able to analyze the data from the tag and record it so all agencies can learn more about how Chinooks move, survive, grow and reproduce within the lake.

"The common objective for the state and tribal partners is to tag all Chinook stocked into the Great Lakes and use the information from tagged fish recovered from fisheries and agency assessments to improve fisheries management," explained Charles Bronte, fishery biologist and USFWS lead for mass marking implementation in the Great Lakes from the Green Bay National Fish and Wildlife Conservation Office.

A special tag detector can be used to determine if a tag is present in the snout of a Chinook. If it is tagged, biologists will record the date, length, weight and sex of the fish and find out where the fish was caught. The fish heads are then brought back to the lab where the tag is extracted. The number on the tag is recorded, along with data from the field, to determine the age of the fish, in which hatchery it was reared and perhaps learn if it was returning to spawn in the same waterway where it was originally released.

Most of the information gathered comes from tagged fish collected through the concentrated efforts of state and USFWS biologists working with fishermen at boat landings and fishing tournaments where heads can be collected. Wisconsin DNR and USFWS biologists recovered hundreds of coded wire tags from angler-caught Chinooks in Wisconsin during this past summer. Many of these tags have been processed and preliminary results indicate approximately 41 percent of these stocked Chinooks came from Wisconsin stocking sites, 43 percent originated from Michigan stocking sites and 16 percent came from Illinois and Indiana.

The next steps

Scientists are increasingly close to solidifying estimates of how many Kings are naturally reproducing in Lake Michigan. With every hatchery-raised Chinook now receiving a coded wire tag, and most fish living no more than five years, there will quickly come a point when any Chinook that doesn't have a tag will be known to have been born in the wild.

The success of the tagging program doesn't lie solely in the number of fish tagged, but rather in the information gathered from them. The data collected during the next decade will prove invaluable in determining which changes need to be made in state stocking programs throughout the Great Lakes system. By learning more about Chinooks and how they live and reproduce, scientists can adjust the numbers and species that are stocked in hopes of maintaining a diverse and healthy fishery. As the program develops, scientists plan to tag and adipose clip all 20 to 25 million salmon and lake trout reared in state and federal hatcheries in the Great Lakes.

As more and more of Lake Michigan's fish are marked, it will become increasingly important for everyone, not just biologists and researchers, to bring forth their catch and have it recorded. It is only through the cooperative effort of state and federal agencies, and anglers themselves, that the ultimate goals of the tagging program will be reached.

Trish Ossmann is the regional public affairs manager for DNR's Northeast Region.

WASTE NOT

Fish are not wasted when DNR fish biologists harvest salmon in the fall and collect their eggs. Harvested eggs either go to one of the state's fish hatcheries or are taken by a contracted wholesaler to be sold as bait once they have been processed. Many of the salmon that are less than 35 inches in length and are in good condition are donated to area food pantries. The remaining fish are either donated to the Raptor Education Group out of Antigo (raptoreducationgroup.org), or are used by another contractor to make liquid fish fertilizer for plants.

STOCK ADJUSTMENTS

With alewife numbers estimated to be at their lowest level since the early 1970s in Lake Michigan, fisheries biologists and many anglers believe that to protect the salmon fishery for the future and make it even stronger, stocking adjustments are needed.

Meetings were held earlier this year in Michigan and Wisconsin to present the public with the latest information about the status of the Lake Michigan fisheries and gather input about the future direction of salmon and trout stocking in the lake. Under the multi-state agreement, Wisconsin will reduce its Chinook salmon stocking levels by 37.8 percent, the equivalent of about 440,000 fish.

"Most of the stocking adjustment is to offset increases in natural reproduction and lower forage abundance," says Mike Staggs, DNR fisheries director. "We expect the stocking adjustment will mean that the remaining fish will show better survival, and that the resulting increase in forage abundance should result in faster growth and bigger fish for anglers to catch."

Since Wisconsin anglers preferred cuts be made from all species rather than just Chinook, Wisconsin received approval to cut other species as long as we cut at least 30 percent of our Chinook quota.

– *Trish Ossmann*

Go wild for wreaths

A symbol of strength that lasts throughout the harshest season.

SUSAN SENATORI

Dave Wilson

The Christmas season comes early for wreath makers in northern Wisconsin where wreath making is an established business thanks to the balsam fir. The only tree in the Northwoods that arguably smells better than a balsam fir is a balsam poplar. But the balsam poplar doesn't make a good Christmas wreath because it isn't an evergreen.

White pine, red pine and spruce are also common evergreens in northern Wisconsin and are used to some extent in wreath making. Not only does the balsam fir smell good, it grows like a weed in most parts of Price County.

I have often joked that there are 5,000 to 10,000 balsam firs on my 5.2 acres alone. A person could make a few dollars cutting balsam boughs just about anywhere in Price County where it is legal to cut. Fragrance and availability make the balsam fir the heart of the local Christmas wreath-making business.

The wreath makers from this part of the state range from one-man garage entrepreneurs to family owned businesses that operate several wreath-manufacturing facilities and employ 20 to 30 people. Then there are bough cutters who cut the balsam boughs and sell to the wreath makers; they usually work for themselves. Add to that local wire wreath frame fabricators who supply the frames to the wreath makers.

Rose Wreath LLC is one of the larger wreath-making businesses in the area.

"Balsam fir is used because of its fragrance, durability and its dark green color," says Dave Barber, production manager of Rose Wreath. "Other types of trees are used, such as spruce, but balsam is used because it smells better. Spruce has a pungent odor; who would want something with a pungent odor hanging on their door? Rose Wreath does use red and white pine for trimming some of their products."

"We use balsam, cedar, hemlock, spruce, red and white pine in our wreaths," says Jean Baroka, of the family-owned Baroka Wreath located in Fifield. "Our wreaths are a combination of these species of evergreens. Balsam fir is the most used species because of its durability and its prevalence in the area."

Both wreath makers agree that balsam fir is also the easiest to work with.

Rose Wreath customers include fundraising groups like Boy Scouts and churches. Both wreath manufacturers have mail order business where products are boxed and shipped. Baroka also cites deer hunters and other walk-ins as customers, but the bulk of their business is from fundraising groups.

Wreath making provides business opportunities in several different areas. There is a local business that fabricates and sells the wire forms to local wreath makers. The wreath manufacturers provide seasonal employment for local residents. Some of these people are retired, some are young people, and some people are looking for a little extra money for Christmas.

Rose Wreath employs up to 30 seasonal employees and Baroka Wreath employs 15 to 20 people during the wreath-making season, which usually runs October through November.

The wreath-making business starts in March with an inventory of what is left over from the previous year. Lists are made of wire rings for wreaths and forms for other shapes such as swags and canes. Red velvet bows are purchased outside of the area and pine cones are ordered. Flyers and brochures are sent to potential and previous customers.

Starting in October, bough cutters begin cutting balsam fir for the local wreath-making companies. Balsam boughs are purchased in October and selected for their freshness because Christmas is still three months away. If the boughs aren't fresh the needles will be falling off before the wreath makes its front door debut. Balsam boughs with a blight that turns the needles brown are avoided because the wreath manufacturers will not pay for them.

The blight is called balsam gall midge, according to Price County Forestry Administrator Eric Holm. Larvae initiate the formation of galls, which appear as swollen oval growths at the base of needles mid-June. Galled needles turn yellow and begin to drop from the twigs in October.

"Bough cutters pay a $100 license to cut boughs on state land, otherwise if they have permission to cut on private land they do not need a license," Holm explains. "The county sometimes sells sections of roadside that are overgrown with balsam fir just to clear the roadside."

Cutters are paid around 25 cents per pound.

"Two people came in and sold Rose Wreath one ton of boughs for a day's work," Barber says. That comes out to about $250/day per person.

Rose Wreath buys about 20 tons of

The wreath-making business has been a seasonal cottage industry in the Wisconsin Northwoods for many years.

DAVE WILSON

boughs a year.

The wreath making itself is piecework. Wreath makers are paid by the number of wreaths made instead of hourly. Each type of wreath has a price according to size and difficulty in making. Wreath sizes vary from 20 inches to 4 feet in diameter. The best wreath makers make $100 a day, which translates to 80 or 90, 20-inch wreaths per day.

The wreath season ends around the first of December. At this time the wreaths have all been delivered and after the long days and weeks from October through December the people who run the wreath-making businesses are ready for a break.

Dave Wilson lives in a cabin he built on the South Fork of the Flambeau River.

A HISTORY LESSON

People in ancient Rome hung decorative wreaths as a sign of victory; some people believe that this is where the tradition of hanging wreaths on doors came from. Pre-Christian Germanic people gathered evergreen wreaths in December and lit fires as a sign of hope for the coming spring. These were called Advent wreaths. Christians kept these popular traditions alive and by the 16th century, Christians in Germany were using the wreath as a symbol to celebrate their Advent hope in Christ.

MAKING A WREATH

"Wreath making looks simple, but to make a quality wreath takes a lot of practice," explains Dave Barber, production manager of Rose Wreath. "It also takes training from a person who has been making wreaths for a long time. Good quality boughs are also important for making a good looking wreath. Using boughs from the right part of the tree makes wreath making easier."

The lower limbs of a balsam make the best wreaths because the needles are in one plane or flat.

A wire ring, or form (if making a swag or cane) is required to attach the boughs. A swag is a straight wreath about eighteen inches long that is hung horizontally and a cane is a wreath shaped like a candy cane. Malleable wire (wire that is easily bent) is needed to attach the boughs firmly to the wire ring or form.

To make a wreath of your own, here are some simple steps:

1. Wrap wire around the wreath form several times so that the wire will not pull free when tightened around the boughs.

DAVE WILSON

Attach the wire to the wreath form.

2. Pick up the correct amount of boughs for the size wreath that you are making and break the boughs to the correct length. This step is what takes experience. Knowing how many and what length the boughs have to be will come from practice.

3. Take a handful of boughs and place them on the wire ring in the same direction; the top of the needles should be in the front of the wreath.

4. Wrap the malleable wire three times around the base of the boughs and the wire form and pull the wire tight.

DAVE WILSON

Make sure there are no gaps and tie off the wire.

5. Pick out another handful of boughs and break to the correct length. Place this handful so that it overlaps the first handful and continue wrapping it with the wire. The second handful should be placed and wrapped about 3 to 4 inches from the first wrapping.

6. Continue this procedure until the wreath is complete making sure there are no gaps or holes, no wire showing and the wreath is full and even. Tie the wire off at the end so that it does not show.

DAVE WILSON

Trim and top off with a bow.

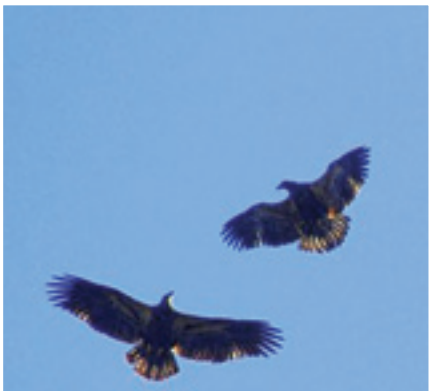
7. Trim the wreath as needed with scissors. The wreath is now done and ready to be trimmed with a bow and pine cones.

PHOTOS BY DAVE WILSON

Eagle tag

The cold winter months of December through February are good times to find and watch bald eagles in Wisconsin.

DON BLEGEN



Wisconsin offers many opportunities to view eagles and learn more about these majestic birds including Sauk Prairie's and Cassville's Bald Eagle Watching Days in January and Prairie du Chien's Bald Eagle Appreciation Day on Feb. 23, 2013.

DON BLEGEN

Musing about promiscuous play, or is it something more?

Don Blegen

On windy days in late fall, I watch eagles play aerial "tag" above my house. Sometimes a dozen or more eagles soar and maneuver, diving upon one another, performing breathtaking acrobatic maneuvers of evasion and pursuit.

Walt Whitman, the great 19th century American poet, apparently witnessed this long ago:

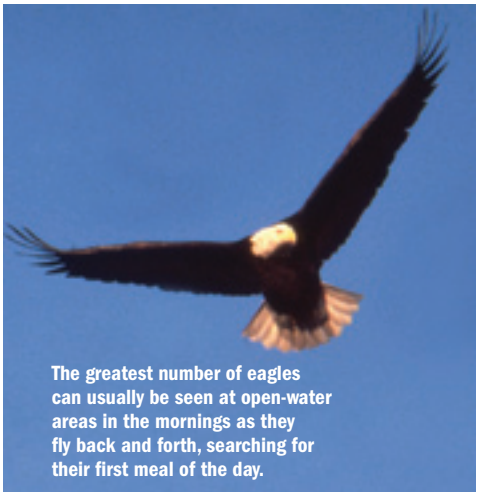
> Skirting the river road, (my forenoon walk, my rest,)
> Skyward in air a sudden muffled sound, the dalliance of eagles,
> The rushing amorous contact high in space together,
> The clinching interlocking claws, a living, fierce, gyrating wheel,
> Four beating wings, two beaks, a swirling mass tight grappling,
> In tumbling turning clustering loops, straight downward falling,
> Til o're the river pois'd, the twain yet one, a moment's lull,
> A motionless still balance in the air, then parting, talons loosing,
> Upward again on slow-firm pinions slanting, their separate diverse flight,
> She hers, he his, pursuing.
>
> • Walt Whitman, *The Dalliance of Eagles*

Coincidentally, I live along what locals call "The River Road" between Spring Valley and Elmwood, next to the Eau Galle River, a migratory path in western Wisconsin, a path that all sorts of migrating birds use in both spring and fall. Many of these birds, like ducks, geese, swans, cranes, warblers, etc., just move on through. But for some reason, the eagles do not. They accumulate for a while here in the autumn.

There may be several eagles roosting every night in the tall white pines on the bluffs behind my house, gradually accumulating to several dozen. On days when the wind is strong out of the northwest, they come out to play tag. The immature birds outnumber the adults by about four-to-one, indicating very good reproductive success among Midwestern bald eagles. It doesn't seem to matter, though, whether they are adults or younger birds when it comes to playing tag. Sometimes it will be an adult playing with an immature. Sometimes vice versa. Sometimes immature

Bald eagles prefer large trees in isolated areas near large areas of surface water, large complexes of deciduous forest, coniferous forest, wetland and shrub communities. Large lakes and rivers with nearby tall pine trees are preferred for nesting.

HERBERT LANGE



The greatest number of eagles can usually be seen at open-water areas in the mornings as they fly back and forth, searching for their first meal of the day.

HERBERT LANGE

Since lakes and rivers freeze over in winter, dams and power plants provide areas of open water in which the eagles can fish.

HERBERT LANGE

on immature or adult on adult.

They fly into the autumn wind until the wind slows or stops them, the eagles hovering motionless until they stall, then wheeling and coursing downwind, losing altitude and picking up speed, until they have enough velocity to rise again into the wind. Quite often one eagle will maneuver into a position where it can dive upon another just as it turns to face the wind.

I have tried to research some reason for this behavior, without much real success. Some sources say it is a courtship thing. Walt Whitman certainly seemed to think so. But there are a couple of things wrong with that idea. Eagles mate for life, so why this promiscuous play? Whitman's "dalliance" would certainly violate that lifelong bond. Both mature and immature eagles play this game with each other. Also, eagles mate in spring, so why this aerial play in the fall?

As one eagle dives upon another, sometimes they will just fly in tandem, barely brushing each other. But sometimes it is more like an attack. The one being attacked will do a half-roll to an upside down position, talons extended to meet the talons of the diving bird. Once in a while they will grasp talons and go into a falling spin, around and around, dropping perhaps a hundred feet before breaking apart.

This is Whitman's "living, fierce, gyrating wheel." Some claim they have seen eagles in a spin fall to the ground and die. I have never seen that happen. But I have seen them break apart only 50 feet or so above the ground. In the recent birding movie *The Big Year*, there is a great sequence of this spinning behavior. It is spectacular.

There seems to be a common belief that eagles mate in midflight, and that this tag and spinning behavior is a prelude to midflight copulation. I doubt that very much. Eagles mate like chickens or any other bird, usually right on the nest. And in the spring, not in the fall.

So what's going on here? It may be that eagle tag is practice for later serious courtship. It may be that it is a dominance thing, establishing some kind of eagle pecking order. Or it may have a much simpler explanation.

If I were an eagle, I would like to demonstrate my flight skills. If I were young, I would like to show off a bit, show those old timers (and those lovely young lady eagles) my aerial mastery. If I were an old veteran, I would like to show those young whippersnappers a thing or two and put them in their place.

I have seen an eagle deliberately swoop over another eagle perched in a tree and do a full barrel roll above the sitting bird. A challenge? Or an invitation to come out and play? I think they might be doing it simply because they enjoy it, because it's fun. It sure looks like fun to me!

Photographer, author and retired biology teacher Don Blegen writes from Spring Valley.

BALD EAGLES

Bald eagles have enjoyed a remarkable recovery in Wisconsin and nationwide since being placed on the state and federal endangered species lists in the 1970s. Eagles were removed from Wisconsin's endangered list in 1997 and from the federal list in 2007.

See why bald eagles winter in southern Wisconsin and learn about one popular event built around these birds. Bald Eagle Watching Days in Sauk Prairie is held in January. See the video on DNR's YouTube channel at: http://youtu.be/_eCdLk8fpUE

A winter bow hunt

PETR KRATOCHVIL

A benefit of a winter hunt is that snow makes trailing deer easier.

It could be the start of a new holiday tradition.

Dean Romano

I set out to bow hunt one Christmas Eve morning.

I had to get the landowner's permission weeks before the hunt and the agreement that we struck was that as long as no one in our hunting party brought an ATV out on his property, the landowner had no problem with us bow hunting his land. I agreed.

I saw a herd of whitetails crossing the snow-covered field just days before the hunt. They emerged from a huge stand of pine trees. It was a good sign.

Why hunt Christmas Eve morning? I hadn't taken a deer yet that year during the bow season and I knew I'd be at family events after that for Christmas.

SUBMITTED BY DEAN ROMANO

This was the second bow season to follow the deer gun season and it would end in January, so I tried to sneak in my chance. Plus, you never know about winter weather in Wisconsin.

If a hunter hits a deer and doesn't find it quickly enough, a coyote might take advantage of an easy meal.

HERBERT LANGE

If we were to encounter weeks of extreme weather conditions it could affect the opportunity to hunt. We had just had weeks of bad weather: wind, rain, extreme cold. Then warmer days, then cold and then snow. The snow was more acceptable.

I also was lucky enough to convince my friends Joe and Art to join me. I was especially glad they decided to come along because with more than six inches of snow it could be a tough hunt for a single hunter if he or she had to drag an animal a long way.

The morning of the hunt the temps were in the teens — cold, but not too cold to hunt. I awoke tired about 5 a.m. thanks to my radio alarm clock. It was still dark and cold outside. I couldn't get the coffee maker on soon enough. I had to have my morning cup to get me moving.

Ground hunting in cold deep snow is fun but can be exhausting, especially when it is time to take home your prize.

GREGORY K. SCOTT

Daybreak would not come until after 7. I called Art about 6 a.m. and asked if he was ready. He was and so was Joe. I picked Art up and we talked a bit on the way about hunting. I was excited. It's not too many holidays I get the chance to hunt. I shared that if I would get a deer that day, I would refer to it as my Christmas deer.

My wife, Gayle, wasn't crazy about that phrase. She doesn't have a problem with me hunting, but taking a deer on Christmas and then naming it my Christmas deer is not her idea of wise words.

My only concern was that during the winter around these parts, animals, especially coyotes, are hungry and they like to hunt deer. And if a hunter injures a deer and doesn't find it quickly enough, coyotes will be all over the prize. In Wisconsin you can hunt coyotes year round as long as you have a small game license, except in some areas during the deer gun season. Coyotes seem to be doing too well in Wisconsin, and there appears to be an over abundance of them in some areas.

We arrived at the field where we would be hunting and divvied it up deciding where each of us would position ourselves. We weren't familiar with the area and hadn't had time to previously scout it out.

Islands of hardwood trees ran through the field. Art asked me if I wanted to take the tip of the small forest on the right and I agreed, heading south. Joe walked straight ahead, which would have been east. Art went to the left and grabbed an edge line of trees to the north.

At the edge of a small forested area I nestled up to a large spruce. I didn't carry a tree stand with me because I had no intentions of setting one up anywhere at that hour of the morning and this would be a morning-only hunt. Family plans awaited all of us.

After standing for an hour I started to feel cold. I decided to move around a bit but try to remain quiet, which isn't easy to do in snow.

I heard squirrels and I watched a mole scamper by my boots and then dive to hide under the snow. Then I heard another noise — a slow moving, more low key sound as if something was moving through the snow to my left.

I was nervous and waited impatiently. Whatever it was, was taking a while to work its way around the trees to the left. I thought, if it's a deer it may wind me or it may not be traveling alone. Deer usually travel in groups of at least two or more. So I waited. Then, off to my left side, my peripheral vision caught a glimpse of a large animal moving closer to me.

I drew my bow waiting to make sure it was a deer. But if the deer catches my movement I will only hear that loud blowing sound that they do and that would be it.

It was now or never. I quietly drew back and a good-sized doe appeared. So far, so good. Then a sudden stop. Then it moved its head looking around — looking to bust me.

Too late. Now! Fire! I let the arrow go.

It hit my target.

There were no other deer with her. She had been alone feeding on branches.

Beautiful. It gets no better than ground hunting in the cold deep snow.

The snow made trailing the deer easy. At first there was nothing but small blood spots here and there. Then I found more and larger blood spots. I followed along as she darted under trees and through some tough terrain. Then I found her.

I wasted no time field dressing her and was done by 11. I marked the area with orange tape and had to leave my bow behind so I could start dragging my deer out into the field where the guys would see me when they came walking back in.

Again I was in luck. I did not get very far when I saw a small shape of one of the guys off in the distance walking toward me. It was Joe.

"You got one?" he asked with excitement.

"Yeah," I replied. "I have to go back and get my bow. I had to leave it to drag this deer."

"Take a break," he said. "I'll walk my bow up to the truck and come back to give you a hand."

Joe and I dragged that doe right up to the truck when we spotted Art walking toward us. We tied the deer to the truck and left to get my bow.

That was tough. The snow felt much deeper than it was and I was tired. But it felt good. Both Art and Joe were as proud as I was. I shared my venison with them that year. We went out there together. I felt it was only fair. Art also was kind enough to share his venison with us when he bagged a nice six pointer just before New Years.

It was a successful bow hunting season. We found some new hunting grounds, didn't encounter coyotes and had a story to share around another tradition, the Christmas tree.

Dean Romano is an avid Wisconsin outdoorsman, and the host and producer of outdoorwild.com

Bow or gun?

Why hunters grab what they do when they head to the woods.

DNR FILE

MICHELLE HELIN

Amanda Laurenzi

I have lived in Wisconsin my entire life and have managed to never go hunting. I even lived in the country for a better portion of my life, but instead of going out to hunt, we allowed others to use our land. I remember hunters coming to our door, asking ever so nicely for the opportunity to sit in our woods and look for game. Some had guns; others had bows. As this took place more often, I started to wonder if there was a significant difference between the two.

The chances of a Wisconsinite never meeting a hunter in this state are slim to none. Many people take part in the sport every year, teaching their children the ways of the hunt and passing down traditions that they learned when they were young. The various reasons for hunting still bring together groups of people who have one goal in common: tagging a prize.

When asked to explain how bow hunting is different from rifle hunting, Mike Brust, President of the Wisconsin Bowhunters Association (wisconsinbowhunters.org), said: "From a general perspective, bow hunting is often favored by some — and not favored by others — for the same reasons."

He went on to explain that bow hunting takes a lot of time, practice and patience. The goal of bow hunters is to hone in on their skills and experience the rush that bow hunting provides.

"It is certainly more challenging and physically and mentally demanding, and takes a lot more time both in preparation and execution — all reasons that draw some folks to it and others away," Brust said.

The pros for bow

Through my research, I found that bow hunting was more popular than I had previously thought. As a non-hunter, I had always assumed most people strictly hunted with rifles. Here's what some hunters had to say about why they bow hunt:

Eli Scriven, Crivitz

PHOTO SUBMITTED BY ELI SCRIVEN

"When you take a bow, there seems to be a more natural, primitive, almost instinctual nature to it. You seem somewhat in tune with nature and the ways of 'the caveman'… You need to take more precautions, and be stealthy and even more skilled to harvest an animal with a bow. You don't have the range of a gun, so you need to be closer to your prey, which means you have to be quieter and make more subtle movements if necessary.

"This obviously helps the heart pound a little harder when you can see your reflection in the blacks of the animal's eye as opposed to sitting on a corn field and shooting a .30-06 at an animal through a 9X scope at a distance of 150-200 yards."

Mike Brust, Wausau

PHOTO SUBMITTED BY MIKE BRUST

"From a physical standpoint, bow hunting involves very close and often extended interaction with the prey. The animal must come within range and offer the proper angle for a humane archery shot. This can take a considerable amount of time, often tense and very exciting, where eventual success is anything but assured.

"Bow hunting … is a much more solitary and introspective activity. Personally, both appeal to me on different levels."

Jake Schmidt, Kieler

"I think the biggest difference with bow hunting is the increased challenge. You have to get within 50 yards if you want to get a good shot. And this increased challenge gives you such a dose of adrenaline when you are pretty much right on top of your prey.

PHOTO SUBMITTED BY JAKE SCHMIDT

"And that adrenaline is why I love hunting. But [don't] get me wrong, I still love to gun hunt; bow [hunting] just has that little extra 'umph.'"

Whether they use a bow or a rifle, Wisconsin's hunters are committed to the sustainable use of wildlife, which they back up by contributing a lot of funding and volunteer efforts toward conservation in Wisconsin. And it goes well beyond license and permit revenues. Hunting in Wisconsin generated $1.4 billion in retail sales in 2006 and supported more than 25,000 jobs. With about 700,000 hunters, that means every 28 hunters support one job in Wisconsin.

LYLE E. DOBERSTEIN

Rifle hunting

Though I was surprised to see how many people bow hunt, Steve Johnson (the-deer-hunting-guide.com/), claims that more than 75 percent of bow hunters also rifle hunt. Here's what some rifle hunters had to say:

PHOTO SUBMITTED BY STEVE JOHNSON

Steve Johnson, the-deer-hunting-guide.com/

"In my opinion, most firearm-only deer hunters do so for a variety of reasons:

"Time … limited time off work and family activities to deer hunt, and the timing of the whitetail rut, which usually happens during the rifle season. The rut itself causes deer to be on the move, especially dominant bucks. Odds of harvesting a mature buck are much more in favor of the hunter during the rut as these male deer throw caution to the wind in favor of breeding does.

"The desire to have a better chance at harvesting a deer. Rifles and shotguns can reach out up to several hundred [yards] to harvest a deer. Bow hunters have to remain stealthy in order to get a deer within 40 yards or less to get a shot opportunity.

"For most firearm deer hunters, it is not necessary to study and understand the biology, behavior and daily habits of deer. Most bow hunters strive to learn everything they can about deer behavior; they actually try to get into the mind of the deer they are hunting.

"The deer camp and camaraderie with family and other hunters … can be something that deer hunters look forward to and plan for all year long. For many, it is a very large part of the total hunting experience.

"Expenses: it can become very expensive to multi-weapon deer hunt. Most modern bows and equipment that are set up correctly can cost well over $1,000 to $2,000. Camouflage and scent free clothing can also be very expensive; add another $1,000 to be properly set up.

"Just plain personal preference. Some hunters just like hunting with a gun versus with a bow. Shooting a bow takes hours, days, weeks and even months of practice to get proficient."

Alyssa Bloechl, Gleason

PHOTO SUBMITTED BY ALYSSA BLOECHL

"The Bloechls have been rifle hunting for as long as my 21 years can tell. We have mounts in our home and countless photos of orange-clad relatives proudly holding their recent kills. I personally started hunting when I was 12 years old. My brother followed the next year. We took the required hunter safety course and have been happily hunting with my dad ever since. It is easy for us to hunt, because we have forest land adjacent to our property.

"We don't have a cabin, and we typically don't hunt with large amounts of people, but hunting every year brings our family closer in the excitement of it all. There are many Bloechls that live on the same country road as us, so it is fun to go and see what their hunting parties have killed by the end of the season. The preparation is a builder of said excitement.

"We don't bow hunt. I'm not even sure any Bloechls that have lived on our farm ever have. My mother's family does both bow and rifle hunt. My family unit just makes the time to rifle hunt, and that way we don't have to spend the extra money on the gear and licenses. I have been building up my collection of blaze orange clothing and guns since I was 12 and I don't plan to taint it with camo and arrows. On the other hand, bow hunting does have an appeal because of the skill required to be a bowman.

"It's fun to share stories and always being on the lookout for specks of orange on desolate snow-covered fields or in shades of green forest. We typically 'talk-up' our kill stories and exaggerate how long we sat still, but the camaraderie is a very important thing that takes place here every year."

Eli Scriven, Crivitz

"Some of the best memories I have [are] from that last week in November around Thanksgiving at deer camp. Whether it's drinking old-fashioneds and playing sheepshead or getting Packers updates via two-way radios on Sunday afternoon during 'primetime,' I look forward to it every year (I usually start to get the 'itch' to get out in the woods when school starts back up and the temperatures begin to drop).

"… Gun hunting represents something so much more than just an attempt to kill an animal. It offers a tradition that has lasted for generations, passed down from my many-times-over-great-grandparents, to my parents, to me and eventually to my children … we learn respect for the great beasts of nature."

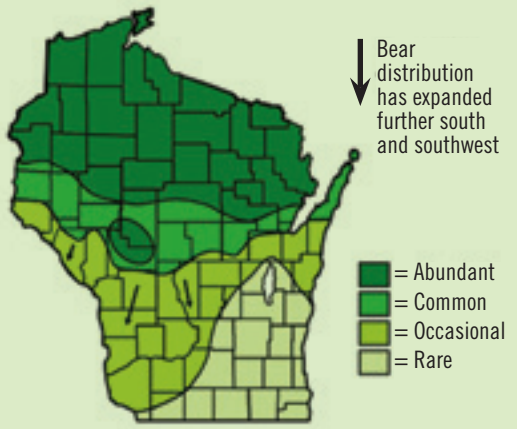
Amanda Laurenzi is an editorial staffer with Wisconsin Natural Resources *magazine.*

More than just the luck of the draw

Explaining the annual bear permit process.

Dawn Bernecker Bayer

Wisconsin has a healthy bear population throughout the northern half of the state with reported sightings increasing each year in the southern half of the state.



In spring when bears emerge from their torpor (bears are not true hibernators), many begin to actively seek opportune food sources to replenish their energy needs. People will commonly see bears at bird feeders, near gardens or passing through yards. While many people enjoy observing bears, it is illegal to feed them for purposes other than legal bear hunting or bear dog training in Wisconsin due to the problems that can develop from bears associating food with humans.

In addition, there are many hunters who look forward to the challenge of pursuing a bear during the annual fall harvest season. Throughout the year, DNR representatives receive calls from hunters seeking to learn more about the annual bear permit drawing process.

What is a Class A bear license?

Class A bear licenses, or harvest permits, are awarded via a preference point sys-

The Wisconsin Department of Natural Resources manages bear population size through regulated hunting. According to state statute, Class A licenses, also called harvest permits or kill tags, are awarded through a "preference point lottery system." You must be a drawing winner in order to be authorized to purchase a Class A license.

HERBERT LANGE

Wisconsin is home to a thriving black bear population estimated at more than 22,000.

tem. Applicants with the greatest number of preference points within each zone are chosen first to receive a Class A license.

Each year from mid-March through Dec. 10, anyone who will be age 10 by the opening day of the following year's bear season and who will be eligible to purchase a bear hunting license may apply for either a bear harvest tag or a preference point for the following year. The cost to apply is $3. Applicants may only apply once per year.

Wisconsin statutes dictate that hunters must apply for either a point or harvest tag at least once every three years to prevent the loss of accumulated points. Hunters may apply as a group with up to four people. Whoever has the least amount of accumulated preference points determines if all are drawn for harvest tags or all are each issued a point instead. Applicants receive a receipt that shows their choice.

Hunters who have already applied have two last minute options for making changes to their choice of harvest zone, preference point or harvest permit, group or individual application. First, they may call DNR Statewide Call Center representatives at 1(888)936-7463 between 7 a.m. and 10 p.m. seven days a week. The second option is available 24 hours a day via the DNR online licensing site at dnr.wi.gov prior to the deadline of 11:59 p.m. on Dec. 10 each year.

The permit drawing is done in mid-February. Applicants who requested a point are awarded one point, which is then added to their accumulated total. Points are not zone specific.

Applicants who requested a harvest tag and who have enough accumulated points for their desired zone are awarded tags and their point totals return to zero. Points will not be returned to drawing winners, even if an applicant chooses not to purchase their Class A license.

When will I find out if I got a license?

Drawing winners are notified by mail that they may purchase their harvest tag and license beginning in mid-March. It is not possible to be awarded both a point and a harvest tag. Only one point can be accumulated each year per applicant. Drawing winners can request to transfer their Class A bear license to a youth ages

HERBERT LANGE

The black bear's primary range is located in the far northern third of the state. However, bear numbers in recent years have expanded south as well. In fact, due to a growing population, bears are becoming much more common in the lower two-thirds of the state than ever before.

HERBERT LANGE

10-17. The transfer application must be received at least 15 days before the bear harvest season begins. Youth hunters are eligible to receive one transferred bear tag only during their lifetime.

The number of points, or years, needed to draw a harvest tag is directly influenced by the number of applicants requesting consideration for a harvest permit within each zone and their preference point status.

For the 2012 season, there were 104,391 applicants — 26,794 requested consideration for one of the 9,015 harvest tags, 77,597 applicants requested to be awarded a preference point only.

Depending on the zone choice, applicants for bear harvest tags know that it will be years before they are drawn for one. Applicants currently need to have collected between four and nine preference points in order to successfully draw a bear harvest permit.

Check your points

Hunters can check their preference point status in one of two ways: by visiting the Online Licensing Center at dnr.wi.gov or by calling the DNR Call Center toll-free at 1(888)WDNRINFo (1-888-936-7463).

Hunters often call DNR staff to get an estimate of the number of years before they may be drawn for a harvest tag. Drawing results are posted to the DNR's website. Enter keywords "bear drawing."

The number of harvest tags available is based on the harvest quota determined annually. Harvest quota recommendations for each zone are based on a number of factors, including population estimates, harvest levels, success rates, nuisance and agricultural complaints, and research results.

The Natural Resources Board approves or rejects the proposed bear quotas and harvest levels annually at its January meeting.

Hunters over the age of 15 who have not drawn for a harvest tag but are still interested in baiting bear or assisting other licensed hunters with dogs need to purchase a Class B bear license.

For zones A, B and D in even numbered years, the first week of the season is open only to hunters hunting with the aid of bait or with other legal methods not utilizing dogs. In odd numbered years, the first week of the season is open only to hunters hunting bear with the aid of dogs. The bear season ends with the final week open only to those using the method that started second that year. Depending on an applicants' preferred method of hunting this can also influence their decision to apply for a harvest permit. In Zone C hunting with the aid of dogs is not legal.

Having a bear of a time?

Anyone experiencing problems with bears should contact the U.S. Department of Agriculture-Wildlife Services on one of its toll-free lines at 1(800)433-0663 for southern Wisconsin and 1(800)228-1368 for northern Wisconsin.

The Department of Natural Resources partners with the U.S. Department of Agriculture -Wildlife Services to handle bear damage and nuisance complaints. This should not be confused with applying for harvest tags through the bear drawing. Individuals with questions or concerns regarding bear licenses and tags should contact the Department of Natural Resources.

For more information on how to obtain a bear harvest permit, bear drawing results and youth transfer forms, please visit DNR's website, dnr.wi.gov, and search keyword "bear."

Dawn Bernecker Bayer is a senior customer service representative for the Department of Natural Resources in Ladysmith.

PERMIT DEMAND

Demand for permits continues to exceed supply in Wisconsin, therefore increasing the number of years/points needed to draw a tag.

Year	Harvest Tags	# Applicants
1996	4570	35356
1997	4700	41969
1998	5860	44928
1999	6014	50938
2000	6598	50584
2001	5580	53530
2002	4986	54865
2003	4710	56944
2004	4741	61678
2005	4731	66777
2006	4370	73289
2007	4405	80245
2008	4660	86113
2009	7310	95384
2010	8910	97467
2011	9005	103853
2012	9015	104391

Some earthworm invasions spread from the lakeshore into the forest when anglers dump unused bait in the forest.

DNR FILE

Little worms, big consequences

Ground-dwelling birds may be silenced by invasive earthworms.

Rebecca Deatsman

One of the most beautiful sounds of the Northwoods in summer is the ethereal, fluting song of the hermit thrush. But in some areas of northern Wisconsin, this song is in danger of being silenced by an unlikely culprit: the earthworm.

One of the greatest misconceptions about earthworms is that they are native in northern hardwood forests. This is not true in northern Wisconsin, Upper Michigan and all of Minnesota. Earthworm species in those areas are European in origin and arrived with European settlement.

DNR FILE

A forest without earthworms has a rich understory of herbs, tree seedlings and shrubs, and a thick, spongy leaf litter layer.

SCOTT LOSS

Extensive sedge carpets dominate the forest floor in many hardwood forests of northern Wisconsin. These conditions are thought to be caused by a combination of heavy earthworm invasion and high levels of deer browsing.

SCOTT LOSS

A forest experiencing heavy earthworm invasion often has few remaining herb and seedlings, no intact litter layer and extensive patches of bare soil.

SCOTT LOSS

Many who grew up with the idea that worms are good for the soil are surprised to learn that earthworms are not native to the Northwoods.

Further south, in areas of North America that were unaffected by glaciers during the most recent Ice Age 11,000 years ago, native earthworms can still be found. However, any that were here would have been killed off by the glaciers, and the forest ecosystem that has developed since has done so in the absence of worms — any present here now originated in other parts of the world.

Exactly how and when they were first introduced is not known, but they probably arrived with European settlers in ship ballast and imported plants. Once introduced to an area, worms extend their range very slowly on their own, at a rate of as little as five yards per year, but humans continue to transport them into new places. Their presence in an area has the potential to change the forest floor in significant ways.

Earthworms are part of a special category of creatures known as ecosystem engineers. Like human engineers designing buildings and bridges, ecosystem engineers have the ability to greatly modify their own habitats and alter the structure of the ecosystems in which they live.

The "structure" of an ecosystem, however, is more than just physical; it refers to how energy and nutrients flow between plants and animals.

As earthworms move through a forest's soil and digest dead leaves and other organic material, they have several subtle but far-reaching effects. They decrease the amount of leaf litter on the soil's surface and mix soil layers together.

They can reduce the abundance of small soil-dwelling insects, as well as of fungi called mycorrhizae that help provide nutrients to plants. This, in turn, affects what plants will thrive in an area invaded by earthworms. Grasses and their cousins the sedges, which don't rely on mycorrhizae and can tolerate disturbed soil, replace a variety of other, more sensitive types of plants, leading to lower diversity.

Earthworms and birds

What does all this mean for birds? A study conducted by University of Minnesota researchers Scott Loss and Robert Blair in northeastern Wisconsin's

Research technicians (from left to right) Lorrine Lambert, Cala Hakseth and Matthew Sharrow measure forest floor habitat in an ovenbird nest in the largest remaining tract of earthworm-free forest in Wisconsin, the Rainbow Lake Wilderness.

SCOTT LOSS

Hermit thrush nestlings beg for food.

DNR PHOTO

An ovenbird nest.

SCOTT LOSS

Chequamegon-Nicolet National Forest sought to answer this question, both for the hermit thrush and another species, the ovenbird.

Though not closely related, these two songbirds have important behaviors in common — both nest and forage on the forest floor. In recent decades, populations of these ground-dwelling birds have been in decline across the northern Midwest.

Loss and Blair surveyed both sites that had been invaded by worms and sites that were still earthworm-free for the presence of hermit thrushes and ovenbirds. They found unequivocally that the population density of both birds was lower in earthworm-invaded areas.

This only answered part of the question. They still wondered why ground-dwelling birds were so affected by the presence of worms. To find out, they monitored ovenbird nests in both site types over two breeding seasons. But because hermit thrushes have larger breeding territories than ovenbirds, they couldn't locate enough hermit thrush nests to have a sufficient sample for their analysis.

They recorded the type of understory vegetation and the depth of the leaf litter at the nest sites to see if they were related to nesting success.

Two factors affected the survival of ovenbird chicks: first, they were less likely to survive if their nests were in areas with greater amounts of grass and sedge cover, and second, they were less likely to survive in areas with a shallower layer of leaf litter.

The researchers theorized that the nests were more visible to predators against the uniform green backdrop of grass. Moreover, the decrease in insects and other arthropods caused by a lack of leaf litter could mean that ovenbird parents had to devote more time to foraging for food and less time to keeping watch over their nestlings.

"In general, the results were along the lines of what we hypothesized," says Loss, who worked on the research as part of his graduate studies. "However, we were surprised at just how clearly different the densities of ovenbirds and hermit thrushes were between earthworm-free and invaded forests."

Loss adds that another surprise was that the grasses and sedges densely covering the forest floor in earthworm-invaded areas didn't provide sufficient cover for the ovenbird nests. Finally, the researchers realized that in addition to the color contrast, the single species produced a single layer of plants that were all roughly the same height, rather than the diverse mixture of cover that would have better hidden the ground-level nests.

All of this is a classic example of what ecologists call "cascading effects." The familiar metaphor is of a series of dominoes falling. One small alteration in an ecosystem, like the introduction of nonnative worms, can cause changes that ripple outward through the food web in hard-to-predict ways. While earthworms are probably not the only factor in the decline of hermit thrushes, ovenbirds, and other ground-dwelling songbirds, the effects they have on the forest floor are certainly contributing to it.

What you can do

Once earthworms have become established in an area of forest, there is no feasible way to remove them. Instead, conservation efforts focus on limiting their spread, and you can help:

- When fishing, dispose of unused bait worms in a trash can instead of tossing them into the woods or water.
- Freeze compost solid to kill any worms in it before using it in your garden or transporting it. The longer compost stays frozen, the better — it can take as long as a month to completely eliminate worms and their eggs.
- Rinse off tires with treads that hold soil (like ATV tires) before moving vehicles from one place to another.

If you are interested in helping to monitor earthworms in your area, consider participating in the Great Lakes Worm Watch (www.nrri.umn.edu/worms). By working together, we can protect Wisconsin's forests from further worm invasions in the future, and the ovenbird, hermit thrush and other ground-dwelling songbirds will continue to sing for years to come.

Rebecca Deatsman is a graduate student in environmental education at the University of Wisconsin-Stevens Point and works at Conserve School in Land O' Lakes.

Amanda Laurenzi

Good winter reads and gifts

A LITTLE SOMETHING FOR EVERYONE.

The garden has been put to bed for the winter. The leaves have long been turned to mulch. It's time to relax, sit back and reward yourself for a frenzied fall with a good book. Here are some suggestions to get you started.

"Keepers of the Wolves: The Early Years of Wolf Recovery in Wisconsin"

Author Richard P. Thiel recounts the vast difficulty wolf enthusiasts have had with bringing wolves back to Wisconsin and maintaining their numbers.

Thiel, coordinator of the Department of Natural Resources' Sandhill Outdoor Skills Center, goes back to tell of his beginnings in tracking wolves and why he became interested: "I learned that the state was responsible for managing its wildlife, and I wrote to the Wisconsin Conservation Department to get information about the status of rare wildlife. I found the response regarding timber wolves especially disturbing. Wildlife officials weren't sure whether any remained in the state, but they were fairly certain the species had been all but eradicated from the lower forty-eight states, with the sole exception of a small population that persisted in northeastern Minnesota."

Throughout the book, Thiel describes his experiences tracking wolves and keeping up with their numbers in order to conclude they had made a comeback and were able to survive. Thiel has also been the team chairman for Wisconsin's wolf recovery plan in the 1980's and wrote "The Timber Wolf in Wisconsin," exploring the history of wolf extermination in the 19th and early 20th centuries.

"Haunted Wisconsin: Third Edition"

Wisconsin has an extensive history of paranormal reports from around the state. Whether you believe in ghosts or not, author Michael Norman makes interesting points with firsthand accounts of people's experiences dating back to the early pioneers of Wisconsin to modern-day tales of haunted schools and theaters in his new book, "Haunted Wisconsin: Third Edition. "

Accounts of events are presented as if someone is actually telling a ghost story by the campfire; people who have contributed also have voices within the book. Quotes from the contributors and others who may have been witness share their experience with articulate detail.

In the preface to the book, Norman notes, "Whether young or old, rich or poor, famous or obscure, many of us find extraordinarily compelling those tales of a hidden world coexisting with our own, one that on occasion allows us a glimpse of its denizens — in the form of ghosts or apparitions or spirits or poltergeists or whatever you want to call them."

"Birdscaping in the Midwest: A Guide to Gardening with Native Plants to Attract Birds"

The best time to plan for spring planting? Before spring, of course! Have you ever wanted to have a garden filled with birds in your backyard along with beautiful plants? There is an array of stunning bird species and plants in the Midwest, and many combinations of the two are possible if you know what to do.

Mariette Nowak, an active leader and volunteer for Wild Ones: Native Plants, Natural Landscapes (a nonprofit educational organization) and for the Lakeland Audubon Society, provides details and instructions on how to landscape your backyard to offer an enriching environment for a variety of birds in "Birdscaping in the Midwest: A Guide to Gardening with Native Plants to Attract Birds."

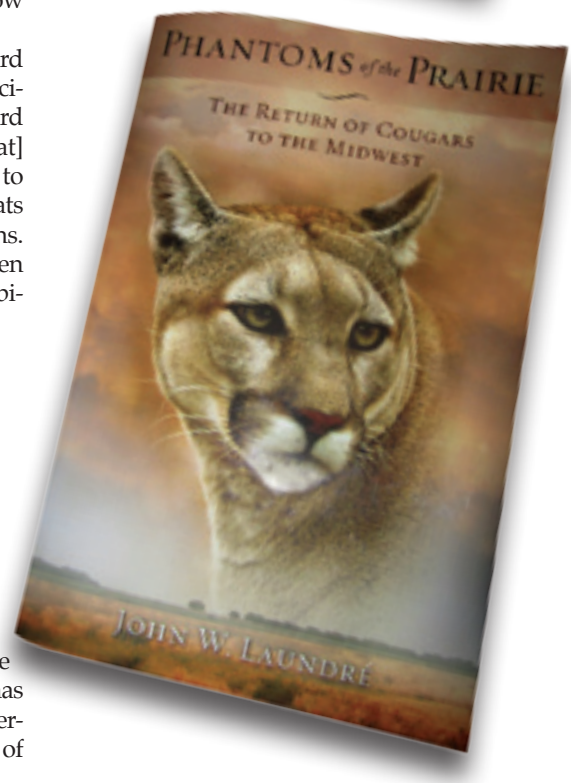
Nowak uses vibrant pictures to show examples of gardens and bird species on almost every page. There are also sidebars of useful information that make finding the answers you're looking for much simpler. Nowak also provides easy-to-read charts that give data and information on birds, plants and other gardening information. The dream of having a plethora of birds in your backyard is now reachable thanks to this book.

Stephen Kress, vice president of bird conservation, National Audubon Society, calls this an "excellent guide to bird gardening in the Midwestern states [that] provides abundant detail about how to improve the quality of backyard habitats through examples and practical plans. Mariette Nowak demonstrates that even small steps can improve local bird habitats in meaningful ways."

"Bird Watcher's Bible: A Complete Treasury"

National Geographic's "Bird Watcher's Bible: A Complete Treasury" is a fantastic read for both bird watchers and curious bystanders alike. Whether you have been participating in the hobby for a while or simply have a vested interest in birds, this book has everything from tips on where to find certain breeds to the history and literature of these magnificent feathered beings.

Each chapter diversifies information by giving facts on specific bird species, featuring a picture of a bird with its name, providing visual guides that coincide with the main information of the chapter, and more. Birds have been a long-time inspiration for humans in



the fine arts, sciences and even everyday life. There is great information for experienced bird watchers and it is also an easy read for someone who has never partaken in anything having to do with birds.

Anyone can read this book and understand the importance of different species to conserving natural habitats without prior knowledge required. So, stop. Look. Listen. Read. And be charmed by the beauty and wonder of birds.

"Phantoms of the Prairie: The Return of Cougars to the Midwest"

In John W. Laundre's book the past, present and future of cougars in the Midwest prairies is unveiled for those who are familiar and unfamiliar with the mysterious feline. Early settlers in our region came close to killing off the cougar, and the rest were scared away by threat of humans making the area their territory. Cougars were shoved west and have been vacant from the Midwest for over a century.

However, recent reports from various people around the region have confirmed the cougars' slow migration back to the prairies of the Midwest. Laundre, vice president of the Cougar Rewilding Foundation and adjunct professor of biology at the State University of New York at Oswego, explores the possibility of the cougar making a comeback in the Midwest and what it could mean for humans.

Coexistence between humans and cougars is unstable and hard to predict, but Laundre attempts to analyze the level of success this movement could accrue in the coming years. The book is an easy read for those who have been following the news of cougars making their way to our region and also for those who are unfamiliar with the history and recent discoveries of the cougar.

Not only does Laundre provide in-depth descriptions and explanations of different issues surrounding the movement, he presents the information through questions that help guide readers into a train of thought that makes his book easier to comprehend.

Amanda Laurenzi is an editorial staffer for Wisconsin Natural Resources *magazine.*

Friends of Wisconsin State Parks holiday gift packages

Friends of Wisconsin State Parks will be featuring holiday gift packages for purchase online again this year. They include a variety of great gift ideas for people who enjoy the Wisconsin state parks, forests, trails and recreation areas. You can purchase a 2013 Wisconsin state park sticker, a state trail pass, a FWSP 2013 calendar and NEW this year several gift packages that include a one-year subscription to *Wisconsin Natural Resources* magazine. Visit the website at friendswiparks.blogspot.com/ to purchase these packages to give as gifts or for you as a convenient way to shop online.

Friends of Wisconsin State Parks

Go face-to-face with freshwater game fish in this 2013 calendar

***Wisconsin Natural Resources* magazine contributor Eric Engbretson trades a fishing rod for a camera, mask and snorkel as he goes underwater to get a look at freshwater game fish in their own habitat.**

Engbretson's photos are featured in the 2013 calender, *Fish of the Northern Lakes*, a beautiful full size wall calendar that will transport you under the surface of crystal clear lakes for a rare glimpse of North American game fish in "their" world.

Each month features a stunning underwater image of one of our most popular native fish in its natural habitat. Included are beautiful underwater scenes of brook trout, rainbow trout, walleye, muskie, northern pike, largemouth and smallmouth bass, bluegill and pumpkinseed sunfish and bullhead and channel catfish. *Fish of the Northern Lakes* is available at underwaterfishphotos.com

"Unlike many of our native animals, we rarely see fish in their natural state," Engbretson says. "Fish live in a world that's largely invisible to us, so when we do see them, it's usually when they're far removed from their natural environment and behavior. This calendar shows what fish really look like in their natural habitat. I think my pictures celebrate the aquatic world by showing the inherent natural beauty of freshwater fish and the uniqueness of the freshwater environments where they live."

Readers Write

SIMPLE WAYS TO REDUCE RUNOFF

[We] are writing because we are concerned citizens. We are both currently enrolled in the Watershed Ambassadors class at the Wisconsin Maritime Museum. Through our studies we have learned about the negative effects of runoff on 90 percent of our lakes and rivers. We were also surprised to learn that many of the contributing factors to the problem can be reduced or avoided altogether, so we have decided to let people know how they can help.

Stormwater carries runoff that can include oil, dirt, fertilizers, chemicals and lawn clippings on our streets. All storm drains empty into our streams, rivers and lakes. If these things get into the water we may end up drinking it and getting very sick.

There are some simple ways to reduce runoff that will only take a few minutes. You could sweep the dried grass away from the storm drains, or you could fix an oil leak in your car. You could also wash your car in the grass, instead of the driveway, or take it to a car wash. Another way to help would be to install a rain barrel and water your lawn with the water you collected, and save some money! If you have a dog, always remember to pick up its feces. You wouldn't want to swim in the same lake with dog poop in it, would you? There are more and more problems with the Earth and we need to do something about them.

Isabella Scheibl and Grace LeSage
Kiel

NO CONSPIRACY THEORIES HERE

I couldn't let the letter, *Discouraged by Chemtrails* (Readers Write, August 2012) go without a response. "Chemtrails?" Really? Printing such letters just encourages the conspiracy people. There are no chemtrails, just ordinary contrails created by high flying aircraft. There is no scientific basis or fact for chemtrails in the legitimate science community. The writer is "deluged" with contrails because of the high volume of aircraft traveling to Florida. I'm disappointed that the official magazine of the Wisconsin DNR would publish such a letter.

Jim Shurts
Madison

I am surprised that you printed the letter from Leroy Gebhart, Gainesville, Fla. (August 2012) regarding "chemtrails." Chemtrails are a purely invented idea promoted by conspiracy theorists. There is no basis in science for them, and the adherents of this belief have produced no evidence whatsoever for their existence. I don't think it is the Department of Natural Resources' responsibility to provide a forum for unfounded theories promoted by an extremely small group of paranoid people.

Steven T. Branca
Milwaukee

Thanks to both of you for pointing out the difference between "chemtrails" and "contrails." It isn't our intent to promote conspiracy theories and we promise to be more attentive to them in the future.

TRAPPING MEMORIES ARE PAINFUL

In regards to "Trapping memories" (August 2012), it was a beautifully written reflection on the pleasures of spending time outdoors with family and friends. But Mr. Klemme could find other ways of getting the benefit of outdoor time without subjecting animals to the extended suffering leghold traps cause. Having removed the family dog from such a trap set without permission on my father's land in Marinette County years ago, I can testify she was in tremendous pain. And I believe many other "non-target" animals are put through such cruel suffering.

I am a Wisconsin native currently living and working in Oklahoma but I plan to return "home" to retire. We continue to subscribe to your excellent magazine as a reminder of the beauty and diversity of our home state. I come from a hunting and fishing background. But trapping has always been a painful topic for me.

Janie M. Martin
Bixby, Oklahoma

DISAPPOINTED WITH EMPHASIS ON HUNTING

I have been a faithful subscriber and have given many gift subscriptions over the years. Rarely do you disappoint me, but I found little to enjoy in the August 2012 edition of *Wisconsin Natural Resources* magazine. "Little," as in the only sections I read were "Readers Write," "Creature Comforts" and "Wisconsin Traveler." I'm not a hunter, or a fisherperson. Occasionally, your articles on managing those activities are interesting regardless, but that wasn't the case this time. It could have been the sheer number of articles focusing on hunting. From your article on "Trapping Memories" (an inhumane and unethical activity), to "Dogs and Ducks," "Sharing a passion for upland birds and bird dogs," "My first waterfowl hunt," "Finding hunting land is easier," "A chance for a reel recovery," and "Hunt, climb, canoe and make crafts," you could not be more obvious at promoting hunting if you tried. As a Wisconsin resident, I am very aware of the general (misplaced) concern about the decrease in hunters. That decline fortunately corresponds with an increase in birders, trail hikers/riders, cross-country skiers and those who just want to get outdoors in some fashion. Please be sure to represent those interests as well. I can't say how disappointed I am in this edition. I've loved reading your articles about science-based species recovery, what's being done to eradicate invasive species, camera traps, combating wildfires, promoting forestry management and the like. I can't help but think this trend is reflective of a new DNR director. Please bring back a more balanced focus on all outdoor appreciation, not just hunting, otherwise I will have to regretfully cancel my subscription. As it is, I will wait to renew until I see if this trend continues.

Carol Siewert
Madison

Our magazine is the official publication of the Department of Natural Resources and from its first issue has covered a wide range of subjects counted in the DNR's mission, including all aspects of outdoor recreation – consumptive and nonconsumptive. Stories of interest to our hunting readers are not new, especially since surveys show that half our readers hunt and at least three-quarters of them are anglers. We continually strive to carry a mix of stories to interest all our readers. Typically our August and October issues carry stories with a hunting theme because that's the time of year most hunters are afield or preparing for their seasons. Our winter and spring issues generally carry stories of interest to birders, kayakers, canoeists, hikers and field trip enthusiasts, to name just a few. To ignore hunting, trapping and angling — all legal activities enjoyed for decades by a wide range of Wisconsinites, male and female and of all ages — our pages would be just as disappointing to them as the August issue was to you.

WHY NO SLOT LIMITS FOR WALLEYE LAKES?

In your June 2012 issue sharing walleye wisdom, in the article "A walleye guy," the author wrote that he recommends releasing fish over 20 inches long. I assume since he's writing an article in your magazine, the Department of Natural Resources must believe he knows what he's

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.

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.

talking about. Which is why I can't help but wonder why the DNR fisheries managers and biologists do just the opposite. In northwest Wisconsin they have put 18-inch minimum length size limits on many lakes, so that the fish being harvested are the larger female spawners we should protect.

I have lived and fished in Wisconsin all my 54 years and have watched our walleye fisheries in Polk, Burnett, Sawyer and Washburn counties decline the last 10 to 20 years, while states and provinces like Minnesota and Ontario have done well using slot limits to protect their larger females and harvest fish under 18 inches which are mostly males. If our fisheries managers were using common sense, then once these lakes they have put 18-inch minimum size limits on had built up good populations of fish 18 inches and over, they would switch to a slot limit protecting fish 18 to 28 inches. We should have slot limits on all our walleye lakes. Let people harvest fish 14 to 18 inches for the pan and one over 28 inches as a trophy.

We might be able to bring our walleye lakes back to decent levels without relying totally on stocking which doesn't seem to be in the budget. For too long the Department of Natural Resources has catered to bass fishermen and tournaments and let largemouth bass take over all our lakes. Now the Department of Natural Resources say bass are eating all the walleye fry. Sounds like another case of DNR mismanagement.

Merlin Jensen
St. Croix Falls

Jamison Wendell, fisheries biologist from Washburn and Burnett counties, replies: *That is an excellent question and one I receive from many anglers. Protected slot limits allow anglers to harvest fish outside of a specific range of lengths. For example, the most common slot limit used in Wisconsin protects fish between 14 and 18 inches from harvest. In this case, fish smaller than 14 inches and one fish greater than 18 inches may be harvested. Slot limits work best on lakes with good natural reproduction and fair growth rates. In these lakes, the abundant smaller size fish do not need the protection of a minimum size limit. Many Canadian and northern Minnesota lakes have abundant natural reproduction of walleye and slot limits can work very well on those lakes.*

An 18-inch minimum size limit is typically used to protect young fish from harvest on lakes with inadequate or no natural reproduction. A number of lakes in northwest Wisconsin have experienced poor natural reproduction of walleye in recent years and 18-inch minimum size limits have been implemented on many of these lakes. If natural reproduction improves and large numbers of small walleyes are present, changes to fishing regulations on these lakes would be considered.

TICK TERRITORY A STRETCH

I found the article on ticks very informative ("Tiny menace," June 2012). However, the statement in the first paragraph that deer ticks "were only found in the areas along the Mississippi River in the northwest corner of the state" is a geographic stretch. The St. Louis River makes up the boundary of the most northwest corner of the state, while the Mississippi River (on Wisconsin's boundary) is over 140 miles away.

Fred D. Nash
Weyerhaeuser

BATS GIVEN A HOME OF THEIR OWN

Over the years we have lived in this house we have appreciated the bats making their nightly flights. I especially enjoy the pups learning to navigate in and out of the rafters. They fly

out well enough, but have to practice flying back up and under the eaves. It's not uncommon to see them fly for the eaves and hit the screen, or land in the potted plants on the deck but after a few attempts they make it in. The whitewash on the logs and droppings on the deck was more than enough to give them a house of their own. In late winter we blocked the eaves and hung a bat house. In the middle of day on July 14, I walked around where the bat house is located and saw all these bats clinging to the logs. There are several individuals clinging some distance from the house. This daytime exposure occurred a few more times, but not with the large numbers as seen on the 14th. Much to our dismay, blocking the eaves did not keep 100 percent of bats out of the eaves. A few managed to squeeze in between the logs, their evidence shown by the droppings on the deck. We have another, larger house to put up next to the current one and will do so when they migrate. Hopefully this addition will give them ample room.

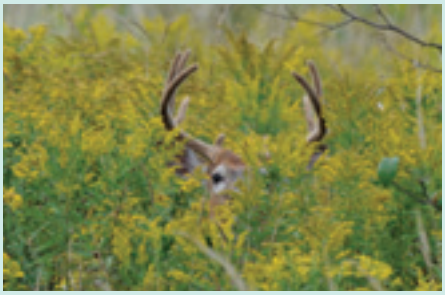
Diana Hierlmeier
Random Lake

BETTER PRIVATE HABITAT MANAGEMENT NEEDED

The final report and recommendations of the Kroll report is interesting reading but hardly earth shattering. But not enough emphasis is placed on managing private lands for deer since that is where the majority of deer are and that is where most people hunt. Deer need good habitat including food, cover and water. The Department of Natural Resources needs to make a concerted effort to work with landowners to achieve that habitat. I chaired a DNR Board-appointed hunter-landowner council for two years that focused in part on the need for technical assistance to manage wildlife on private property. If the DNR Board adopted some of those recommendations it would help solve the scarcity issue.

William Horvath
Stevens Point

In June 2012, Dr. James C. Kroll submitted a report to the Wisconsin Department of Administration with his recommendations for improving Wisconsin's deer management practices. The report can be viewed online at DOA's website (http://www.doa.state.wi.us/section.asp?linkid=239&locid=0).



BUCK IN VELVET

[This] photo was taken on a warm August afternoon. My parents were graciously giving me a tour through their woods in Taylor County when I was very pleased to catch a quick glimpse of this 10-point buck. As I placed my camera on the roof of the truck, I was amazed he stared at me long enough to get the pic… within seconds, he was gone.

Mary LaMotte
Neenah

CREATURE *Comforts*

Wisconsin Gypsies.

Story by Amanda Laurenzi and photos courtesy Feathered Gold Stables, LLC

When people envision Wisconsin and are asked to say which animal first comes to mind, more than likely they will say, "Cow." While we are the dairy state, we do hold hidden treasures in small locations scattered throughout the rolling hills and flat prairies of Wisconsin.

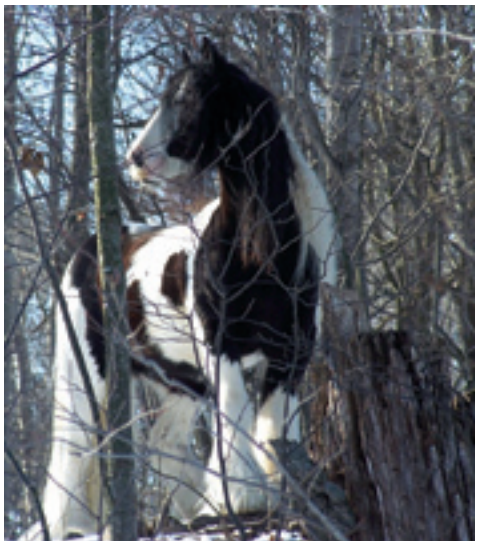
I am referring to a horse known as the Gypsy Vanner. Equine stables and farms are not rare in Wisconsin; however, these horses are. Consider this: there are only 3,500 Gypsy Vanner horses in the United States; Wisconsin has over 120,000 horses alone.

The Gypsy Vanner was brought to the United States in 1996, after the breed had been discovered by Cindy and Dennis Thompson while vacationing in Europe. When they returned to America, they established the Gypsy Vanner Horse Society.

What exactly is so special about this breed and why are they so rare in the United States?

Gypsy Vanners were created by Romani, or Gypsy, people of Europe. They were specifically bred to be sturdy, willing and beautiful. The Gypsies needed these horses to pull their caravans for long hours and still have energy to help with other work once camp was set up.

The horse can be distinguished from other breeds just by the long, flowing hair of the mane and tail, and also their feathers (long hair behind and underneath the knee). The abundance of hair gives them an angelic look whether they're running or standing still. Their bloodlines are a mixture of Shire, Clydesdale, Dell and Fell pony. They stand between 14-17 hands and are traditionally piebald (black and white), but can be registered under any color.



The Gypsy Cob was bred to be a wagon horse. These horses were bred by the Romani and pulled wagons or "caravans" known as vardos, which is a type of covered wagon in which people sometimes lived.

They are a Gypsy horse, so through the centuries of Romany people being persecuted and highly unaccepted by others, the breed was easily kept away from society. Through the years, of course, the English and Irish came to know these horses and owned them. Thanks to the Thompsons, we in America can also enjoy the magnificence of these creatures.

I had the pleasure of visiting Feathered Gold Stables, LLC in Ogdensburg, owned by Denise and Derek Krause. The stable is arguably the best-known Gypsy Vanner stable in the state. They have well over 30 horses and run a business breeding, showing and caring for their horses.

Denise bought her first Gypsy Vanner, Feathered Gold Moe, in March 2004 when the horse was eight months old. After a rocky trip to America from England, Krause was pleased to find Moe was calm and willing to learn. Moe initially was going to be the only Gypsy Vanner Denise owned, but she shortly bought two mares after receiving Moe and now has well over 30 Gypsy Vanners. She describes these horses as "puppy dogs" and after my visit, I would have to agree.

The Gypsy Vanners are strong bodied work horses with incredible endurance and sweet temperament.

I have grown up with horses and feel I have a good understanding of their mannerisms and how to take good care of them. When Denise took me out to the pasture where most of the mares and foals were, I expected them to run away. Instead, we were surrounded by foals as their mothers continued to graze, barely taking notice of our presence. The foals were curious and social, poking their muzzles at us and whinnying for treats and pets.

I was astounded. They truly were like puppies. The adults were docile and I saw something I had never thought was possible: two stallions, Feathered Gold Mickey Finn and Romantic Legend, were placed in the same pen next to a handful of mares! Any horse owner would be considered crazy to do that, but Krause just smiled and stated she had never had a problem come of it.

Krause and her family compete and join in about 20 events per year. Gypsy Vanners are versatile enough to show English and western styles. Their calm demeanors make them ideal for parades and other chaotic events.

See Gypsy Vanners at the Midwest Horse Fair 2013, which runs April 19-21 in Madison.

More information on the breed can be found at vanners.org. Information about Denise Krause's Feathered Gold Stables can be found at featheredgold.com

Amanda Laurenzi is an editorial staffer at Wisconsin Natural Resources *magazine.*

Traveler

Embrace the season.

Amanda Laurenzi

Wisconsin is notorious for its winters and each year seems to live up to the stereotype. Don't let the cold weather keep you inside. Explore snowmobile and snowshoe trails along with skiing and snowboarding hills. If you aren't into winter sports, join in on the fun at parties and get-togethers around the state. Don't be a Scrooge this winter; embrace the season!

Head up to Hurley December 6-9 for the **Red Light Rally** event, which hosts not only fantastic snowmobiling trails, but various events such as the Poker Run. Make sure to grab a map of the area and trails before going out. Contact Susan at (715) 561-4334 for more information.

The Christmas spirit is contagious on December 22 as Pleasant Prairie presents its annual **Holiday Ice Show**. The event features holiday music, bright lights and colorful costumes as all styles of ice skaters perform. Following the show is an opportunity to skate with Santa. For more information visit pleasantprarieonline.com or call (262) 925-6752.

It's an ultra-uphill battle from Rice Lake to Park Falls.

JULIEBERG.BLOGSPOT.COM

For those seeking more challenging adventures, check out the **Tuscobia Winter Ultra** in Park Falls, December 28-30. You can run, bike or ski this race at 150-mile, 75-mile or 35-mile distances based on your skill level. The 150-mile race starts Friday at the Chequamegon Canoe Club Bistro. The 75-mile race is held Saturday, starting in Rice Lake and ending in Park Falls. The 35-mile point-to-point race will begin in Winter on Saturday. Parking will be available near the finish line in Park Falls. Pre-registration is required; there is no race day registration. A portion of proceeds will be donated to Friends of Tuscobia Trail, Inc. For more information call (651) 755-5880 or email tuscobia@gmail.com with questions or comments.

New Year's Eve is a time for celebration! But if you had a little too much fun, join the club and do it all over again at the **Lugerville Chasers New Year's Hangover Party** in Phillips on January 1. The event features food, games, raffles and more. Everyone is welcome. Proceeds go toward trail maintenance. The event runs 1 to 5 p.m. For information call (715) 339-4066 or email belanbuilders@pctcnet.net.

Not all sports have to be intense. The **Candlelight Ski, Hike and Snowshoe** event held at Mirror Lake State Park near Wisconsin Dells is a great example of a fun-filled and relaxing winter evening on the trails. Skiers, hikers and snowshoers follow torch-lit trails as they embark on a nighttime journey 6 to 8 p.m. on January 5. The Friends of Mirror Lake will provide bonfires and a fundraiser for the park by selling food and beverages. Call (608) 254-2333 or email Rebecca.Green@wisconsin.gov with questions or comments.

Carvers tackle 300-pound ice blocks in Waukesha.

WWW.JANBOREE.ORG

Come to the **Jack Frost Fest** in Spooner on January 12 for some family fun! Events such as the Antique Snowmobile Show, Pond Hockey Tournament, Family Ice Fishing Contest, Turkey Bowling, Toilet Seat Toss, Rib & Chili Contest Bonfire and Marshmallow Roasting, Open Skating and other great events are reasons to bring your family for a day of games and food. The event starts at 8 a.m. and ends at 4 p.m. For more information call (715) 635-2168, visit spoonerchamber.org or email aaron@spoonerchamber.org.

Explore Waukesha with the whole family Jan. 18-20 for the **Waukesha JanBoree**. Events such as the Ice Sculpting Contest (Sat. 10 a.m. to 2 p.m.) provide an opportunity for novice and international carvers to form 300-pound blocks of ice into works of art. Other events can be seen at janboree.org

If you haven't had enough competition in the season, don't worry — there is still one more event for you! The **Badger State Winter Games** in Wausau on January 19 features Alpine skiing, Nordic skiing, curling, figure skating, bowling, billiards, archery and more! Competitors from around Wisconsin and other Midwest states come together to compete in these events. For more information and registration, visit badgerstategames.org and spectator admission is free.

Missed your chance to register for the Birkie? Ski the Badger State Winter Games.

SPORTS AUTHORITY OF WAUSAU/CENTRAL WISCONSIN CONVENTION & VISITORS BUREAU

Play pond hockey at Jack Frost Fest.

WWW.TRAVELWISCONSIN.COM

Some of the most picturesque settings during the winter months in Wisconsin are snow-covered trails illuminated at night by candlelight.

WWW.MEETUP.COM

Amanda Laurenzi is an editorial staffer for Wisconsin Natural Resources *magazine.*

Wisconsin, naturally

ENTERPRISE HEMLOCKS STATE NATURAL AREA

Notable:

The presence of "coarse woody debris" is one of several distinguishing characteristics of old-growth forest ecosystems such as that protected at Enterprise Hemlocks. This material, composed of large, downed tree trunks and branches, tip-up mounds and standing snags, provides food and habitat for a variety of organisms, and adds significantly to the biological diversity of old forests. An entire functioning micro-community of bacteria, fungi, mosses, lichens, insects, salamanders and other species can be supported in a single decaying log that may take as many as 100 years to fully decompose. Many bird and mammal species use coarse woody debris as nesting, feeding and denning sites. Enterprise Hemlocks features stands of mature mesic forest heavily dominated by eastern hemlock, along with sugar maple and yellow birch. Very old trees are present; some more than 200 years in age. A small, boggy conifer swamp and ephemeral ponds are scattered throughout the site in kettle depressions. Larger wetland areas are dominated by black spruce muskeg and white cedar swamp. Showy lady's slipper and small yellow lady's slipper orchids can be found here in the late spring.

How to get there:

Access is across Oneida County lands. The best forest is found on the two easternmost 80-acre tracts. To reach the northern 80: from the junction of U.S. Highway 8 and County G in Rhinelander, go south on G 8.3 miles to a parking area at the intersection of North (Sugarbush) Road. Walk 0.2 miles north to the southern boundary of the tract. For the southern 80: from the parking area, follow the snowmobile trail (Route 15) west 0.3 miles, then south about 0.6 miles to the tract. Visit dnr.wi.gov and search "Enterprise Hemlocks" for information and a map of the site.