



Wisconsin natural resources. Vol. 30, No. 1

February 2006

[Madison, Wisconsin]: Wisconsin Department of Natural Resources, February 2006

<https://digital.library.wisc.edu/1711.dl/WDI475V4RNI5J9D>

<http://rightsstatements.org/vocab/InC/1.0>

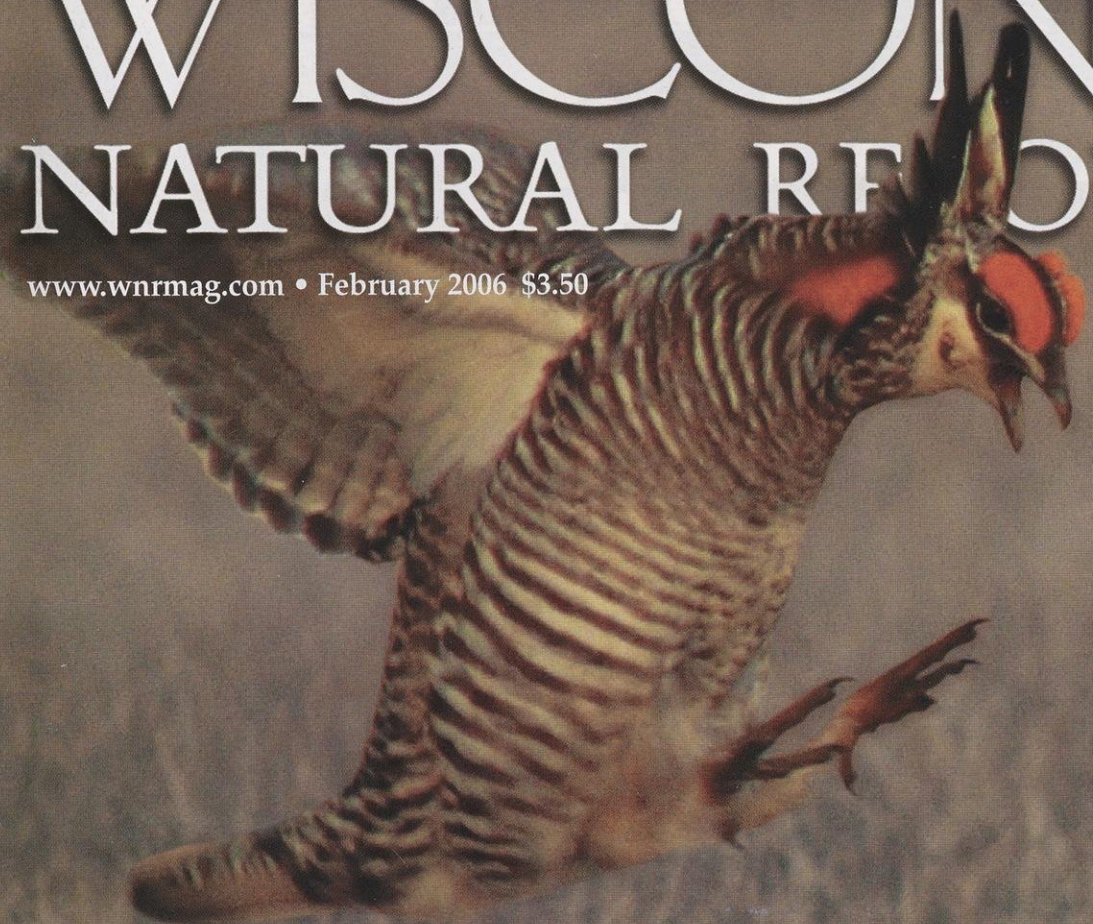
The libraries provide public access to a wide range of material, including online exhibits, digitized collections, archival finding aids, our catalog, online articles, and a growing range of materials in many media.

When possible, we provide rights information in catalog records, finding aids, and other metadata that accompanies collections or items. However, it is always the user's obligation to evaluate copyright and rights issues in light of their own use.

Conservation Patrons: Renew your licenses

WISCONSIN NATURAL RESOURCES

www.wnrmag.com • February 2006 \$3.50



Prairie chickens
dance
at dawn

Sturgeon patrol: On guard!

Getting more when dams renew



Wandering waxwings

A search
for fruit
keeps flocks
of these
magnificent
birds
roaming the
countryside.

Kathryn A. Kahler

Cedar waxwings wait until
June to nest. They primarily
feed on sugar-rich berries,
flower petals and insects.

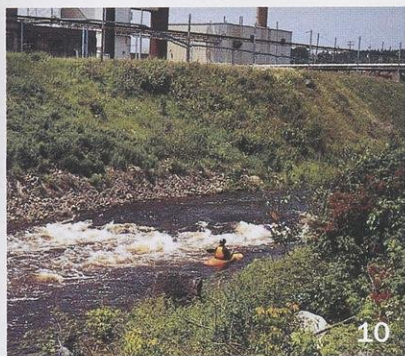
Regal. Nomadic. The two descriptions seem incongruous applied to the same bird, but the cedar waxwing's roving habits do nothing to diminish its sleek, stately façade. Two species of waxwings are found in Wisconsin — the cedar waxwing (*Bombycilla cedrorum*) and its larger cousin, the Bohemian waxwing (*B. garrulus*). Both are nomadic migrants, driven by their frugivorous, or fruit-eating habits.

Cedar waxwings are very social and flock year-round, even during courtship, breeding and nesting when other birds abandon their wandering ways. They are most often seen in flocks of 40 or more, often noisily descending en masse on a fruit-laden tree and making quick work of stripping it bare. Their summer breeding range is throughout Canada and the central U.S., and generally they winter in the southern half of the country.

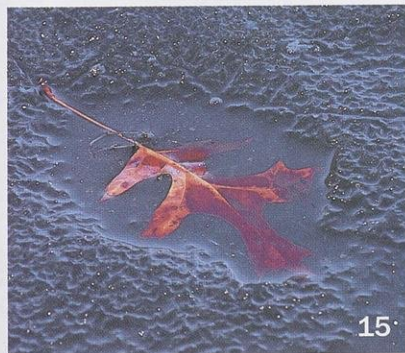
Continued on page 27

WISCONSIN NATURAL RESOURCES

February 2006
Volume 30, Number 1



ROBERT MARTINI



JACK R. BARTHOLMAI



DEAN TVEDT

2 Wandering waxwings

Kathryn A. Kahler

Cedar waxwings flock like a regal entourage.

4 On guard!

Frankie Fuller

Sign up for a streamside look at a sturgeon love-in!

10 A fluid situation

Lisa Gaumnitz

Hydroplants undergo license review every 30-50 years. It's our best shot to reclaim recreational and environmental benefits lost when the dams were built.

15 A surface observation

Anita Carpenter

The thin border between water and sky is a hotbed of activity.

Center pullout — Conservation Patrons

Buy or renew your licenses. It's easy online, by phone, in person or by mail.

17 The drummer of love

Peggy A. Farrell

Taking steps to preserve the dawn dance of prairie chickens on the central Wisconsin grasslands.

22 Hit the books

Kathryn A. Kahler

The green thumbs-up for eight new outdoor writings.

26 Flavors we savor

Share your recipes for the one pan, one pot dishes you gotta have when you get together campside, shoreside, outside or trailside.

28 Readers write

31 Treemendous

Maureen Mecozzi

Traveler cruises the tall timber to see trees that make specimens of themselves.

FRONT COVER: Male prairie chickens flutter jump to advertise their territory as part of ritualized fighting to attract hens.

© STEVEN SERVANTEZ, Milton, Wis.

BACK COVER: Germain Hemlocks State Natural Area in Oneida County. For more information, or to order a guidebook, contact the State Natural Areas Program, Bureau of Endangered Resources, DNR, P.O. Box 7921, Madison, WI 53707 or visit dnr.wi.gov/org/land/er/sna.

© THOMAS A. MEYER, WDNR

Editor David L. Sperling
Associate Editor Natasha M. Kassulke
Contributing Editor Maureen Mecozzi
Circulation Manager Kathryn A. Kahler
Business Manager Laurel Fisher Steffes
Art Direction Thomas J. Senatori,
Waldbillig & Besteman
Printing Schumann Printers



PUBLCE-012
ISSN-0736-2277

Wisconsin Natural Resources magazine (USPS #34625000) is published bimonthly in February, April, June, August, October and December by the Wisconsin Department of Natural Resources, 101 S. Webster St., Madison, WI 53702. The magazine is sustained through paid subscriptions. No tax money or license fees are used. Preferred Periodicals postage paid at Madison, WI. POSTMASTER and readers: subscription questions and address changes should be sent to Wisconsin Natural Resources magazine, P.O. Box 7191, Madison, WI 53707. Subscription rates are: \$8.97 for one year, \$15.97 for two years, \$21.97 for three years. Toll-free subscription inquiries will be answered at 1-800-678-9472.

© Copyright 2006, Wisconsin Natural Resources magazine, Wisconsin Department of Natural Resources, P.O. Box 7921, Madison, WI 53707. <http://www.wnrmag.com>

Contributions are welcome, but the Wisconsin Department of Natural Resources assumes no responsibility for loss or damage to unsolicited manuscripts or illustrative material. Viewpoints of authors do not necessarily represent the opinion or policies of the State of Wisconsin, the Natural Resources Board or the Department of Natural Resources.

Printed in the U.S.A. on recycled paper using soy-based inks in the interest of our readers and our philosophy to foster stronger recycling markets in Wisconsin.

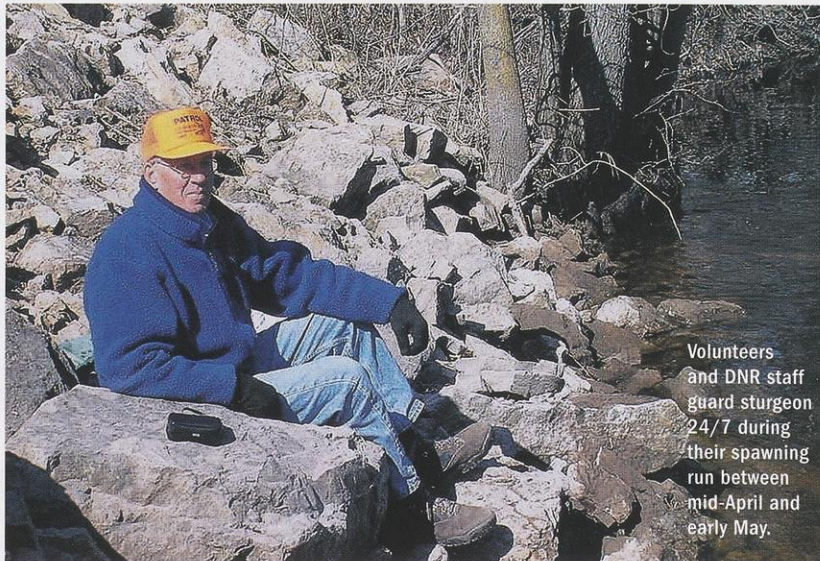
Governor Jim Doyle

NATURAL RESOURCES BOARD
Gerald M. O'Brien, Stevens Point, *Chair*
Herbert F. Behnke, Shawano
Jonathan Ela, Madison
Howard D. Poulson, Palmyra
Christine L. Thomas, Plover
John W. Welter, Eau Claire
Stephen D. Willett, Phillips

**WISCONSIN DEPARTMENT OF
NATURAL RESOURCES**
Scott Hassett, *Secretary*
William H. Smith, *Deputy Secretary*
Mary W. Schlaefer, *Executive Assistant*

On guard!

Sign up for a streamside look at a love-in.



Volunteers and DNR staff guard sturgeon 24/7 during their spawning run between mid-April and early May.

DNR LAW ENFORCEMENT

Frankie Fuller

It was like going to a singles' bar. The comers mingled, touched each other, stayed together for a moment, then moved on. Suddenly, something clicked and their rapture exploded.



Sturgeons spawn in extremely shallow waters. Males crowd around ripe females releasing milt as they release their eggs.



FRANKIE FULLER

At ease! The author settles in for a 12-hour shift of sturgeon guarding.



DNR LAW ENFORCEMENT



FRANKIE FULLER

Sturgeon guards and watchers certainly get a close look at the fish during the spring run. Here you can see the four barbels that sturgeons use to sense food in front of their mouths.

This singles' bar, though, was for fish — sturgeon, as a matter of fact — not people. And when their rapture exploded, they celebrated with such fervor that the cold water splashed up the side of the rocky riverbank and onto my face, leaving icy drops as I leaned over to get a closer look, not to mention a few pictures! The fish created such noise as they thrashed about that it sounded like a waterfall.

My friend and I were on the banks of the Wolf River north of Shiocton as volunteers with the Wisconsin Sturgeon Guards. Our mission? To prevent any harm or poaching as the sturgeons spawned and started another generation in an ongoing cycle that stretches back millions of years.

Sturgeons spawn in shallow water, right next to shore and in such large numbers that they are vulnerable to human poachers. People wading in the shallow waters might easily collect them by hand or net. Both sturgeon eggs and meat are prized foods. The eggs are easily processed into caviar that is nearly equal in quality to some of the world's best Russian caviar. Lake sturgeons are also smoked as a tasty fish. Sturgeons are huge and grow very slowly. Consequently, without protection and regulated harvests, sturgeon populations quickly diminish to dangerously low levels.

Sturgeons are considered rare species worldwide and here in Wisconsin, they are on watch status, which means they are protected with fishing and spearing restrictions. Active sturgeon management sustains strong populations of this ancient fish on the Lake Winnebago chain of lakes and tributaries, the Wolf River, the Menominee River, the St. Croix River to the Gordon Dam, the Namekagon River below the Trego Dam, and the Chippewa and Flambeau rivers. Stocking by DNR fisheries crews



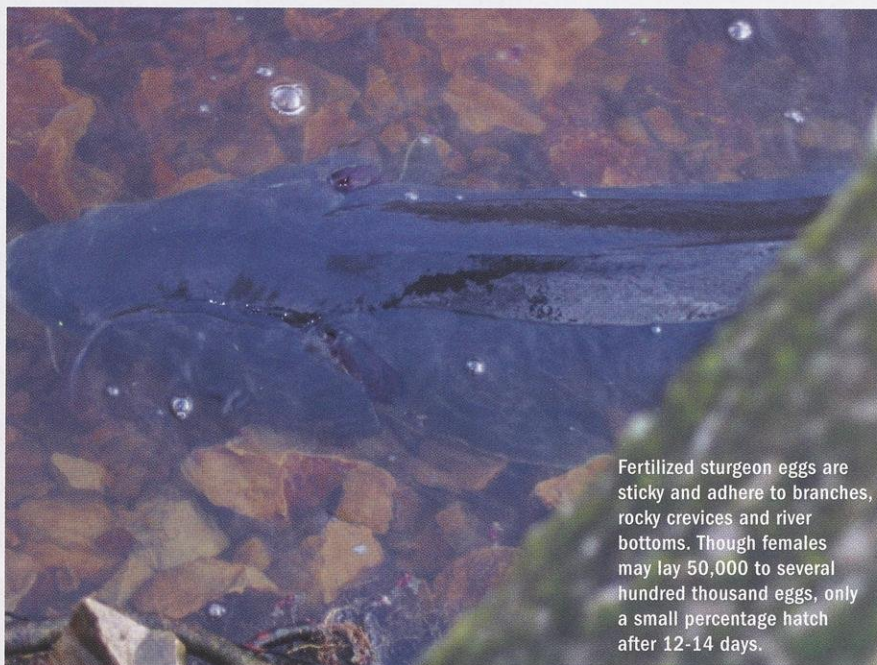
Thousands of visitors come to watch sturgeons each spring. Prime viewing spots are along the Wolf River at Shiocton and near the Shawano Dam, along the Fox River, and near Mukwa Wildlife Area and Pfeifer Park in New London on the Embarrass River. Check the DNR's Outdoor Report each week between mid-April and early May for viewing locations.

DNR LAW ENFORCEMENT

with help from local sporting clubs and Native Americans is also restoring populations on lakes in Washington, Dane, Waupaca and Washburn counties, on the Wisconsin, Baraboo, and Milwaukee rivers, and several other waters under tribal management.

Given the number of recovery plans in so many places, it's not plausible to monitor every site during the spawning period, but more intensive efforts continue where sturgeons traditionally congregate in large numbers on the Lake Winnebago chain. Since 1987, the nonprofit organization Sturgeon for Tomorrow has cooperated with the Department of Natural Resources to put out a call for volunteer Sturgeon Guards to watch over the spawning fish during the short breeding season.

Lake sturgeons spawn on cue in a brief breeding season as warming spring weather raises the water temperature. If water flow is high and water temperatures rise slowly, spawning begins in mid to late April



Fertilized sturgeon eggs are sticky and adhere to branches, rocky crevices and river bottoms. Though females may lay 50,000 to several hundred thousand eggs, only a small percentage hatch after 12-14 days.

FRANKIE FULLER

when the water temperature reaches 53° F. When it is drier and water flow is low, the water temperature rises more rapidly and spawning begins when the water temperature reaches 58-59° F.

To make sure that guards will be

available, the DNR sends out a call for volunteers about a month in advance. Two 12-hour shifts are available: daytime from 7 a.m. to 7 p.m., or nighttime, 7 p.m. to 7 a.m. Shifts cover a three-week spawning period that begins about the middle of April and

continues through the first week in May. As you might imagine, finding volunteers for the nighttime shifts when the air can stay pretty chilly can be especially difficult. Since I wanted to maximize my chances for being assigned, I signed up for a night shift during the second week. To hedge our bets, we also offered our services for a day-time shift during the first week. We got lucky and were called to service.

On call, on demand

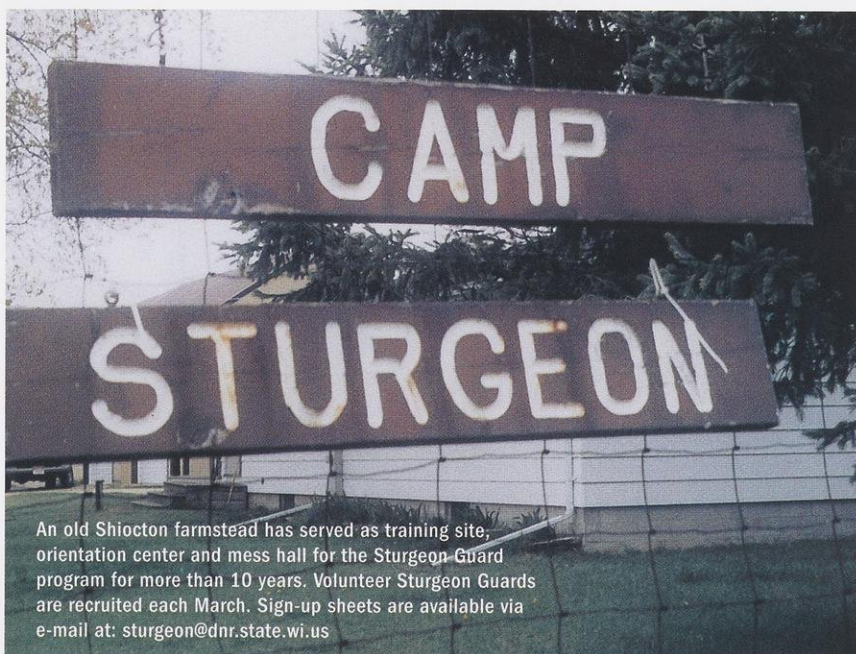
The Sturgeon Guard system runs a bit like jury duty. You telephone the sturgeon hotline every day and listen to a recorded message that tells you to either show up for the patrol or go ahead with your normal activities. Other messages may tell you to show up unless you are notified that you are not needed in a specific location. Thirty-six sites are staffed each night. When you are accepted into "The Guard," you receive directions to report to a central fish camp where you will be trained and assigned to a final nearby destination. When I called the hotline on April 15th, I got my marching orders and was told to report for duty at 6 a.m. on Tuesday, April 19th.

The camp at Shiocton is a staging ground and was only the kick-off point for our adventure. This training site is owned by the Department of Natural Resources and consists of an old farmhouse, a large barn and a couple of other farm buildings. Since we were traveling to sturgeon camp on unfamiliar roads in the dark, we left ourselves plenty of travel time. We arrived around 3 a.m. We had previously been offered a bunk, but declined and chose to stay in our camper since we were unsure about our arrival time. We slept for about three hours, then were greeted in the morning with a hearty home-cooked breakfast, compliments of Sturgeon for Tomorrow. The organization kept us well-fed, providing the fixings for sack lunches and a hot dinner at the end of our 12-hour shift. They also gave each of us a must-have fire engine red baseball cap emblazoned with "PATROL Sturgeon for Tomorrow 2005" across the front. Generally I dislike wearing caps because they leave



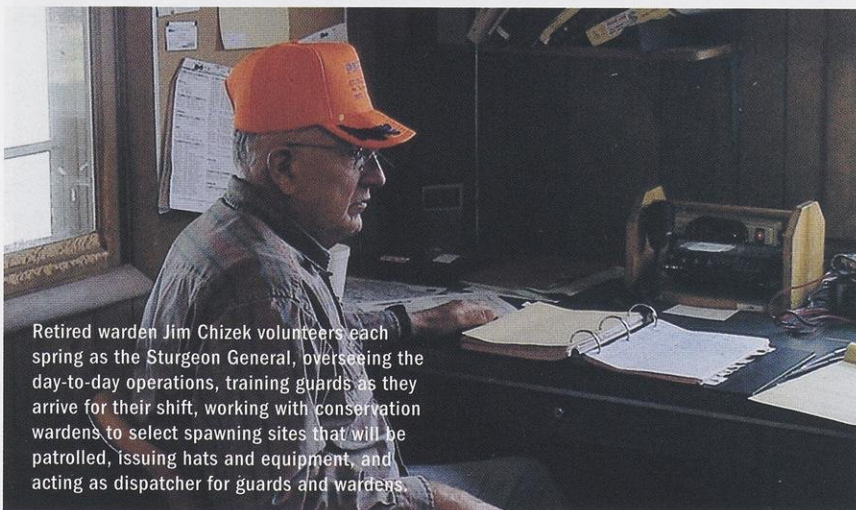
Rock riprap on the shore stabilizes the bank, slows erosion and provides protective substrate for spawning sturgeons.

FRANKIE FULLER



An old Shiocton farmstead has served as training site, orientation center and mess hall for the Sturgeon Guard program for more than 10 years. Volunteer Sturgeon Guards are recruited each March. Sign-up sheets are available via e-mail at: sturgeon@dnr.state.wi.us

DNR LAW ENFORCEMENT



Retired warden Jim Chizek volunteers each spring as the Sturgeon General, overseeing the day-to-day operations, training guards as they arrive for their shift, working with conservation wardens to select spawning sites that will be patrolled, issuing hats and equipment, and acting as dispatcher for guards and wardens.

DNR LAW ENFORCEMENT



Natural reproduction is augmented with fry raised to fingerling size in state hatcheries to establish sturgeon populations in riverways where they traditionally occurred or where restoration could now sustain sturgeons.

DNR PHOTO

indentations in my hair, but this one came in handy to identify me to potential poachers and to break the ice when welcoming visitors, meeting property owners and contacting helpful DNR wardens. We were off after breakfast, hats in hand, with directions to reach our patrol spot.

Staffing our post

We were assigned to guard "our" sturgeons from a rocky shore along the Wolf River just north of Shiocton. The shoreland property is privately owned and contains some spawning habitat where rock riprap was being added to a steep shoreline to protect the area from further erosion. The owner lamented some delays in his project, but was grateful that improvements were finally underway. Truckloads of rock were still piled near the shore. Our access to the river followed a trail from his house almost a mile through a woods at the edge of the property. The owner drove down on his ATV to see how we were doing, visit us and then do some fishing. Since he could not fish where the sturgeons were spawning, he took off in his motorized rowboat. Except for the splashing fish, it stayed pretty quiet as the morning progressed.

Male sturgeons arrive at the shallow spawning grounds before the females and mill around in groups of eight or more. They come so close to the surface that their snouts, backs and tails pop right out of the water. Spawning begins as soon as a ripe female arrives. The males crowd around her, thrashing about releasing clouds of sperm (called milt) while the females start dropping eggs. Each egg is only about an eighth-inch in diameter. Fertilized eggs get quite sticky and they drop in the fast current adhering to rocky crevices, under branches, river bottoms and onto any other solid surface. While a female may produce anywhere from 50,000 to 700,000 eggs during the short spawning season, only a very small percent survive to hatch in 12-14 days. In addition to human predators, suckers follow the sturgeons as they spawn for the sole purpose of eating the freshly deposited eggs.

The sturgeons are especially vulnerable during their first few years when they are smaller and slower than many fish that prey upon them. It helps that their bony armor develops quickly, but they grow slowly and it takes decades before young sturgeons join the breeding population. The males typically spawn about every other year starting about age 15. They can live about 40 years in the wild. Females don't mature until around age 25 when they are about 55 inches long and they only spawn every three to five years. They can live 80 years or more if they don't succumb to disease, pollution or human harvest.

Fossil records of sturgeons date back about 100 million years and the fish maintain many primitive features that contributed to their success over the millennia. They are very interesting looking creatures, three to five feet long

with tails that look like small shark fins. Four feelers called barbels hang in front of their mouths and alert them to food as they cruise along the bottoms of the waterways. Sturgeons have no teeth. Their mouth and lips actually pop out, lower and work like a vacuum to suck up and filter food detected by their barbels. Sturgeons have no scales but develop a firm, shell-like body armored with five rows of bony, overlapping plates.

As we kept an eye on our fishy charges from shore, other human visitors stopped by during the day to watch the mating rituals from the riverbank or from their fishing boats. We watched the boaters carefully too. The DNR equipped us with cell phones, thanks to U.S. Cellular, to report poachers or note other problems.

A DNR warden was among those who visited. We had a nice chat with

him and learned that the spawning period had an unusually early start in 2005. He mentioned that staff scrambled to line up enough volunteers to cover the weekend patrol, but he expected the annual spawning run would be finished by week's end. He was right. I subsequently called the DNR hotline and learned that the fish camp would close for the season by the next Friday.

We were lucky to get even one shift on patrol, but I got hooked by the experience, and we have a clearer idea of what to expect this year when we sign up once again to reserve a date to "chaperone" as sturgeon meet, mix and mosh in their annual, ancient dance. ❧

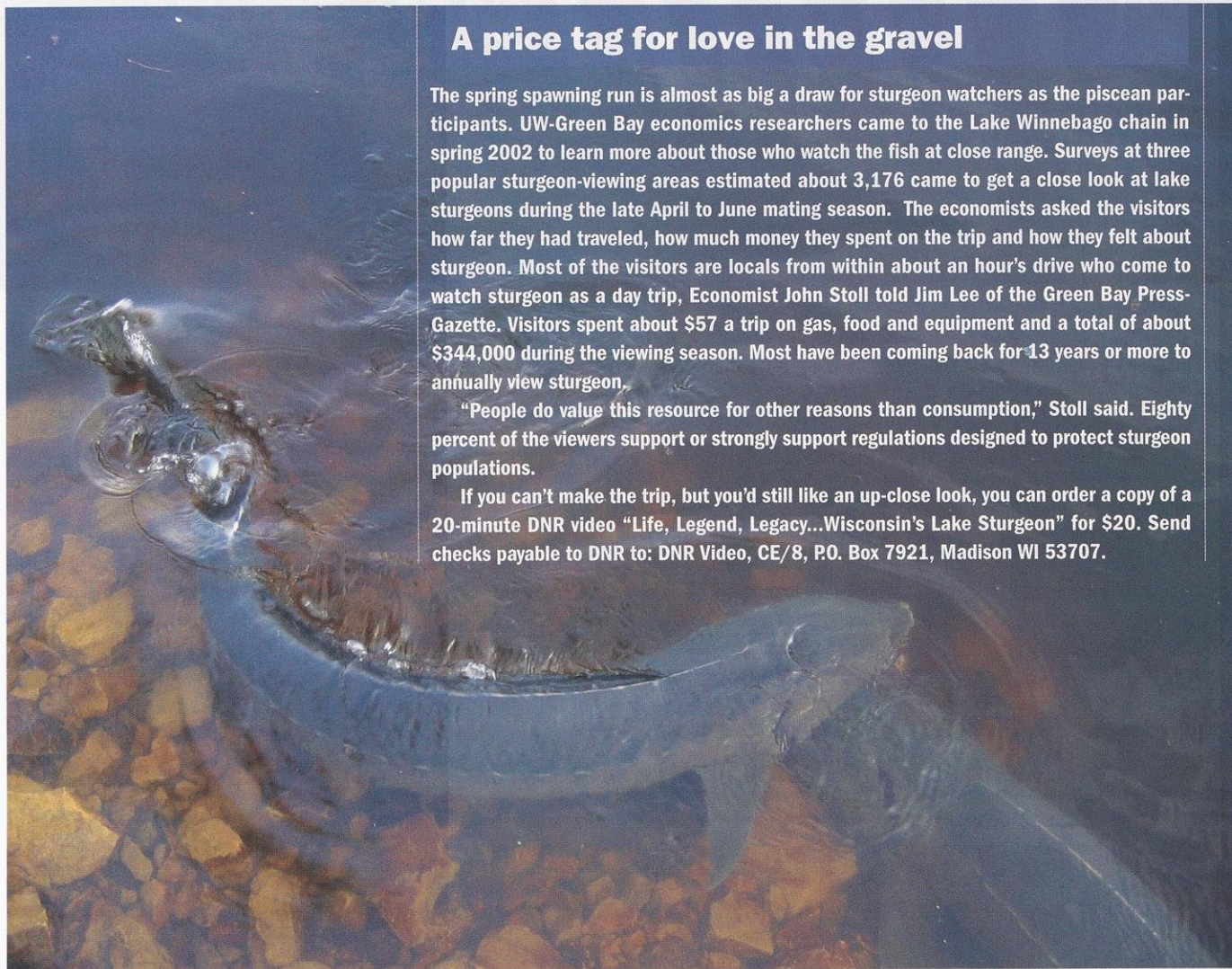
Frankie Fuller volunteers for the American Hiking Society and the Friends of the Horicon Marsh with her friend, Kent Wahlberg. She writes from Madison.

A price tag for love in the gravel

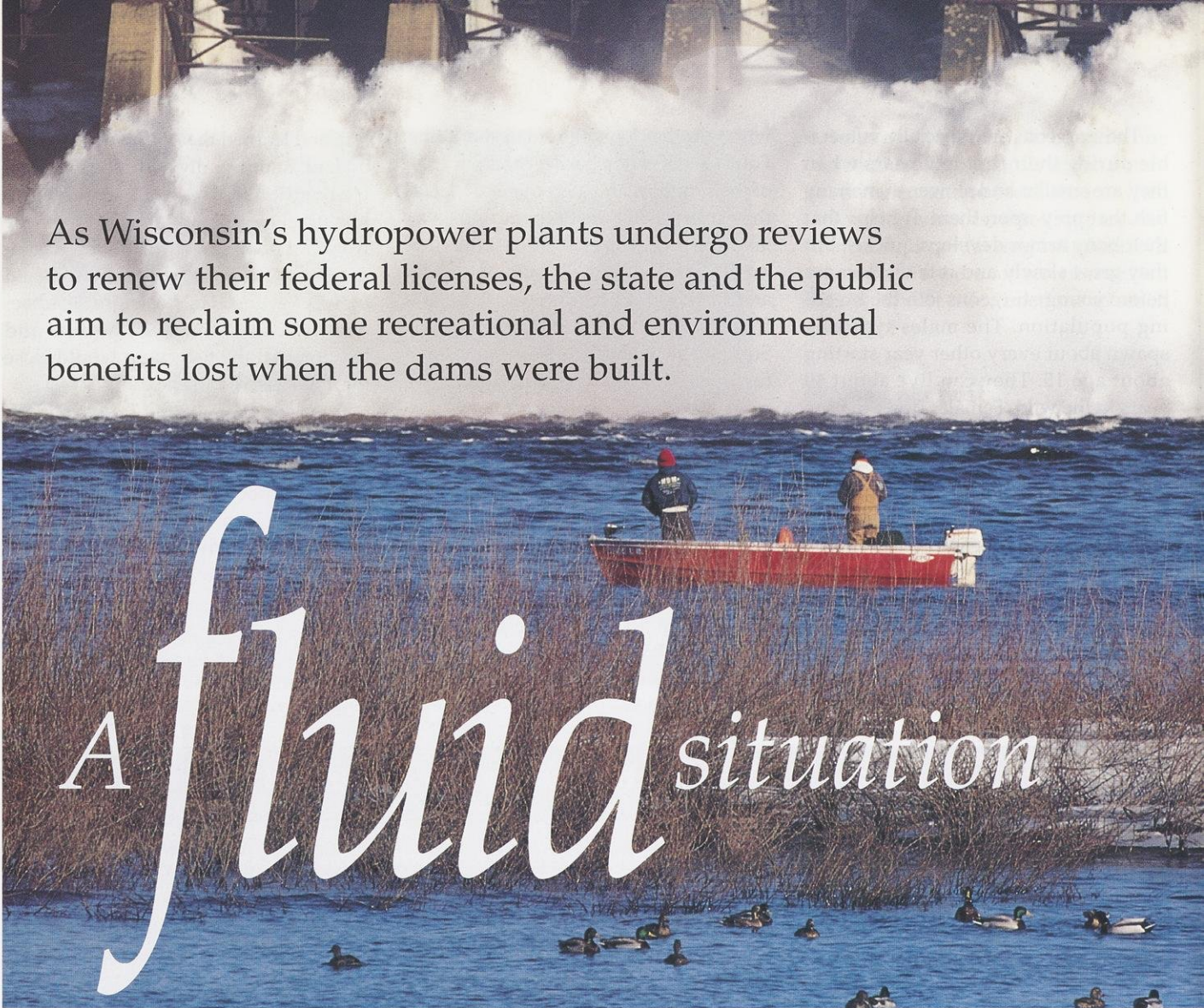
The spring spawning run is almost as big a draw for sturgeon watchers as the piscine participants. UW-Green Bay economics researchers came to the Lake Winnebago chain in spring 2002 to learn more about those who watch the fish at close range. Surveys at three popular sturgeon-viewing areas estimated about 3,176 came to get a close look at lake sturgeons during the late April to June mating season. The economists asked the visitors how far they had traveled, how much money they spent on the trip and how they felt about sturgeon. Most of the visitors are locals from within about an hour's drive who come to watch sturgeon as a day trip, Economist John Stoll told Jim Lee of the Green Bay Press-Gazette. Visitors spent about \$57 a trip on gas, food and equipment and a total of about \$344,000 during the viewing season. Most have been coming back for 13 years or more to annually view sturgeon.

"People do value this resource for other reasons than consumption," Stoll said. Eighty percent of the viewers support or strongly support regulations designed to protect sturgeon populations.

If you can't make the trip, but you'd still like an up-close look, you can order a copy of a 20-minute DNR video "Life, Legend, Legacy...Wisconsin's Lake Sturgeon" for \$20. Send checks payable to DNR to: DNR Video, CE/8, P.O. Box 7921, Madison WI 53707.



FRANKIE FULLER



As Wisconsin's hydropower plants undergo reviews to renew their federal licenses, the state and the public aim to reclaim some recreational and environmental benefits lost when the dams were built.

A fluid situation

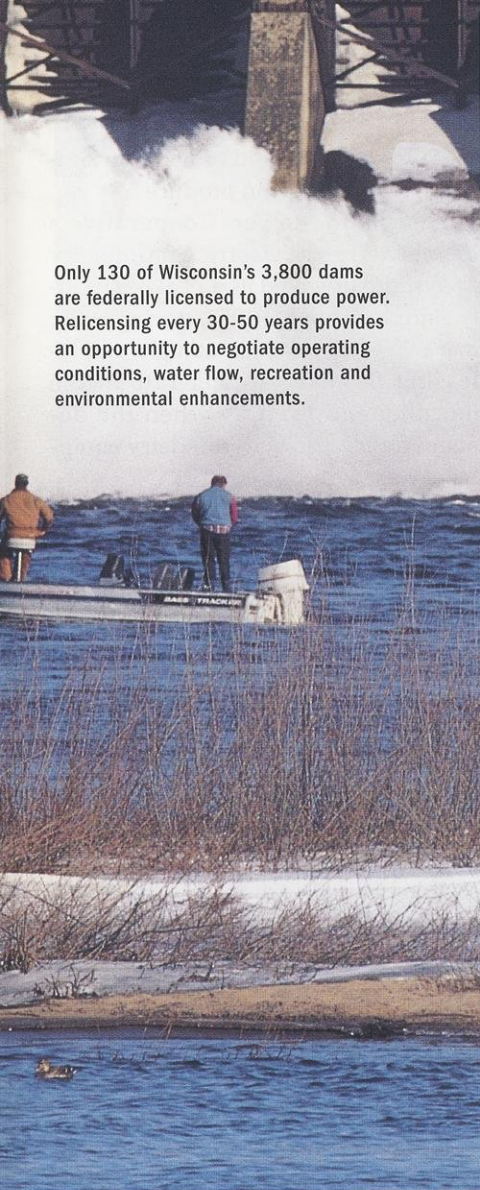
Lisa Gaumnitz

Wisconsin has a national reputation for removing old, obsolete dams and restoring free-flowing rivers. Quietly, the state is also moving to the forefront in assuring its largest working dams generate more public benefits and less environmental damage.

Capitalizing on a landmark U.S. Supreme Court decision, the Department of Natural Resources, working with conservation groups, has negotiated greener operating conditions at dozens of dams in the process of applying for federal licenses to operate for the next 30 to 50 years.

The effort has built new boat ramps, campsites, canoe portages and other recreational facilities. Negotiations are also restoring more natural river flows that are better for fish, other aquatic creatures and paddlers; to install passageways that allow lake sturgeon and other fish to return to historic spawning grounds; and to protect fish from the blades of turbines and other power-generating equipment. This approach has helped local communities preserve jobs and maintain a cheap, renewable source of electricity.

"Wisconsin has been a leader in bringing stakeholders to the table, keeping the issue out of the courts, and balancing needs — economic, ecological and recreational," says Helen Sarakinos, dam program manager for the River Alliance of Wisconsin.



Only 130 of Wisconsin's 3,800 dams are federally licensed to produce power. Relicensing every 30-50 years provides an opportunity to negotiate operating conditions, water flow, recreation and environmental enhancements.

STEPHEN J. LANG

"These agreements are not as sexy as dam removals — after all, how much can you celebrate an agreement?" she asks. "But cumulatively, these operating agreements can have an enormous impact — and their sexy moments will come."

Federally-licensed hydroelectric dams comprise less than four percent of Wisconsin's 3,800 dams, most of which are small, privately owned and built to create ponds or reservoirs for recreation and aesthetic purposes. The 130 hydro dams are located on the state's largest, most popular waters and most of them continue to generate electricity to serve local communities, to sell on the market, or to power the paper industry. A small number of the dams tame water levels for flood control. Between 1989 and 2010, some 73 hydro dams in Wisconsin will have their federal operating

licenses reviewed and revised before they can be renewed, more than in any other state.

"There aren't that many situations where you can affect such a range of natural resources in a legally-binding agreement for 30 years," says Bob Martini, a 30-year DNR veteran recently appointed to coordinate such dam relicensing issues. "These are unique opportunities, so it's worth whatever effort we can give to it."

Stoking Wisconsin's economic engine

Starting before statehood, wave after wave of dam building altered Wisconsin's waters. "It transitioned from lumber to wheat to industry to electricity," says Meg Galloway, DNR's chief dam safety engineer.

Dams raised water levels so spring floods could float logs downstream to mills and markets. Falling water provided mechanical energy to run sawmills, turn grist mills or power manufacturing in just about every community.

In September 1882, Appleton's Vulcan Street Plant opened to run electric street cars. It became the world's first hydroelectric generating station and sparked an era of renewed dam construction and renovation in Wisconsin. By 1920, hydroelectric stations supplied 40 percent of the nation's electric power according to the Federal Energy Regulatory Commission (FERC).

Thirty years later, however, hydropower's star was fading, and coal and natural gas met the nation's voracious demand for energy. Today, hydropower accounts for only 10 percent of electricity produced nationally, and for about three percent in Wisconsin.

Hydropower generation can vary considerably from year to year based on precipitation. Wisconsin has about 500 megawatts of hydroelectric generating capacity and produces an average of two million megawatt hours per year, enough to supply the average electrical needs for about 280,000 homes, according to the state Public Service Commission.

Wisconsin's hydro plants use differ-

ent strategies to harness a river's energy:

- **Storage projects** impound water behind a dam, forming a reservoir, and then release the water through turbine-generators to produce electricity.

- **"Run-of-river" projects** typically use relatively low dams where the amount of water running through the powerhouse is determined by natural river flow.

- **"Pumped-storage" projects** pump water from a lower reservoir to an upper reservoir at off-peak times when electrical costs are cheaper. During periods of high electrical demand, the water is released back to the lower reservoir to generate electricity.

Although hydropower has been eclipsed by other forms of energy generation, our awareness of how hydro projects alter natural waterways has been on the rise. The high water levels of dam impoundments and reservoirs can erode river banks upstream, making the water silty, cloudy and warmer, contributing to poorer conditions for fish and other aquatic organisms.

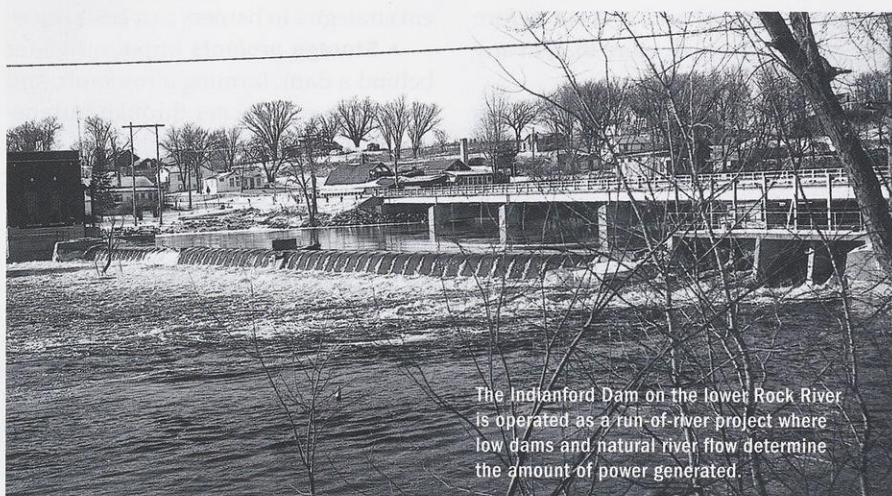
Downstream, water levels may drop significantly on a daily basis, stranding fish and mussels, leaving piers high and dry, and exposing rocks, logs and other boating hazards. Fluctuating water levels also affect wastewater dischargers who rely on river flow to dilute treated wastewater. Downstream businesses similarly use river water in manufacturing and for processing effluents.

Finally, the dams themselves can block fish migrations, interfere with spawning, and disrupt the life cycle of native mussels that rely on fish as hosts. Fish and other aquatic species can be harmed as they go through a dam or get trapped in turbines and other equipment.

Generating greener dam operation

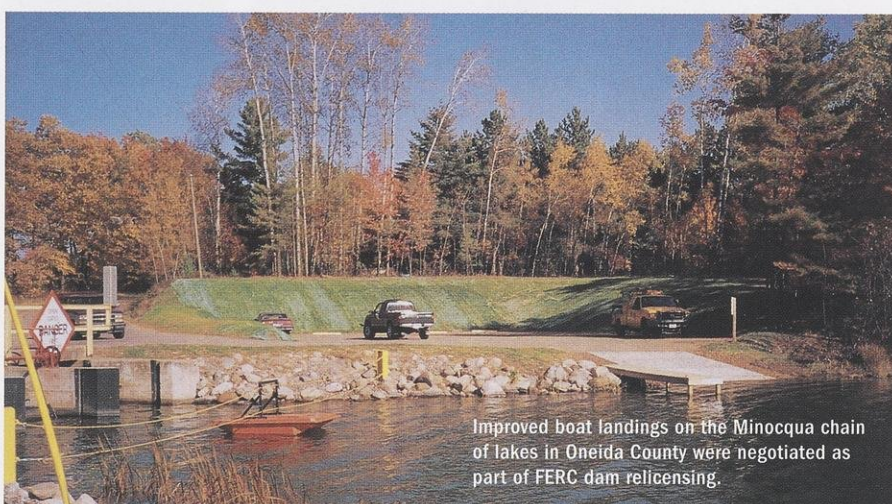
Hydroelectric dams were originally licensed by the federal War Department based on guidelines laid out in 1920, well before the full range of environmental consequences were known or of much concern.

The Federal Energy Regulatory Commission (FERC) took over licens-



The Indianford Dam on the lower Rock River is operated as a run-of-river project where low dams and natural river flow determine the amount of power generated.

DNR WATERSHED MNGT. BUREAU



Improved boat landings on the Minocqua chain of lakes in Oneida County were negotiated as part of FERC dam relicensing.

ROBERT MARTINI

ing in 1977 and started requiring analysis of how dam owners and operators would minimize environmental consequences. In 1986, federal law required FERC to give equal consideration to environmental concerns and power generation, says Michael Scott, a DNR attorney who has worked on dam relicensing issues since 1994.

Wisconsin was actively involved in the relicensing process during the 1980s. Hydroelectric project owners had to consult with the Department of Natural Resources and conduct environmental studies as directed, and the department made recommendations to mitigate some of the dams' impacts. But FERC was required only to give equal *consideration* to environmental concerns in its decisionmaking, not equal *weight*. "The FERC would take our recommendations and not put them into the operating conditions," Scott says.

A landmark 1994 U.S. Supreme Court decision changed that. The ruling upheld the state of Washington's right to insist on a minimum water flow to protect salmon and steelhead in a river in the Olympic National Forest near Tacoma. "In many cases," wrote Justice Sandra Day O'Connor, "water quantity is closely related to water quality...." States had broad authority under the Clean Water Act to protect not only water quality but water quantity that flows in rivers and streams.

"After *Tacoma*," Scott says, "they [FERC] had to put our recommendations in verbatim and follow them."

The recognition of state authority spurred the agency, dam owners and the public to work together earlier on and more directly, selecting the issues particular to each dam site and negotiating specific remedies.

The parties don't always get everything they want, but two recent exam-

ples illustrate the kind of win-win situations negotiation can produce.

Dairyland Power Cooperative's Flambeau Hydroelectric Station near Ladysmith operated as a peaking facility since it opened in 1953, storing water in a 1,900-acre reservoir at night and releasing flow at a higher rate in the morning and evening when the demand for electricity to run dairy equipment was high.

"The storage and release cycle reduced the amount and the quality of aquatic habitat in the impounded and free-flowing downstream river reaches," says Jeff Scheirer, part of DNR's relicensing team that sought to change the dam to a run-of-river operation. Run-of-river plants generally do not hold back water behind storage dams and tend to have less harmful effects on upstream water levels and downstream flow.

"The issue for us wasn't so much economic loss," says Mary Beth Peranteau, a Madison lawyer who represented Dairyland in the negotiations. "The plant is not one of the bigger sources of power in Dairyland's portfolio, but it was important because it was one of the few the utility could use for 'blackstart' operations."

Blackstart operations allow the generators to start running without an initial boost from fossil fuels. It was also important for Dairyland's generating capacity rating. "If we couldn't run the plant in a particular way, it could lose that rating for regulatory purposes," Peranteau says.

Under the settlement, Dairyland Power agreed to stop peaking twice per day starting in 2005, and operate instead in run-of-river mode. The change at Dairyland Power's Flambeau Hydro Station automatically triggered changes at three smaller stations to lessen effects on fish and wildlife.

"Anglers, canoeists, boaters and other recreation users should notice that water levels and flows fluctuate less throughout the day," Scheirer says. "Stable flows mean more suitable habitat, more fish production and better fishing."

Dairyland won't be generating less power and it retains the right to peak in emergencies and to prevent blackouts when other options are not available.



Xcel Energy replaced old wooden flashboards on the crest of the spillway on the Cedar Falls Dam on the Red Cedar River with an inflatable rubber dam. The device should reduce sudden drawdowns on Tainter Lake providing more stable water for boaters, homeowners and greater energy capacity from the dam.

XCEL ENERGY

The utility also wasn't required to put fish passageways on the dam, given that so many other dams on the river block fish migration.

In western Wisconsin, along the banks of the Red Cedar River, negotiations among Xcel Energy, DNR, the City of Menomonie, federal agencies and local conservation groups produced three highlights, according to fish biologist Heath Benike, a member of the DNR team.

First, it improved stable river flows in the Red Cedar River downstream of Menomonie, benefiting recreational users and aquatic life, particularly endangered and threatened fish and wildlife species in the Lower Chippewa River State Natural Area.

Second, the company replaced "flashboards," wooden boards attached to the crest of the concrete spillway at the Cedar Falls Dam that allow a few feet of additional water height to increase energy production. The old boards washed out during floods, drawing Tainter Lake down four to five

feet. A new permanent inflatable rubber dam was installed in December 2005. This will prevent fish, aquatic habitat, boat landings and boaters from being left high and dry due to sudden drawdowns.

"Third, dam owners made these improvements while preserving the capacity ratings of the hydroplants, which is good for the environment and good news for local energy users," Benike says.

Getting a seat at the table

The public's role in the relicensing process has changed significantly since Frank J. Luedtke first got involved in 1974 at the wrong end of a knife.

A weekend resident of Lake Petenwell, the now-retired American Family Insurance executive had been walking along land owned by the Wisconsin River Power Company, which created the lake by building a dam across the Wisconsin River near Necedah in 1951. He was approached by the land care-

taker, who ordered him off the property.

When Luedtke refused, the caretaker left and returned with his son, who brandished a bolo knife. "That's when I went ballistic," Luedtke recalls. "Not only had he threatened me, but I had been fishing and trapping on many federal hydroelectric projects before and not had a problem."

When the company president later told him he condoned the caretaker's actions, Luedtke got madder still and started researching the utility's federal dam license. He learned the utility had never implemented its access and recreational improvement plan. Portions of the lakeshore were blocked off to residents and there were no concrete boat ramps or other recreational facilities on two of Wisconsin's largest lakes.

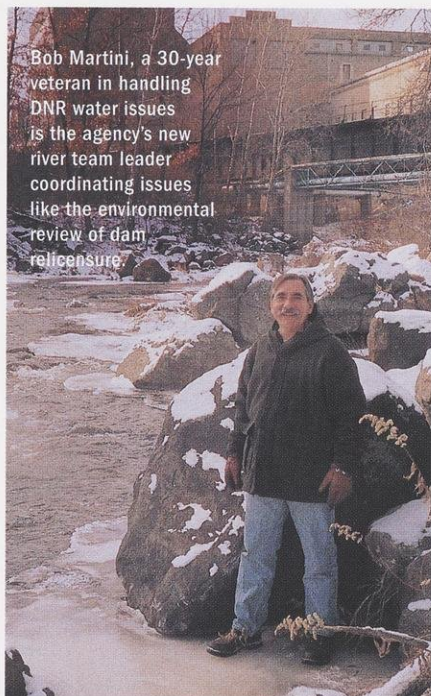
With financial backing from American Family Insurance, he built up an association of property owners, and the group became the first party to intervene and raise issues over a federal dam license in Wisconsin.

The association's efforts over the years brought a wave of new boat ramps and hiking trails on both lakes, Luedtke says. The county and townships each got parks, and a 100-foot strip of land next to the water on property owned by the utility has been preserved for public walking trails and for scenic values. Luedtke now advises other citizen groups facing relicensing issues.

Today, some dam owners invite the community in. Having just been through a bruising, costly battle to relicense four dams in Michigan and Wisconsin, We Energies, a Milwaukee-based utility, agreed to a negotiated process for relicensing eight dams in northeastern Wisconsin and Michigan's Upper Peninsula.

The discussions brought the utility together with Wisconsin's and Michigan's natural resource agencies, the U.S. Fish and Wildlife Service, as well as the River Alliance of Wisconsin and the Michigan Hydro Relicensing Coalition.

Discussions over two years addressed land management, fisheries protection, water quality, recreation and hydroplant operations. The utility agreed to operate dams with a more natural flow of water, protect 25,000



Bob Martini, a 30-year veteran in handling DNR water issues is the agency's new river team leader coordinating issues like the environmental review of dam relicensure.

ROBERT MARTINI

acres of land and water surrounding the hydroelectric facilities in the Upper Menominee River basin, and add recreational facilities. In addition, three dams will be removed, and the utility is committed to working with resource agencies to research technology for allowing lake sturgeon to pass two of their dams.

"From my perspective, what's exciting is through relicensing that balances all river uses, lake sturgeon will eventually move from the mouth of the Menominee to Sturgeon Falls and back again while we're still generating power," Sarakinos says. "That's a huge accomplishment."

Bill Rauscher, We Energies manager of hydroelectric operations and one of three company people who participated in the negotiations, is satisfied with the settlement approach, but considers it the lesser of two evils. He believes states now have too much authority in federal dam licensing process through the water quality certification process. The new hydro relicensing rules have eliminated FERC's ability to balance competing interests like the need for electrical power, the cost of that power, consequences for the local economy, and changes to local recreation and river access, Rauscher says.

The settlement process gave We En-

ergies more flexibility to operate some of the dams as peaking dams than would have been possible through normal relicensing. Rauscher says the process allowed the utility to spend money on habitat enhancement and research that otherwise would have been spent on the relicensing process and studies.

"In the long run, it didn't save us money," he says. "We saved 50 percent on the cost of getting a license, but we put it right back into the habitat fund and fish protection. At least we were able to spend the money on something for the future instead of on the paper process," he says.

Promise and peril around the bend

Greener operating conditions negotiated during dam relicensing hold the promise of reclaiming some of the recreational and environmental benefits lost for generations on Wisconsin's working rivers. Martini's appointment as DNR river coordinator is expected to provide statewide leadership as the department devolves teams that specialized in FERC issues into smaller work groups of local fish managers and others who are intimately familiar with the river and fishery, but less so with dam relicensing and deadlines.

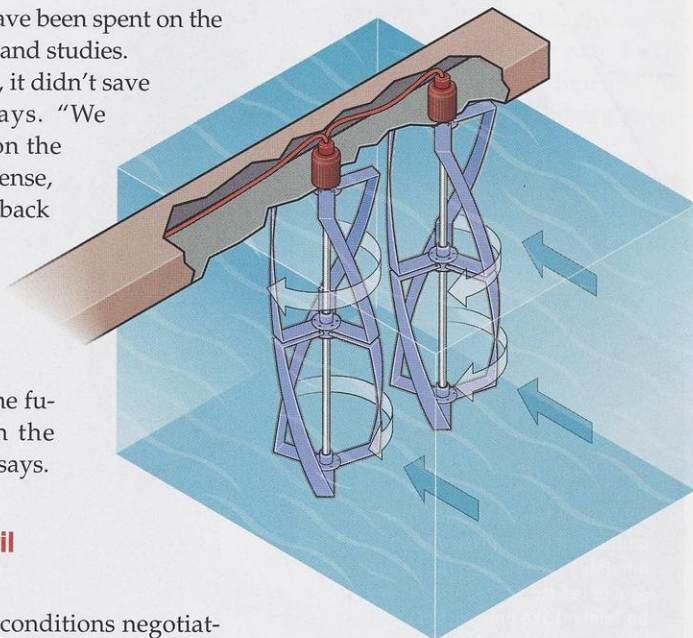
New technology may eventually allow more electricity to be generated without nearly as many environmental consequences. Helical turbines, which resemble big egg beaters, generate electricity from the kinetic energy created by moving water — even slow-moving currents — without the need for dams. That technology may someday allow more hydropower in a state where most of the best dam sites are taken and the cost of retrofitting plants would be prohibitive.

The peril lies in some worrisome trends and in a pending U.S. Supreme Court case threatening the state authority DNR has used so well, Sarakinos says.

Bottom-line pressures from stockholders may spur publicly-traded utili-

Power without a dam?

A technology worth testing? Innovations like helical turbines may prove practical for generating electricity from even slow-moving currents without the need for dams.



KOPP ILLUSTRATION

ties to back off on agreements, she says. Recent funding and staff cuts, the retirement of staff knowledgeable of FERC issues, along with political pressure, could impair DNR's ability to ensure utilities abide by their settlement conditions.

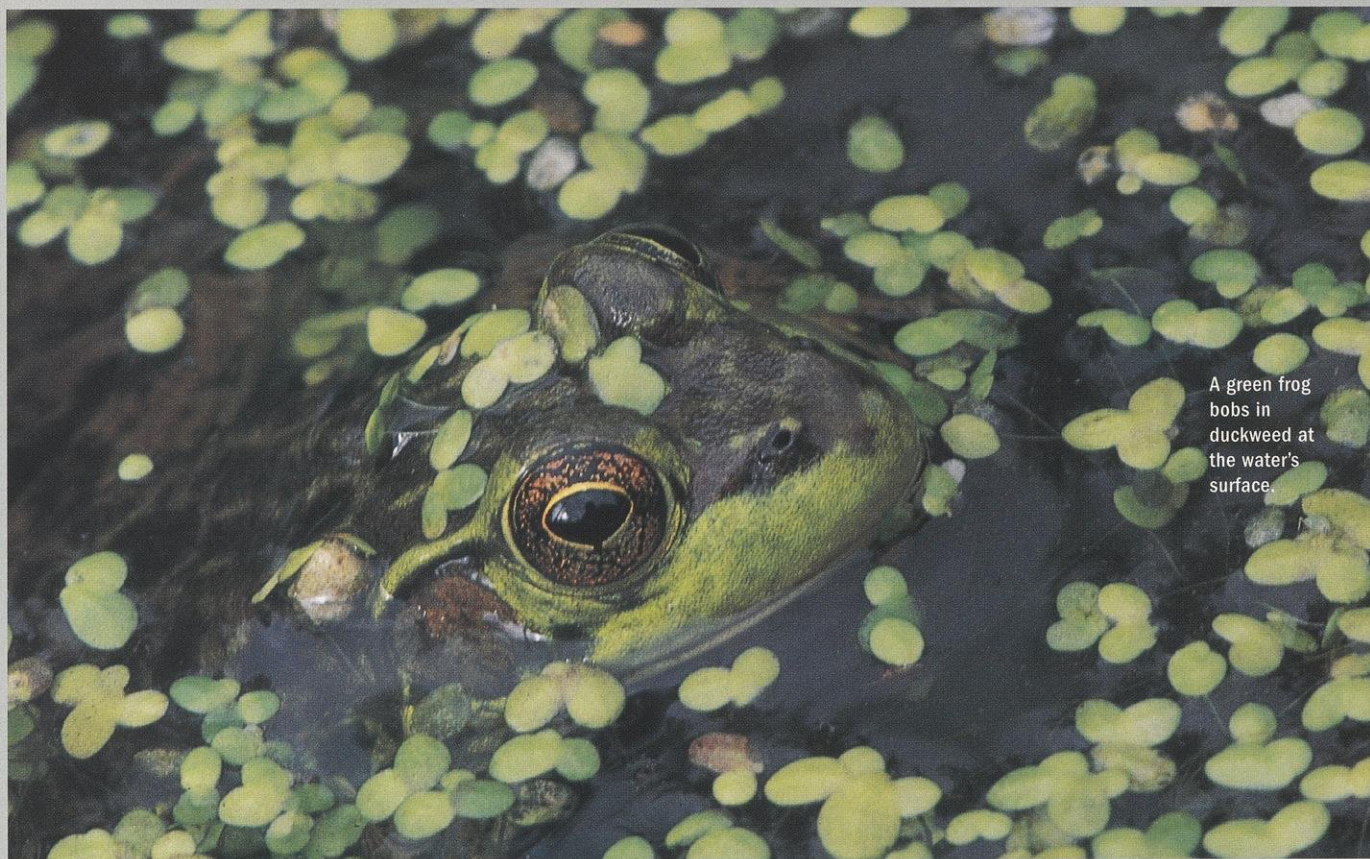
People involved with FERC issues are concerned over a case the U.S. Supreme Court has agreed to hear challenging states' authority to impose operating conditions affecting the quantity of water in their rivers. As of press time, the case hadn't been heard.

Sarakinos worries that a ruling against states' authority would again create a real imbalance favoring power generation over environmental considerations, and largely remove the public from the process.

"These are dams on our rivers — yours and mine," she says. "It's important for us as the public to remember these are public rivers being used for private gain. We should have that once-in-a-lifetime chance to set the conditions by which this facility is going to meet all the interests — economic, environmental and recreational."

Lisa Gaumnitz is public affairs manager for DNR's water programs in Madison.

A SURFACE OBSERVATION



A green frog bobs in duckweed at the water's surface.

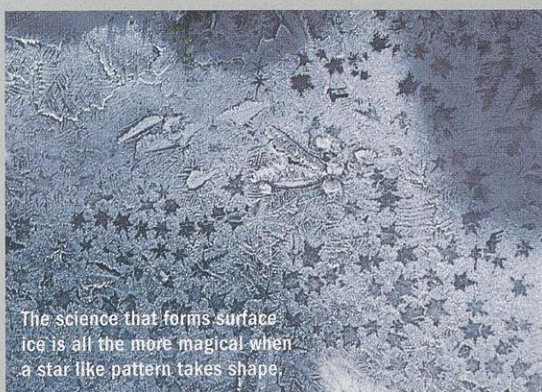
SCOTT NIELSEN

Anita Carpenter

In winter, the surface of a pond turns cold and hard, sometimes blanketed with snow, other times swept clean by raw, northwest winds. Ice makes solid the otherwise fluid boundary between air and water that allows us to walk, slide or skim along the surface on steel blades.

As impenetrable as ice seems, it forms a barrier that sustains life for the inhabitants sealed below. Ice is a relatively good insulator that slows the transfer of heat from water to frigid air. Flora and fauna trapped below that can withstand the minimum 37° F temperature will live to see next spring.

The ice that thickens as winter deepens started forming weeks earlier as cool air passed over warmer water, sapping heat from the pond and lowering the surface water temperature. The cooled surface water became dense and heavy, sinking to the bottom while warmer subsurface



DON BLEGEN

The science that forms surface ice is all the more magical when a star like pattern takes shape.

water rose to the top creating a temporary vertical circulation that hastened the heat loss. Once the water reached a uniform 37 degrees the vertical circulation stopped. The surface continued to cool, but convection no longer transferred heat from below. Conduction is a slower process and

In every season, the water line forms a fine border that is ceiling, floor, barrier and foundation for a lot of living things.

as the water temperature dropped to freezing, the water molecules aligned in a crystalline matrix and ice formed. Its thin solid tentacles reached out from shore toward the center. Given still days and cold nights, smooth ice soon covers and seals the pond until spring's warmth reverses the cooling trend and melts the frozen shield away.

By summer, the same surface forms a fine line between the freedom of flight and the confines of a watery world. It's a barrier that can be easily penetrated, but it's also a microhabitat used by animals, plants and insects adapted to life right on the boundary where water meets the sky.

Whirligig beetles — black, oval and the size of a pumpkin seed — spin on the water surface in large congregations. Each of their compound eyes is divided in half, top and bottom, so they can see equally well above and below the surface as they search for prey and avoid being preyed upon.

Spindly water striders skate as easily on water as we did on winter's ice.

Water lilies rooted in the pond form circular leaves that float on the surface providing an excellent landing pad for dragonflies. Whirligig beetles lay their eggs on the underside of the lily's waxy leaves.

An often misidentified soupy lime-green layer that covers the pond in late summer is not algae, but Wisconsin's smallest flowering plant called duckweed. The minute flowers are seldom seen as the plant reproduces by budding. In fall, tiny mats of green scales break loose and drop to the pond bottom to overwinter. The new growth will rise to the surface again next year and eventually recover the pond.

Though many insects live most of their lives in water, they still depend on air to breathe. Backswimmers, water boatmen, giant water bugs and predaceous diving beetles periodically rise to the surface. Each in its own way grabs an air bubble before descending to continue underwater activities.

Nostrils from turtles that do not wish

to be seen barely break the surface to inhale life-sustaining air. Green frogs, leopard frogs and American toads rest on top of the water to plunk, snore and trill in their efforts to solicit females. Swallows during the day and bats at night skim the water line in search of insects. Trout rise to and through the surface chasing mayflies while belted kingfishers dive down through it to catch fish. Dragonflies and damselflies hover above the water surface but dip their abdomens below to deposit eggs on plants and rocks. Puddle ducks paddle, dabble and tip up at the surface to feed. Speaking of refueling, two "jumbo transports" of the avian world, Canada geese and tundra swans, find rest and refuge at the surface during their long migratory flights.

Reflections play and cast off the tranquil surface extending light and space. Looking down, we can see cumulus clouds traveling overhead or double our pleasure in the mirrored collage of tree silhouettes surrounding a pond. At nighttime, stars and moonbeams sparkle and shimmer as breezes ripple across the water. The small waves carry pine pollen, twigs, lost bobbles and colorful leaves across the surface to be washed ashore or temporarily suspended if they are trapped as the water freezes again in its annual cycle.

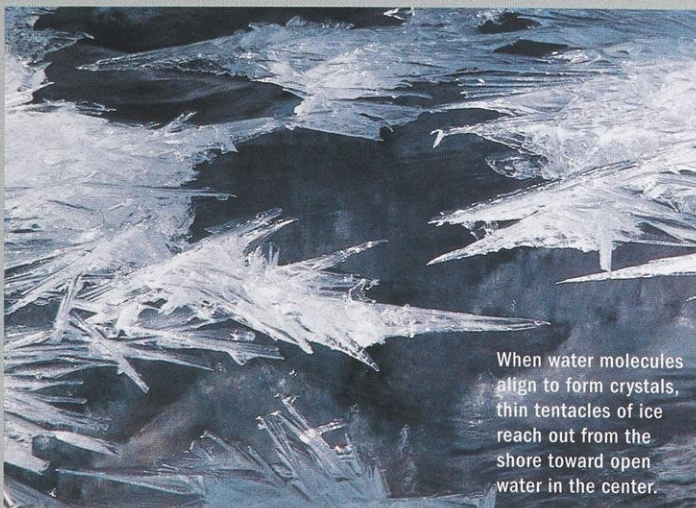
Marking time from day into night, week into month, season into season, the pond surface holds many stories of so many species that survive and thrive on the thin line between the vast spaces of air and water.

Anita Carpenter writes from Oshkosh and enjoys sharing different ways to look at nature.



Reflected light adds light, depth and a new view of the surface.

SCOTT NIELSEN



When water molecules align to form crystals, thin tentacles of ice reach out from the shore toward open water in the center.

GARY E. MARTIN



Four ways to purchase

Thanks for your interest in renewing or buying a hunting, fishing or Conservation Patron license. These licenses expire each year on March 31st.

1 Buy online

The Wisconsin Department of Natural Resources offers four convenient ways to quickly buy recreational licenses starting March 10, 2006. Choose an option:

Buy online. Visit dnr.wi.gov on the Internet to purchase recreational licenses online. From the main page, click in the left column on the "Licenses, Permits & Registrations" heading. Then look for the "Online Services" heading and choose the first entry, "Hunting and Fishing License Sales." That brings you to the Online Licensing Center, choose "Purchase a License" option. After you verify your name, address and a few other simple questions, you can start your online shopping. The very first option on the form under the "Combination" heading is the Conservation Patron license.

2 Call us

3 Visit us

4 Buy by mail

Online orders need to be billed to MasterCard or Visa credit cards for a \$3 handling fee. Make sure your computer is hooked up to a printer before purchasing your licenses so you can print your receipt. Your tags will be mailed.

Call us. Purchasing a license by phone is a snap. Call toll-free 1-877-WI LICENSE (1-877-945-4236). Phone orders can be billed to either Visa or MasterCard for a \$3 handling fee. At the end of your transaction, you will receive an authorization number that provides immediate license privileges during open seasons, except those that require a carcass tag.

New for 2006

Resident and nonresident **Junior Patrons** will no longer receive a patron State Park admission sticker, State Trails pass, Heritage Hills admission or a subscription to Wisconsin Natural Resources magazine as part of their Patron License purchase.

Visit us. Recreational licenses can be purchased at more than 1,400 sporting goods stores, merchants and resorts as well as at DNR offices. Don't know where the nearest DNR Service Center is located? The location and phone number of each center are listed on the last page of this flyer. You can also find a listing online at dnr.wi.gov under the heading "About." Click on "Service Centers" under the "Contacts" list. You can search by county or city for DNR offices and businesses that sell recreational licenses.

Buy by mail. For Conservation Patrons who still prefer to renew their CP license through the mail, fill out the form on the reverse side and mail it to: **DNR – Attn: Conservation Patron Renewal, P.O. Box 7924, Madison, WI 53707-7924.** Be sure to include the \$3 handling fee in your check that is made payable to DNR, or pay by MasterCard or Visa credit card. Allow 4-6 weeks to process mailed applications to renew CP licenses.

RESERVE A BACKTAG NUMBER?

Conservation Patron and Sports License holders can reserve four-digit backtag numbers for a \$5 fee. Reserve your backtag numbers **before** buying or renewing a license. Call the Patron/Sports License Coordinator, Sue Meyer, at (608) 266-7030 or e-mail her at sue.meyer@dnr.state.wi.us.

Wisconsin Department of Natural Resources
Attn: Conservation Patron Renewal Coordinator
P.O. Box 7924
Madison, WI 53707-7924

www.dnr.wi.gov
Patron Coordinator: (608) 266-7030



2006 Wisconsin Conservation Patron License Renewal Application

Form 9400-356R Rev. 1/06

Resident — \$165.00 Nonresident — \$600 Junior Resident CP (12–17 yrs.) — \$75.00 Junior Nonresident CP (12–17 yrs.) — \$77.00

Notice: Information collected on this form is required for any application filed under Chapter 29, Wis. Stats., and may be used for eligibility for approvals, participation in surveys, law enforcement and other secondary purposes. Credit card data will be kept confidential and will only be used to process this license request, under S.29.024 (2g), Wis. Stats.

☐ Check here if you want personal identifiers collected on this form withheld from disclosure on any list of 10 or more individuals that the DNR is requested to provide to another person (s.23.45, Wis. Stats.)

Name (Last–First–Middle) (Please print or type)

DNR Customer# required

Street Address

City, State, Zip Code

County of Residence

Daytime Telephone Number

Date of Birth (Mo–Day–Yr)

Eye Color

Hair Color

Weight

Height

Sex (M–F)

Please answer the following questions: (Circle your answer)

Yes No 1. Do you wish to make a contribution to the Fish & Wildlife Fund?
If yes, enter amount \$ _____

Yes No 2. Do you wish to make a donation to food pantry venison
processing? If yes, enter amount \$ _____

Yes No 3. Do you intend to hunt ANY migratory birds? If yes, you must
complete **Section A – HIP Certification** (required annually for
questions 4 and 5 below)

Yes No 4. Do you want an Early Season Canada Goose permit?

Yes No 5. Do you want to hunt the Regular Canada Goose Season?
If yes, choose ONE of the following:

- ☐ Exterior Goose Zone (permit will be received with
Conservation Patron license)
☐ Horicon or Collins Zone (complete the application in your
Patron packet)
☐ Undecided (complete the application in your Patron packet)

Yes No 6. Residents only: Do you intend to trap? If yes, indicate which
of the qualifications you meet:

- ☐ Trapper Education graduate
☐ Previously purchased a license, which authorized
trapping prior to 1992
☐ I actively engage in farming (per s. 102.4(3), Wis. Stats.)

Yes No 7. Will you fish for sturgeon using hook & line? Which tags would you like?

- ☐ Inland (includes Mississippi River) ☐ Wisconsin/Michigan Boundary ☐ Both

Section A — HIP Certification

Circle the quantity of birds bagged last year
(for each species):

			Quantity Bagged		
Ducks	Did Not Hunt	0	1–10	>10	
Geese	Did Not Hunt	0	1–10	>10	
Woodcock	Did Not Hunt	0	1–30	>30	
Rails/Gallinules	Did Not Hunt		Hunted		
Coots/Snipe	Did Not Hunt		Hunted		
Mourning Doves	Did Not Hunt	0	1–30	>30	

Conservation Patron license:

Resident (\$165)	\$ _____
Nonresident (\$600)	\$ _____
Jr. Res (\$75)/Nonres (\$77)	\$ _____
Fish & Wildlife Fund Contribution	\$ _____
Food Pantry Venison Donation	\$ _____
Reserved Backtag Fee (optional, \$5.00)	\$ _____
Application handling fee	\$ 3.00
Total Amount Due	\$ _____

Payment: Credit card information will be kept confidential and only used to process this license request.

Make checks payable to "DNR" or please charge my: ☐ Visa ☐ MasterCard Expiration Date: _____

Card Number _____ - _____ - _____ - _____

I hereby certify that I have complied with all of the laws regulating the issuance and purchase of this license and that my license privileges are not otherwise revoked.

Signature of Applicant _____ Date Signed: _____

Mail to: DNR–Attn: Conservation Patron Renewal, P.O. Box 7924, Madison, WI 53707-7924

2006 Wisconsin Hunting & Trapping Seasons

















Get your regulations faster!

Visit dnr.wi.gov to view and print regulations up to one month before they are available in print.








Some seasons may be subject to change. Consult the hunting regulations pamphlet(s) before going hunting or check the DNR's website at dnr.wi.gov.



PUB-WM-153 2006

Ruffed Grouse Zone A (Northern) Sept. 16 - Dec. 31 Zone B (Western) Sept. 16 - Jan. 31, 2007 Zone C (Eastern) Oct. 14 - Dec. 8 	Hungarian Partridge Statewide* Oct. 14 (noon) - Dec. 31 * Closed in Clark, Marathon, and Taylor counties 
 Bobwhite Quail Statewide Oct. 14 (noon) - Dec. 6	 Crow Sept. 16 - Nov. 16 and Jan. 18 - March 20, 2007
Sharp-tailed Grouse Oct. 14 - Nov. 5 	White-tailed Deer (non-CWD units**) <p>Due to pending rules, these deer seasons may be modified.</p> Bow Sept. 16 - Nov. 16 and Nov. 27 - Jan. 3, 2007 Gun Nov. 18 - Nov. 26 Muzzleloader Nov. 27 - Dec. 6 Youth Deer Hunt (Antlerless only) Oct. 28 Additional Zone T and Earn-a-Buck** Oct. 26 - Oct. 29 & Dec. 7 - Dec. 10 
 Pheasant Statewide Oct. 14 (noon) - Dec. 31	<p>**See the 2006 Deer Hunting Regulations for a list of Zone T and Earn-a-Buck units, and for CWD hunt dates.</p>
Woodcock Sept. 23 - Nov. 6 	Jackrabbit Statewide Oct. 14 (noon) - Nov. 15 
Wild Turkey Open Zones Spring Period A Apr. 12 - 16 Period B Apr. 19 - 23 Period C Apr. 26 - 30 Period D May 3 - 7 Period E May 10 - 14 Period F May 17 - 21 Fall Oct. 1 - Nov. 9 	Cottontail Rabbit Northern Zone Sept. 16 - Feb. 28, 2007 Southern Zone Oct. 14 (noon) - Feb. 28, 2007 
 Mourning Dove Statewide Sept. 1 - Oct. 30	Squirrels, Gray and Fox Statewide Sept. 16 - Jan. 31, 2007 
Waterfowl Season dates for waterfowl vary annually. Duck and regular season goose regulations will not be available until August. 	Raccoon Resident Gun/Trapping Oct. 14 - Jan. 31, 2007 Non-Resident Furbearer Nov. 4 - Jan. 31, 2007 
Canada Goose Early Goose Season Sept. 1 - 15	Black Bear Zone C where dogs are not permitted: Sept. 6 - Oct. 10 Zones A and B, and subzone A1 where dogs are permitted: Sept. 6 - Sept. 12 <ul style="list-style-type: none"> • with aid of bait • with other methods not utilizing dogs Sept. 13 - Oct. 3 <ul style="list-style-type: none"> • with aid of dogs • with aid of bait • with other methods Oct. 4 - Oct. 10 <ul style="list-style-type: none"> • with aid of dogs only 

Keep the traditions alive! Take a kid hunting.

 <h3>Coyote</h3> <p>Hunting Continuous open season except closed in some areas during gun deer, Zone T, and muzzleloader seasons.</p> <p>Trapping Northern Zone Oct. 14 - Feb. 15, 2007 Southern Zone Oct. 28 - Feb. 15, 2007</p>	 <h3>Muskrat</h3> <p>North Zone Oct. 14 - Feb. 28, 2007 South Zone Oct. 28 - Feb. 28, 2007 Winnebago Oct. 28 - Mar. 15, 2007 Mississippi River Begins the day after duck season closes or the second Monday in November, whichever occurs first, and ends February 28, 2007.</p>
<h3>Fox (all species)</h3> <p>Northern Zone Oct. 14 - Feb. 15, 2007 Southern Zone Oct. 28 - Feb. 15, 2007</p> 	 <h3>Bobcat, Otter and Fisher</h3> <p>Permits required</p> <p>Bobcat Hunting/Trapping North of Hwy 64 Oct. 14 - Dec. 31</p> <p>Fisher Trapping only Various Zones Oct. 14 - Dec. 31</p> <p>Otter Trapping only North Zone Nov. 4 - Apr. 30, 2007 Central Zone Nov. 4 - Mar. 31, 2007 South Zone Nov. 4 - Mar. 31, 2007</p>
 <h3>Beaver</h3> <p>Trapping only Zone A (Northwest) Nov. 4 - Apr. 30, 2007 Zone B (Northeast) Nov. 4 - Apr. 30, 2007 Zone C (South) Nov. 4 - Mar. 31, 2007 Zone D Day after duck season closes to March 15, 2007. (Mississippi River)</p>	 <h3>Opossum, Skunk, Weasel, and Snowshoe Hare</h3> <p>No season limits, bag limits, size limits or possession limits.</p>
<h3>Mink</h3> <p>North Zone Oct. 14 - Feb. 28, 2007 South Zone Oct. 28 - Feb. 28, 2007 Winnebago Oct. 28 - Mar. 15, 2007 Mississippi River Begins the day after duck season closes or the second Monday in November, whichever occurs first and ends on Feb. 28, 2007.</p> 	<h3>Protected Species</h3> <p>Hunting protected species, such as badger, woodchuck and flying squirrel, is prohibited. See Small Game Regulations for more details.</p>

Permit Application Deadlines

Hunter's Choice (Deer)	August 1
Horicon & Collins Zones Goose Seasons	August 1
Fall Turkey	August 1
Sharp-tailed Grouse	August 1
Bobcat	August 1
Otter	August 1
Fisher	August 1
Spring Turkey	December 10
Bear	December 10

Drawing Dates

Hunter's Choice (Deer)	Mid-August
Horicon & Collins Zones Goose Season	Late August
Fall Turkey	Early September
Sharp-tailed Grouse	Mid-September
Bobcat	Mid-September
Otter	Mid-September
Fisher	Mid-September
Spring Turkey	Late January
Bear	Early February

DNR Service Centers

Office hours vary by location. For general hunting and trapping information call 1-800-282-0367 or:

Madison (Central Office)	608-266-2621
South Central Region (Fitchburg)	608-275-3266
Dodgeville	608-935-3368
Horicon	920-387-7860
Janesville	608-743-4800
Poynette	608-635-8110
Southeast Region (Milwaukee)	414-263-8500
Plymouth	920-892-8756
Sturtevant	262-884-2300
Waukesha	262-574-2100
Northeast Region (Green Bay)	920-662-5100
Oshkosh	920-424-3050
Peshtigo	715-582-5000
Sturgeon Bay	920-746-2860
Wautoma	920-787-4686
West Central Region (Eau Claire)	715-839-3700
Baldwin	715-684-2914
Black River Falls	715-284-1400
La Crosse	608-785-9000
Wausau	715-359-4522
Wisconsin Rapids	715-421-7800
Northern Region (Spooner)	715-635-2101
Antigo	715-627-4317
Ashland	715-685-2900
Cumberland	715-822-3590
Hayward	715-634-2688
Ladysmith	715-532-3911
Park Falls	715-762-3204
Rhineland	715-365-8900
Superior	715-392-7988
Woodruff	715-356-5211

To check your drawing status go to:

dnr.wi.gov

The drummer of love

Peggy A. Farrell



LEN BACKUS

Prairie chickens jump, dance and boom to attract females to the small territory that each defends on the grassland breeding grounds.

Every spring, nature lovers from across the country come to the Buena Vista Grasslands of central Wisconsin to experience a most unusual early morning show. They get to review a song-and-dance performance that is equal parts entertainment and science. They also help gather data on a state-threatened species, the greater prairie chicken. The annual mating rituals of the male prairie chicken, known as “booming,” are an equal treat for the eye and ear that includes behaviors, moves and the distinctive male call, a low and resonant *whoo doo zhoo*. Males will cackle

and whine and raise their pinnae, or “ear feathers” to catch a potential mate’s eye. A foot-stomping display is said to have inspired the species’ scientific name, *Tympanuchus cupido pinnatus*, meaning “drummer of love.”

Prairie chickens court spring and a future on vast grasslands of central Wisconsin.



Ear feathers or pinnae are raised like a bonnet. Wing feathers are splayed to the side, tail feathers are fanned erect and orange sacs inflated on either side of the neck. Then the birds beat feet and emit a low, resonant booming call. It's quite a show of stylized dance and calls.



DNR PHOTO

Cattle and other livestock have to be fenced off the grassland areas.



DNR PHOTO

Tractors with big lateral cutters called bat wings mow back shrubs and brush.



DNR PHOTO

Prescribed burns are an important tool for controlling weeds and encouraging fresh growth of young grasses that provide food and cover.



Prairie chickens here in the Upper Midwest live in flocks of a few to 200 birds, except during breeding and nesting season when they are more solitary. There is safety in numbers, and gathering in groups helps keep the flock alert and protected from predators like coyotes and raptors as the coveys feed and roost in tall grassy areas. They are non-migratory residents of Wisconsin, and are well adapted to the cold. Like their more familiar relatives, ruffed grouse, prairie chickens will roost in snow burrows when it becomes extremely cold. Their winter diet consists of crop and weed seeds exposed by harsh winds in open areas, as well as aspen buds. Summer fare includes insects and seeds supplemented by feeding on green leafy vegetation.

Over the last century, prairie chicken populations declined because they were tasty table fare. Also their habitat continued to shrink as the tallgrass prairie was cultivated into prime farmlands. In Wisconsin, prairie chickens were once found in every county. As recently as 1930, their state population was estimated at more than 54,000 birds. Today, bi-

ologists estimate about 1,500 prairie chickens remain in the state.

It takes a lot of land to support even this small number of birds, and approximately 12,000 acres of land on the Buena Vista Grasslands of southwestern Portage County are managed by the Wisconsin Department of Natural Resources to provide the needed wide horizons and habitat for prairie chickens. In addition, prairie chickens can be found in outlying grasslands from the Medford area of Taylor County southeast to the Leola grasslands in Adams County particularly on the state wildlife areas known as Mead, Dewey, Paul J. Olson and Buena Vista.

Due to the dwindling numbers of prairie chickens, a count is taken each spring to track the population trends and evaluate management effectiveness. The census consists of finding all booming grounds and recording the number of males present during the month-long mating season. Biologists infer that if the total number of males increases from year to year, the entire population has grown proportionately.

Taking a "chicken census" isn't just a simple matter of counting birds. Staff and volunteers from the University of Wisconsin-Stevens Point and the Wisconsin Department of Natural Resources as well as private volunteers spend hours in March and early April scouting out booming grounds, or leks, where male prairie chickens will put on their show during the April breeding season. When booming grounds have been identified, these surveyors, along with the public viewers, spend time in blinds each morning gathering the data used in population estimates. It takes a stalwart bird lover to sit in a wooden box in the cold dark, recording the number of dancing birds on a tally sheet!

According to Lyle Nauman, UW-Stevens Point wildlife professor emeritus and census coordinator, 444 male chickens were observed in April of 2005, a 26 percent decrease overall from the previous year.

"This was the lowest count since our census beginning in 1989," Nauman indicates. "In addition, last year was bad for prairie chicken reproduction be-



Wildlife managers and private landowners maintain thousands of acres of grasslands scattered over more than a million acres of central Wisconsin to provide for prairie chickens.

STEVEN SERVANTEZ

Your ticket to the dance

Make your reservation now to observe prairie chickens on the Buena Vista Marsh in April. Plan on an early morning visit, REALLY early. Visitors need to arrive two hours before sunrise. Once in the blind, you'll be given clipboards and data sheets to note the number of birds present, note their behavior and record any other observations of potential interest to wildlife managers. Your volunteer observations are essential to the continued success of the prairie chicken program.

Once you have a reservation, you'll be mailed information about when and where to meet, and what to wear and bring. You'll also receive background briefings on prairie chickens and observation procedures. There is a small fee (\$15 for adults, \$10 for students and seniors) to defray the cost of guiding observers as well as maintaining, placing and retrieving blinds. Veteran chicken viewer Becky Martin recommends: "Be prepared to wake up really early, wear layered clothing — it can be cold in April. Bring a good flashlight because you'll be walking out to a blind in the dark following a trail of reflectors. If you want to be really comfortable, you may want to bring along a seat cushion!" To make a reservation, call Katie Brashear, 715-346-3259. Visit the UW-Stevens Point prairie chicken website at uwsp.edu/wildlife/pchicken for more information and to see pictures and video of prairie chickens on the booming grounds.



ROBERT QUEEN

Your observations are important to track prairie chicken populations and activity during the spring breeding season.

cause it was cold and wet. Young chicks are susceptible to cold and pneumonia. It looks pretty grim in some areas."

He noted lower numbers of birds throughout the fringe areas of the prairie chicken range though populations were more stable and hadn't fluctuated as much in areas specifically managed as grassland habitat like the Buena Vista property.

Drawing from a deeper genetic pool

Wildlife professionals and conservationists agree that a sound management plan is key to sustaining healthy resources. In October 2004, the Wisconsin Natural Resources Board approved the Central Wisconsin Grassland Conservation Project, a management plan that grew out of research to address habitat concerns and genetic viability of prairie chickens, according to DNR Wildlife Biologist Jim Keir.

"Wisconsin has an isolated population of prairie chickens," Keir explains. "Historically, they were scattered over much of the central part of North Amer-

ica, but the landscape has changed and continues to change today. If we want to maintain this species we have to manage the habitat or these birds would soon be gone from the state."

Professor Christine Thomas, Dean of the College of Natural Resources at UW-Stevens Point, and a Wisconsin Natural Resources Board member, says the current management plan uses a landscape-level approach. "We're looking at the entire biological region, not just the Buena Vista marsh. What we don't want to see are islands of isolation in the chicken population."

When small numbers of a given species become isolated from other populations of the same species, inbreeding can occur, leading to a loss of genetic diversity and declining population health. Wildlife professionals were seeing some evidence of Wisconsin's prairie chickens going down that path. In January of 2005, the Department of Natural Resources asked a committee of seven geneticists from around the country to look at research that suggested "inbreeding depression"

might soon occur. After reviewing historical and contemporary genetic data, the group found evidence that subpopulations of prairie chickens in Wisconsin have lost significant levels of genetic diversity, according to committee member Brian Sloss of the Wisconsin Cooperative Fisheries Research Unit at UW-Stevens Point.

"We all agreed that the genetic component is a problem," Sloss says, "but without adequate habitat, the chickens won't survive either, and habitat is a concern too."

To begin to address genetic weaknesses, the committee formally recommended relocating 30-40 hen prairie chickens from Minnesota to the Buena Vista Marsh in Wisconsin. That process may begin as early as this summer.

In addition, the long-term success of prairie chickens depends on sustaining adequate amounts of permanent grassland habitat. Managing grasslands in the prairie chicken range is the single most important component of the Central Wisconsin Grassland Conservation Project, Keir says. The Department of



Dairy farmer Dale Daggett of Rusk County shows a bus tour of visitors how rotational grazing and a rest period keeps grasslands lush, slows erosion and benefits wildlife that depend on grassland habitats.

TEAL FYKSEN

Natural Resources' approach to achieve that goal includes a blend of science and public education.

"Our work over the past few decades on Buena Vista serves as the template for what we'd like to accomplish," says Keir. "But the state owns the lands we are managing now and it's not the state's intent to own all the prairie chicken habitat out there." He goes on to explain that suitable grassland occurs in clusters. Grasslands are scattered over a landscape of more than one million acres from Leola in Adams County sweeping northward towards Medford in Taylor County, a distance of 75 miles that contains distinct core areas where chicken activity is concentrated. Between core areas there is currently little chicken activity. "We'd like to connect these core areas with a landscape through which the birds would be comfortable traveling," Keir says. "You might visualize them as connecting stepping stones that encourage more intermixing in the breeding population."

To create this "scatter pattern" that integrates productive farm practices with suitable grassland habitat, the Department of Natural Resources is working with the Natural Resources Conservation Service, the U.S. Fish and Wildlife Service, county land conservation departments and private landown-

ers to maintain grassland on agricultural landscapes. This effort includes providing incentives for farmers to use rotational grazing and to apply for Farm Bill programs like the Conservation Reserve Enhancement Program (CREP) that will share costs with landowners to maintain grasslands.

"The flagship species of this project is obviously the prairie chicken, but many other species will benefit from maintaining more grassland," Keir notes. "For example, songbirds like the Henslow's sparrow

(a state-threatened species), the regal fritillary butterfly (a state-endangered species), as well as short-eared owls would be helped," Keir says.

A solid 75 years of prairie chicken work here

Concern for Wisconsin's prairie chickens is not new. The first wildlife research project in the state focused on this colorful bird with the fast feet when A.O. Gross, a grouse expert from Maine, was contracted to do research from 1928-1930. Pioneering work by biologists Frederick and Frances Hamerstrom began in the 1930s. The last legal prairie chicken hunting season in Wisconsin took place in 1955. The Hamerstroms published a guide to prairie chicken management in 1957. By then, their urgent call for habitat protection prompted private groups like the Dane County Conservation League and the Society of Tympanuchus Cupido Pinna-tus to purchase over 12,000 acres of land that was subsequently leased to the Wisconsin Conservation Department to establish a grassland management program. Today, the state manages 15,000 acres of grassland.

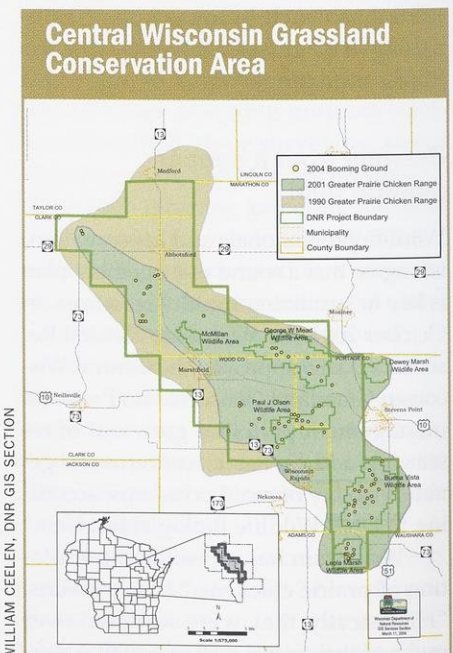
The University of Wisconsin-Stevens Point College of Natural Resources (CNR) became another key partner in prairie chicken research. The Hamer-

stroms were inducted as honorary associates in the college and the late professor Ray Anderson had a close personal friendship and professional relationship with the couple. Several CNR wildlife students had the fortunate opportunity to work with them.

In the late 1990s, university funds dried up for faculty to coordinate the annual spring prairie chicken viewing. "We thought it would be a shame to see this great public service eliminated," says CNR Dean Thomas, so the Becoming an Outdoors-Woman (BOW) program stepped in to schedule public opportunities to view chickens during their mating season. BOW staff members and graduate students take viewing reservations, handle correspondence and guide the early morning visitors to the blinds.

With so many people and organizations rooting for the prairie chicken, the fate of the threatened bird looks a little brighter in the future. Agencies and landowners can work together to manage habitat that benefits all grassland species, which in turn will benefit the people who rely on the land for a living and call it home.

Jim Keir is optimistic that the plan will work. "A lot of the right people are putting a priority on this effort. We're gaining knowledge, using it, and I'm confident we can maintain a healthy



WILLIAM CEELIN, DNR GIS SECTION

population of prairie chickens. What happens here can provide a positive national example of how to work with landowners to manage remnant and isolated populations." Given adequate habitat and proper management, we can create a greater sense of security for our prairie chicken populations and their "dance at dawn" will be viewed by generations to come right here

in central Wisconsin.



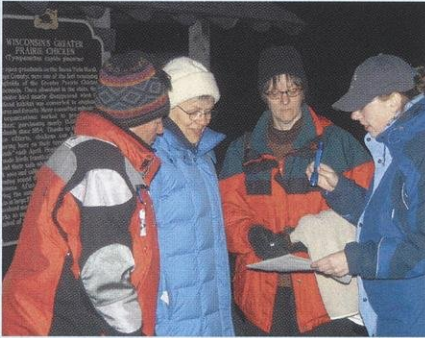
Peggy A. Farrell is the assistant director for the International Becoming an Outdoors-Woman program. She lives in farm country with wide-open spaces in Portage County where she raises prairie plants and fancy-breed domestic chickens.

University of Wisconsin-Stevens Point graduate student Katie Brashear also contributed to this article.

To learn more about the Central Wisconsin Grassland Conservation Area, contact Sharon Schwab, grassland coordinator at the Golden Sands Resource Conservation & Development Council, Inc. 715-343-6221 or via e-mail at schwabs@co.portage.wi.us. To get details on the first Prairie Chicken Festival on Saturday, April 22nd in central Wisconsin, visit the Golden Sands RCDC website, goldensandsrcdc.org, and click on the wildlife projects icon.

Dance at dawn

Good thing we made a scouting trip the afternoon before. Looking for a roadside kiosk on the back roads of Portage County at 3 a.m. would have been no fun. We saw taillights from four cars pulled onto the road shoulder ahead of us and joined the queue. The ground was frosty, but the greeting was warm from a UW-Stevens Point student who welcomed us and handed out assignments. We drove off as a caravan and car by car were dropped off at fields and given directions to the small observation blinds that would be our front-row seats to "the big show."



Chicken watchers rendezvous before dawn at a roadside kiosk.

ROBERT QUEEN

"Just follow the path by the field edge and you can't miss it," the guide said. But at 4 a.m. in the pitch dark with a small flashlight, it would have been easy to stumble around the vast grasslands without finding the simple rectangular wooden blinds before sunup. Fortunately my wife and kids had a better sense of direction and we soon crawled in side-by-side box blinds that looked like homeless shelters for wayward birders. We paired off, latched the simple doors behind us, doused the lights and waited for the first low notes of the morning concert.

The accommodations are spartan — unheated, low plywood blinds with wood benches — but the location is prime. Six blinds placed in four locations on 15,000 acres of grassland put 24 people a day in the heart of the booming grounds just a few feet away as male chickens display, posture, dance and call to attract a mate.

The handouts we received in advance prepared us well for the experience at hand. We knew it was important to remain really quiet, muffle our cameras and turn off the flash. We also knew that once we were in the blinds we had to stay there for two to three hours to avoid disturbing the birds or changing their behavior.

As night crept toward dawn, we heard then saw the males emerge from the dim light — the soft, rhythmic patter of their feet drummed the hard ground accompanied by an amazing array of clucks, hoots and cries mixed in with booms. In the dim light, their physical displays form a ritual dance — head down and parallel to the ground, neck feathers thrown over the head like horns, wing feathers straight back, tail feathers fanned skyward and orange neck sacs inflating and deflating in time with the low booming sound. The males repeatedly stomp the ground in slow circles defining the edges of the small territory that each defends. The birds are really close. In fact one jumped on top of our blind and tattooed his song and dance routine just two inches above my head!

We made rough sketches of the territories and kept track of the numbers of males and females we saw every half hour on the census forms provided. Truth be known, we saw lots of males but only two females in a nearly two-and-a-half-hour stint, and they strolled through the leks picking at grass without a care in the world as the males furiously beat feet trying to attract their interest.

At one point all the chickens flushed and disappeared for about 10 minutes and we assumed some cruising raptor or predator temporarily busted the boom. Slowly the males returned and resumed until stronger daylight convinced them to wander off and give it up for the morning. We crawled out of the blinds about 7:20 a.m., cracked the kinks in our backs, shook the blood flow back into our legs in our own sympathetic jig, filed our field forms and headed back to the motel for a snooze before the 11 a.m. checkout.

— David L. Sperling

LEFT: The management plan seeks to improve grassland corridors between core areas so prairie chickens will range over a wider area and the breeding populations will intermix, strengthening genetic diversity.

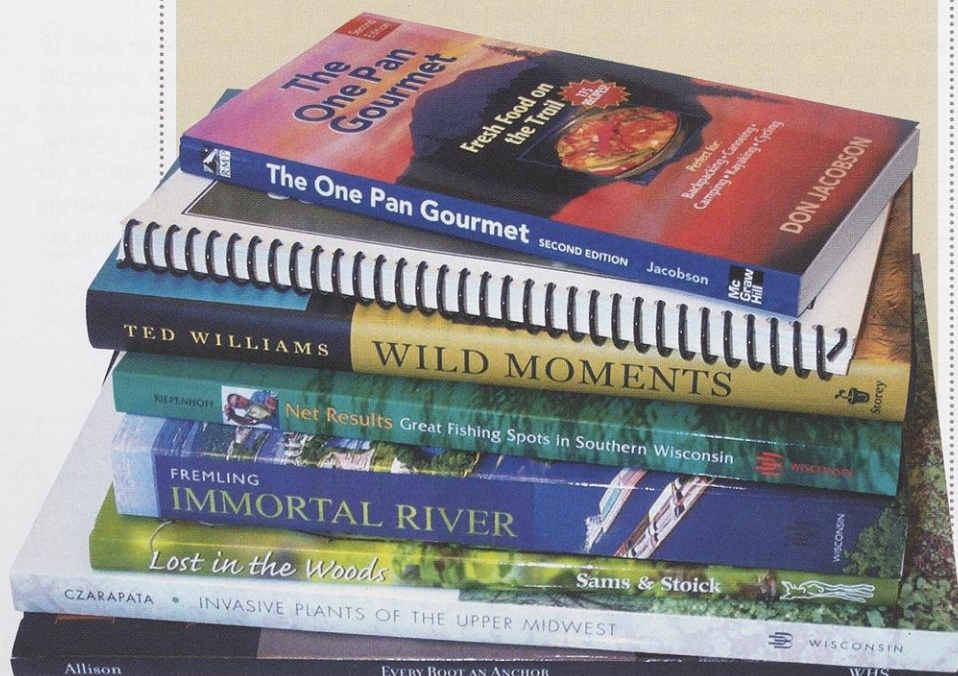


Hit the books

Kathryn A. Kahler

Eight new offerings to round out your winter reading.

As you while away these cold winter days waiting for a glimpse of spring, perhaps we can interest you in a book or two. The selection runs the gamut of fare for the bookworm to the casual reader, and from scholar to pre-schooler. There are guides to finding fishing hot spots, rooting out invasive plants and identifying grasshoppers; a collection of short nature essays; and a couple of historic works on Wisconsin's famous trees and the immortal Mississippi River. There's one for streamlining your outdoor culinary skills, and another to keep your young ones entertained. So pull up a chair, put your feet up, crack a book and spring will be here before you know it.



Wild Moments: Reveling in Nature's Signs, Songs, Cycles, and Curious Creatures

by Ted Williams, Storey Publishing, 189 pages, \$22.95.

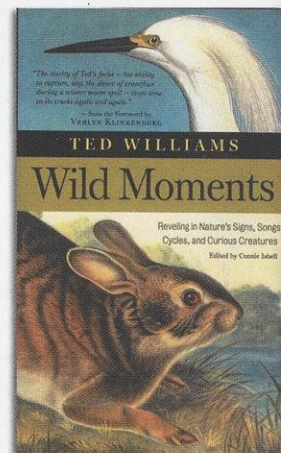
Wild Moments is a collection of short nature essays, seasoned with humor, folklore and advice, with a good mix of nature lessons for kids. Good therapy for everyday stresses, readers can turn to any page for a quick nature nugget about a broad range of topics from across North America or as close as your back door.

Williams, whose writing is familiar to sports enthusiasts and environmentalists alike, is adept at teaching astounding facts of nature in an entertaining style.

He makes no apology for ascribing humanlike qualities to his subjects, like this one of flying squirrels, or "fairydiddles" as he calls them: "It's hard not to wax anthropomorphic about these woodland sprites. They embrace while mating, the male throwing his cape over the female like an Austrian baron....Or they'll chase each other up tree trunks and sail off through the night, chirping and twittering — as if in laughter at those who do not believe in fairydiddles simply because they never see them."

It's evident Williams has spent countless hours introducing his children to delightful creatures as close as their back yard. "Artist in the Garden" describes the fascination of a garden spider spinning an orb web, and "Blood of the Great Bear" weaves Indian lore about the constellation Ursa Major with an activity for discovering how maple leaves change color in the fall.

Williams has a deep love for all things natural and shows no favoritism among the seasons. The anthology is grouped by season, beginning with gentle advice about winter wildlife viewing: "Each time you venture into



winter you'll discover something new and improve your looking skills. But if you go out for the express purpose of 'viewing' wildlife, you're apt to be disappointed. Wildlife doesn't behave this way. At any season, but especially now, it has a way of presenting itself only when you least expect it and rarely in great quantity."

This promises to be a book of lifetime nature lessons and one you will pick up again and again in your journey through the seasons. Here's one called "Birds on Snowshoes."

The ruffed grouse, whose feather pattern makes it appear to be robed in royal ermine, is the most widespread upland game bird in America, residing in all Canadian provinces and 38 states. It is a creature of secret, forgotten places where aspens march into pastures rank with juniper and hawthorn, where multi-trunked wolf pines stand guard over stone walls and cellar holes, where bittersweet clutches at the gaunt arms of ancient apple trees and, especially, where snow lies heavy in the winter woods.

As the North Pole tilts from the sun, ruffed grouse grow 'snowshoes' from all four toes — protrusions that look and feel like hemlock needles. Frequently a bird allows itself to be buried by the first major snowstorm. Later, it will dive directly into soft snow, where it will spend much of the winter, emerging occasionally to stuff its crop with buds.

Every Root an Anchor: Wisconsin's Famous and Historic Trees

by R. Bruce Allison, The University of Wisconsin Press, 128 pages, \$21.95.

There is a story in every tree, and thanks to Madison arborist R. Bruce Allison, the tales behind some of Wisconsin's historic and otherwise remarkable trees have been transformed from memories to written word, preserving them for the next generations of tree-lovers. His compilation of accounts includes stories of magnificent elms that graced city streets across the state until they fell to Dutch elm disease in the 1950s and '60s. Another

chapter tells the stories of trees like the Coffin Tree of Rusk County, found to hold the mummified remains of a buckskin-clad man in a coonskin hat, or the Trading Post Oak that stood witness to negotiations between Colonel Henry Dodge and the Winnebago Indians on the shore of Lake Mendota in 1832.

Other accounts document the utility of trees as early signposts, navigation aids and surveyor's markers. Large trees were carved with words or symbols, and young trees were bent into abnormal shapes to designate property lines or to mark a trail. There were trees — like the Hanerville Oak and Prairie du Chien's Black Hawk Tree — whose significance was so revered that roads were detoured around them to save them from cutting.

Some of the featured trees still stand, but many have succumbed to the saw or forces of nature, like the General MacArthur White Pine that once towered 140 feet above the Nicolet National Forest in Forest County. It stood for an estimated 400 years only to be struck by lightning and burn to the ground in 2003.

Allison's book is well illustrated with 89 historical photos that help the reader grasp the enormity of these massive trees. The book concludes with "Trees in Literature, Art and Folklore" and "Arborphiles," a chapter on some of Wisconsin's most famous "lovers of

trees." "Rudy Lange: Delavan Tree Surgeon," is an especially colorful account of a naturalist who lived a life of adventure and whose "cremated remains were incorporated in the soil at the base of his favorite tree, an Adams flowering crabapple."

The One Pan Gourmet

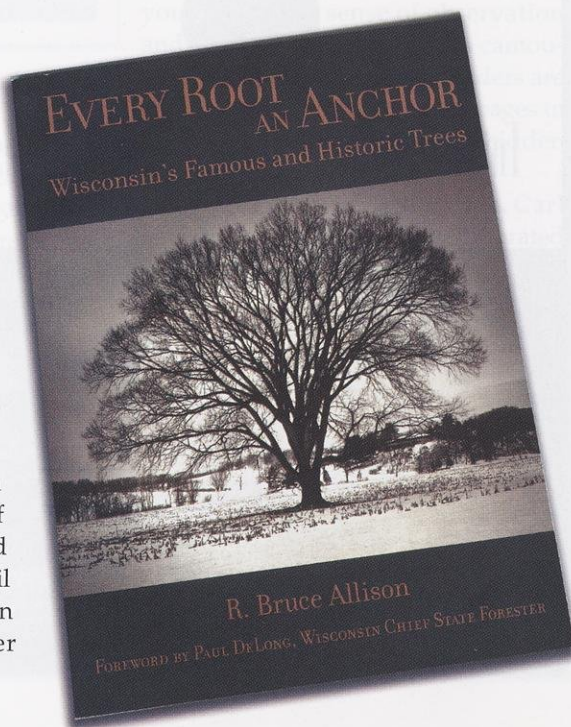
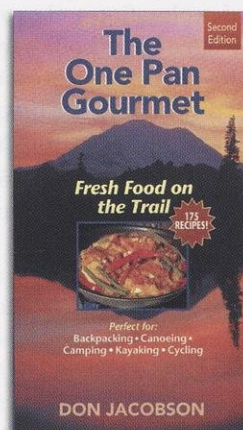
by Don Jacobson, Ragged Mountain Press/McGraw-Hill, 167 pages, \$13.95.

Imagine hiking and backpacking for a weekend in a wilderness area. There's no car in which to pack a multiburner stove or a multitude of pots, pans and other equipment. Now imagine setting up camp along the trail and enjoying a menu like this: Eggs a la Gold-enrod or Soy Sauce Steak Sunrise for breakfast, Fast Pea Soup for lunch, and Calcutta Chicken and Indian Pudding for dinner. Jacobson maintains that hiking and enjoying fresh-cooked meals don't have to be mutually exclusive and has written the book to prove it.

A key to Jacobson's philosophy is that you must first decide which cooking utensil to bring along — a frying pan, a pot or an oven — then base your meals around that utensil. Careful menu planning, choosing the most lightweight and efficient equipment, and proper packing will ensure that you won't break your back on the trail.

Jacobson's 40 years of experience provide the reader with a wealth of tips for selecting pots, pans and camp stoves; making a one-pan oven; purifying and filtering water; properly packing a backpack; planning a menu; and hanging a bear bag. All 175 recipes — categorized by whether they're cooked in frying pan, pot or oven — are field tested by scouts and other outdoor enthusiasts. His culinary and nutritional advice is useful and includes vegetarian and low-fat options.

"I believe the time you spend in



camp," says Jacobson, "should be just as rewarding as the time spent walking."

Immortal River: The Upper Mississippi in Ancient and Modern Times

by Calvin R. Fremling, *The University of Wisconsin Press*, 472 pages, \$29.95 (paper) or \$70 (cloth).

Calvin Fremling, in the "labor of his life," has produced a comprehensive, authoritative book about the world's third longest river that drains about 40 percent of the contiguous United States. It covers the river from its geological beginnings hundreds of millions of years ago to the more recent 300 years of exploration and exploitation.

One of the book's five parts, "Caging the Giant," relates the days of the steamboat era, railways, and subsequent laws creating and maintaining navigational channels, wing dams and

the extensive system of locks and dams we see today. "The Glory Years" starting in the mid 1920s, resulted from creating the Nine-Foot Channel and the passing of the river landscape from

private to public hands. River bottomlands were purchased from St. Louis to St. Paul making the once hard-working river a paradise for conservationists and recreationists.

The section on "Ecological Relationships" explores the long-term consequences of channelization and related projects. Fremling details the decline of the river's biological productivity since its peak in the early 1960s, pointing to increased turbidity caused by more river traffic, growing danger of hazardous spills, an elevated water table, eutrophication, barriers to fish migration, and recreational overuse.

In an epilogue, Fremling eloquently addresses "The River Yesterday, Today, and Tomorrow," and the conundrum that although "the river is cleaner, safer, and more inviting...there are serious

problems" that must be addressed about the river's future.

This book defies summarization; there is simply no fluff. The author's expertise in geology, history, biology and economy is interspersed with more philosophical discussions of fishing and the people he fondly calls "river rats...who have the river in their blood and whose lives are shaped by the decisions and actions of river managers. They include a knowledgeable but not necessarily scientific group of bird-watchers, sport anglers, commercial fishers, hunters, trappers, hikers, boaters, and river-watchers who would rather live along the Mississippi River than anywhere else."

Invasive Plants of the Upper Midwest: An illustrated guide to their identification and control

by Elizabeth J. Czarapata, *The University of Wisconsin Press*, 228 pages, \$26.95 (paper) or \$60 (cloth).

This is a comprehensive, practical guide to learning how to control the spread of exotic plants on private or public property. The book classifies invasives by varying degree of threat or potential threat, their growth form (e.g.,

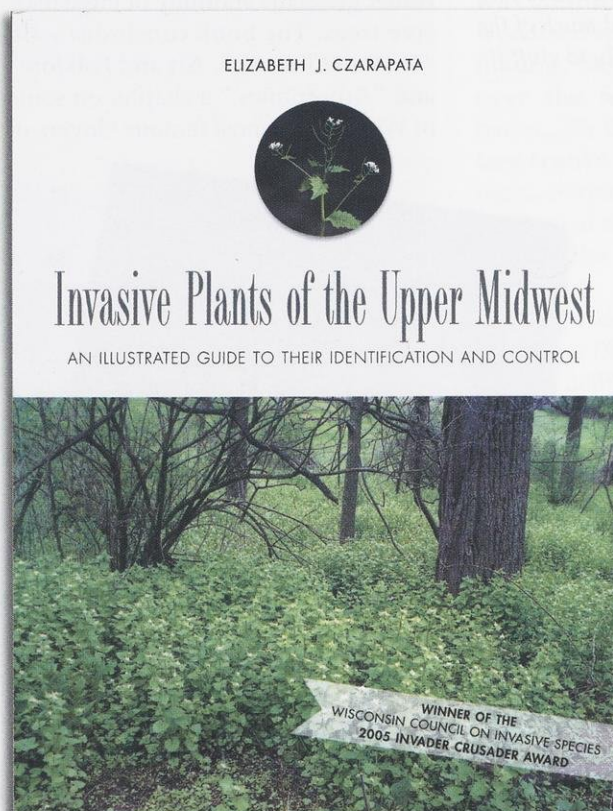
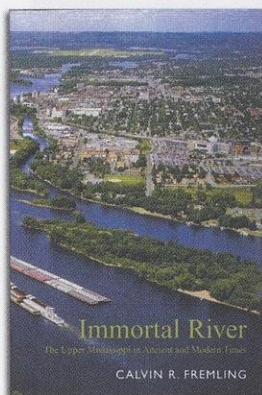
tree, grass or aquatic), the habitat they invade, their range and how they are most effectively controlled. What sets this book apart from others is the wealth of quality photos that show plants in different life stages, and also point out their identifying characteristics.

Buckthorn, for example, is shown growing alone and in a cultivated hedge; with and without leaves; as a seedling and in varying stages of leafy growth. Photos show the bark of young twigs with white spots, how those spots change to elongated lenticels with age, and how the bark becomes rough with age. Other images illustrate how the berries grow and the appearance of the terminal bud to aid in winter identification.

The late author developed the guide as part of her own volunteer efforts to help eradicate invasives. A schoolteacher without a botanical background, she discovered the need for good photos to identify plants and began an extensive photo collection of her own. All but a few of the photos in the book are hers.

Besides photos of each of the featured plants, the guide includes narrative descriptions of habitat, leaves, seeds, taproot, height, flowers, stem and similar species. A chapter on control techniques encourages the use of "integrated vegetation management," or a combination of two or more control techniques. They include manual techniques (hand-pulling, digging, flooding, mulching and burning), mechanical techniques (pulling, cutting, girdling, tilling, mowing and chopping), chemical and biological controls.

Other important features come from contributors such as Ken Solis who authored a section on "Convincing the Skeptics" that removal of invaders is worthwhile; and Dave



Egan, Steve Glass and Evelyn Howell, who contributed advice on restoring native vegetation to sites that have been cleared of invasives. Czarapata concludes with outreach and community action advice to encourage civic groups, scouts or local conservation organizations to get involved in restoration efforts.

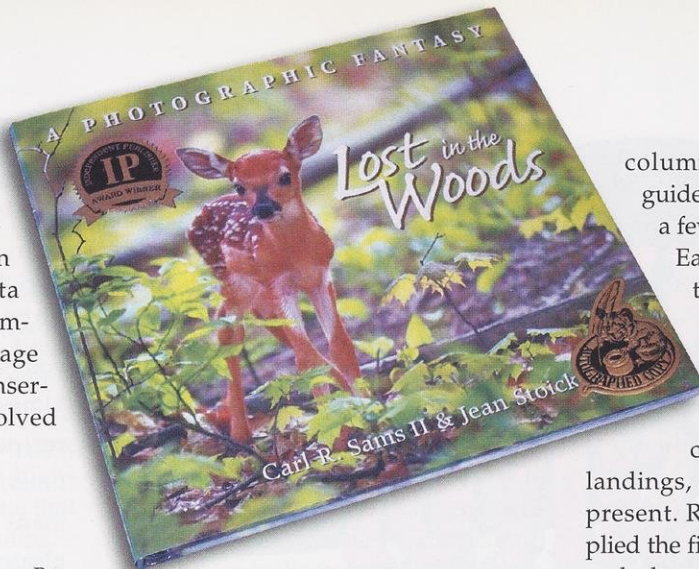
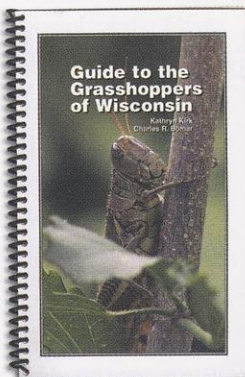
Guide to the Grasshoppers of Wisconsin

by Kathryn Kirk and Charles R. Bomar, Bureau of Integrated Science Services (Wisconsin Department of Natural Resources), 154 pages, Free.

This all-inclusive guide fills the void in information on Wisconsin hoppers that bound into your fields, pathways or are occasionally clutched in little hands. This book is a useful tool to learn how to distinguish among slantfaced, spurthroated and bandwinged grasshoppers. The three identification keys, one for each group, are complemented by anatomical illustrations, color plates and species accounts to aid in identification. The guide describes 70 species of Acrididae, the grasshopper family collected in Wisconsin since 1881, half of them as part of DNR's Prairie Invertebrate Study from 1994 to 2002.

Each entry describes the insect, range (from North to South America), Wisconsin distribution, status ranking (such as imperiled, rare or secure), habitat description and a discussion of the specimens that were examined from the various collections. Color photos are included for about half of the species.

Kathryn Kirk is a conservation biologist and terrestrial ecologist for DNR's Bureau of Endangered Resources and Charles Bomar is an insect ecologist and professor of biology at UW-Stout. To obtain a free copy please contact Martin Griffin of DNR's Integrated Sciences Services Bureau at (608) 266-0842. For information about ordering online or down-



loading, go to dnr.wi.gov/org/es/science/publications/SS1008_2005.htm.

Lost in the Woods

by Carl R. Sams II and Jean Stoick, Carl R. Sams II Photography, Inc., 48 pages, \$19.95 (hardcover).

Here's a book for parents or grandparents looking for an engaging tale that teaches an important wildlife message. Written at four- to eight-year-old reading level, it tells the story of a newborn fawn seemingly lost in the woods and fellow woodland creatures' concern for his fate. The lesson? Wildlife young found alone in the woods are best left alone because their mothers are likely nearby and will return to care for them. The fawn's mother left him alone so her scent wouldn't alert predators to his presence.

The story can help develop the young reader's sense of observation and appreciation of wildlife's camouflage. When the story ends, readers are urged to turn back through the pages to find the other forest creatures hidden within the photos.

Wildlife photography team Carl Sams and Jean Stoick have collaborated on several children's products, including a companion book *Stranger in the Woods*, a fun story about forest creatures' reactions to finding a snowman in their midst.

Net Results: Great Fishing Spots in Southern Wisconsin

by Bob Riepenhoff, University of Wisconsin Press, 239 pages, \$19.95.

Bob Riepenhoff, outdoor editor of the Milwaukee Journal Sentinel, compiled 44 of his "Riepenhoff on Local Lakes"

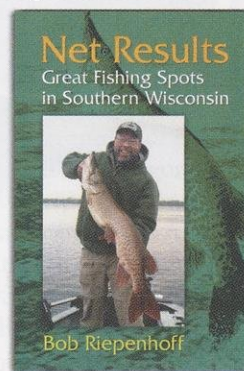
columns in this practical fishing guide. It covers 55 lakes, all within a few hours' drive of Milwaukee.

Each lake is categorized by the type of fish it's most noted for — bass, walleye, panfish, trout, northern pike or musky. Accompanying each lake description is a contour map showing boat landings, and a list of the fish species present. Riepenhoff's son, John, supplied the fine fish drawings that preface each chapter.

If it's bass fishing you're seeking, Riepenhoff's guide covers the gamut of lakes from 932-acre Big Cedar Lake to 102-acre Lake Five, both located in Washington County. Big Cedar Lake is reportedly one of the best bass lakes in southeast Wisconsin, "an action lake known for trophies." Lake Five on the other hand, is "a quiet little lake where you can rent a boat, row all the way around in a few hours and catch bluegills, largemouth bass and maybe even a northern pike." Similar varieties of lake size and accessibility are covered for each species.

For each write-up, Riepenhoff relates the successes of his fishing buddy du jour and there are plenty of big-fish photos to whet readers' appetites.

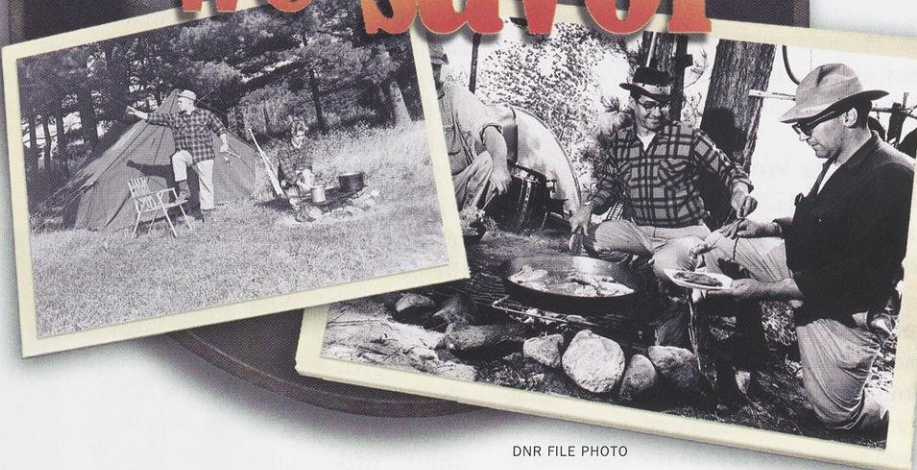
Lake descriptions typically include comments from DNR fish managers about size structures, population characteristics, rationale for restrictive or special regulations, recent fish surveys and plans for habitat management. Riepenhoff advises readers of recent stocking efforts, the availability of boat rentals and the opportunity for shore fishing. Tips for what baits and lures produce the best results round out each write-up. It's a good guide for novice and experienced anglers to maximize their fishing enjoyment.



Kathryn A. Kahler, Wisconsin Natural Resources magazine's circulation and promotions manager, writes from Madison.

Flavors we savor

DEAN TVEDT



DNR FILE PHOTO


Good times and good food go hand in hand. Many of the experiences that etch their way into our memory — a favorite campsite, the spring fishing trip, deer camp, a special trip — are a sensory mixture of sights, sounds, people, the feel of the wind and sometimes smells and tastes. And it's amazing how small things can trigger the experience. One whiff of balsam on a damp day and I'm back on the trail portaging our canoe. A hint of neat's-foot oil and I'm out in center field shagging flies.

Perfumeries and chocolatiers know this phenomenon all too well. In fact they bank on it.

Favored foods can do that too — the savory smell of stew following an opening day hunt, frying walleye at a shore lunch, a slow pot of soup simmering over a campfire. We're betting that you have some homemade favorites that provide the crowning touch to your days afield — a casserole that you always serve when camping, a dish you always have at deer camp, a tinfoil wrap that only works on a bed of coals, a drink that only tastes good accompanied by a game of poker in the ice shanty, a cobbler or home-canned jam you have to make with fresh-picked berries, a cookie that's always in your rucksack when you hike.

Send those recipes our way and we'll publish them this summer alongside a few favorites from a new campside cookbook produced by our friends at Peninsula State Park.

Suggestions for cooking up your story:

- 1 Why is this recipe special?** Briefly tell us in a paragraph or two how you discovered this dish, who passed it down to you or why it is special to your group.
- 2 Time-tested and good** — Share recipes that you've tried several times, tinkered with or perfected over many outings until they are crowd pleasers.
- 3 Readily available, fresh ingredients** — We prefer dishes made from scratch with fresh ingredients and slow cooked rather than doctored up canned foods or nuked stuff.
- 4 Clearly label measurements and quantities** — List volumes in teaspoons, tablespoons and cups. List weights in ounces and pounds.
- 5 Provide step-by-step preparations and instructions.**
- 6 Share your presentation** — Take a photograph showing readers how to plate and serve the dish. Also share the ambiance. If you normally serve this by campfire, candlelight or in between hands of a rousing sheepshead game at the cabin, set the stage for us and share the surroundings.
- 7 Sign on the dotted line** — Please print your name, tell us from which community you are writing, include an address if you send us a picture you want returned and provide a phone number or e-mail address in case we need to ask a question about your recipe. We want to make sure we spell names correctly for those stories that are published, and we like to publish as many usable entries as we can.
- 8 Send submissions by April 1st** to: Outdoor Favorites, *Wisconsin Natural Resources* magazine, P.O. Box 7921, Madison, WI 53707. 

Wandering waxwings

Continued from page 2

These lovely nomads don't have much of a song, but they do produce distinctive calls. One is a buzzy, high-pitched trill, or *see* call. A birder with a good ear can hear variations of this trill that serve as both courtship and begging call. Another common call is a high-pitched, drawn out, hissed whistle that flocks use when taking off and landing.

"Cedarbirds" are bluebird-sized, light brownish gray with pale yellow bellies. Their feathers are soft and silky, giving them their velvety, regal appearance. Tails are tipped with yellow and the undertail coverts are white. The most distinguishing characteristics are their crests, bandit-like black masks and the bright red wax-like extensions of the secondary wing feathers, an adaptation scientists have been unable to explain. The number of these waxy appendages, for which the birds are named, increases with age until the birds attain adult plumage. Males and females look alike; juveniles have streaked breasts and lack masks.

Wisconsin residents might expect to see cedar waxwings making their way north at the end of May. Don't look for them with earlier spring migrants; they are one of the latest arrivals each year. You might see them in small flocks in orchards, residential areas and open woodlands feasting on insects, buds and flower petals. By mid-June, when they get down to the business of nesting, waxwings are more commonly found in the northern half of the state. Their summer fare consists of such foods as elm

leaf beetles, weevils, carpenter ants, sawfly larvae, flies, cicadas, scale insects and caterpillars.

Nesting pairs are established well in advance of the nesting season. Courtship actually begins in the migrating flock when males and females start a ritual of side-hopping and berry passing. A male perched next to a female on a branch will side-step up to the female and offer her a berry. She accepts it, hops away and back again, and passes the berry back to him. This activity continues, sometimes for up to 15 minutes, until one of the birds eats the berry.

The pair scopes out and builds the nest, usually four to 50 feet up in the fork of a horizontal tree limb in a fruit or shade tree. The birds construct a loose, bulky nest from fine twigs, grasses, paper, pine needles and stems, and sometimes line it with moss and caterpillar silk. Cedarbirds nest much later than most other birds, often as late as August, perhaps because they need ripe fruit to feed their young.

After laying two to six gray spotted eggs, the female incubates them while the male brings her food. The male protects the nest from a "sentinel perch" on a branch above the nest. When the eggs hatch in 12 to 14 days, the male continues to bring food, feeding the female first, then the young. They eat protein-rich insects for the first few days, and fruit thereafter. A waxwing pair will usually have a second brood immediately after the first. Their family-rearing activities often reach a feverish pitch as they con-

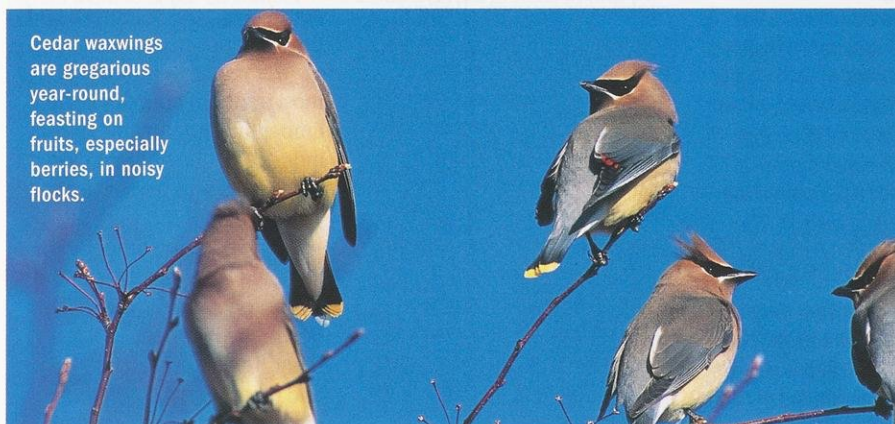
tinue to feed the first brood while building a new nest and resuming courtship. Just as they start their second brood, the first birds fledge and are on their own. Both families are out of the nest in about 65 days, by the end of September.

Late fall through early spring is the nomadic time of the year for cedar waxwings. They leave the northern counties starting mid-October and travel in flocks to wherever they can find a fruit supply. Some may stay in scattered flocks across the state all winter, especially in the Madison and Milwaukee area. Others fly south to wintering grounds, in Florida, Louisiana or Texas.

Anecdotal accounts of cedar waxwings' voracious appetite for fruit are both amazing and amusing. Berry seeds are eliminated within 45 minutes of ingestion. Some accounts tell of birds gorging themselves on over-ripe fruit until they are drunk and can scarcely fly. Another theorizes that rather than becoming intoxicated, the birds stuff so many berries down their throat in such a short amount of time that the berries cut off the blood supply to their brains, and they are only revived as the berries are quickly digested.

Bird enthusiasts can attract these lovely birds to their yards by planting a variety of fruit trees that bear in different seasons. For summer fruit, plant black cherry, pin cherry or mulberry. To bring in cedarbirds in the fall, try American mountain ash. In winter, waxwings prefer eastern red cedar and hawthorns. Also try shrubs or vines such as serviceberry, chokecherry, raspberry, blackberry, elderberry, dogwood, nannyberry, winterberry, swamp rose, American bitter-sweet, grapes and wild strawberry. Nesting pairs prefer maples, alders, cedars or dogwoods. Also during spring nesting season waxwings will use wool, string, hair or other nesting materials that birders place in the bark of a tree or in a suet cage. ■

Kathryn A. Kahler writes from Madison and is circulation and production manager for Wisconsin Natural Resources magazine.



Cedar waxwings are gregarious year-round, feasting on fruits, especially berries, in noisy flocks.

HERBERT LANGE

COMMENT ON A STORY?

Send your letters to *Readers Write*, WNR magazine, P.O. Box 7921, Madison, WI 53707 or e-mail letters to david.sperling@dnr.state.wi.us

READER DISPUTES SUCCESS OF WALLEYE FISHERY

While I view this article ("A generation of shared rights and shared responsibilities," August 2005) as an attempt to smooth over some of the issues brought about by the 7th Court of Appeals ruling, I wonder what you truly are trying to say. Spearing of any spawning fish is not a good practice for any resource. This practice has resulted in stocking fish in places where natural reproduction was doing great by itself.

The quality of the speared fish is going down. This means the cream of the crop has already been harvested. When the elders talk to their grandchildren they will refer to 1985 and several years after as the "good old days of harvest." We are creating a put-and-take fishery. The spawning adults are becoming a "mono" class of fish. No more will you see a great diversity in the age of the spawning fish. To harvest more fish we will need to plant more fish to make up for the lack of numbers on the spawning beds and in the natural systems. And now we [stop] taking bass in these northern lakes until June 15th. This is to help that fishery expand and take the place of the walleye.

How long does it take for a walleye fry to mature into a spawning adult? Tell us how long it takes for that fry to become a first-year spawning walleye or grow to 20 to 30 inches long? Disturbing the fish spawning on the beds will cause the young fish not to spawn that year. The drive to spawn is not as strong as it would be in the older class of fish. Will the younger fish have the amount of eggs that the older fish will have? Is this to be the "Legacy of the Ojibwe on North-

ern Wisconsin Walleye Fishery?" We all are witnessing firsthand what 20 years of harvesting the spawning walleyes has done.

My personal solution now is to harvest walleye in other states and countries that have ample bag and possession limits. My days of catching walleyes, filleting them on a canoe paddle and dropping them into a frying pan are now a time of the past. This elder will now tell this story to his children's children and wish they could experience the same. You may still find me in your neighborhood dipping a paddle in the cool water, sliding along the undeveloped shoreline, watching the mink look out from among the logs or otters playing with each other. I may still hear the clack of an eagle as I get too close to where it is fishing, but you won't find me catching any walleye.

Art Chevrier
Sheboygan, WI

DNR's Treaty Fisheries Coordinator Patrick Schmalz and Fisheries Policy Chief Steve Hewett respond: DNR staff set harvest quotas based on the best fish population data available in the state. Safety factors built into that system are designed to prevent the harvest from exceeding safe levels. In northern Wisconsin, loss of habitat due primarily to development most likely has had a much more dramatic impact on natural reproduction than spearing.

It is because fish are vulnerable during spawning that the DNR limits angler harvest in a closed season and regulates the tribal fishery. Walleye populations are not put at risk. A variety of safety factors are included in the calculations for safe harvest by the tribal members. Most tribal spearing harvests males rather than females (about 10 percent of the harvest is female walleye). The DNR does not stock walleye to replace tribal harvest and has not had to increase stocking to lakes that had natural reproduction before the fishery. The best walleye waters in the north are those that are maintained by natural repro-

duction and those lakes form the majority of the waters that are jointly harvested by tribes and anglers.

The assertion that new bass regulations on northern lakes are a reaction to walleye populations is simply not true. We still have a fantastic naturally reproducing walleye fishery in the north. Fish stocking will never make up for a lack of numbers in naturally reproducing lakes. The bass season structure was designed to protect bass during the spawn, as are all of our season dates, and has nothing to do with walleye populations. In some waters where walleye populations have declined, bass populations have increased. There is no evidence to suggest the two are linked. Walleye are native to river systems and still do best in rivers and flowages in Wisconsin.

The proportion of large fish harvested by the tribes has stayed remarkably consistent through all the years of tribal harvest. The average length of tribal harvested walleye has been about 15 1/2 inches for the 21 years of spearing. The percentage of fish that are speared that are over 25 inches has also been consistent at 0.8 to 1 percent of the harvest since the current safe harvest system was established. Our walleye fishery is not put-and-take and it is not a mono class of walleye.

Walleye mature at two to five years for males and five to seven years for females, depending on the water body. In the ceded territory, males probably mature between three and six years and females over six years. Walleye can reach 20 inches by age six and rarely reach 30 inches. Those that do take well over 10 years. Over 100 waters are sampled each fall by DNR and the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) to determine year-class strength and speared lakes often have some of the highest young-of-year catches. There appears to be absolutely no impact of spearing on spawning numbers or the number of young walleye pro-

duced in a lake.

The shared fishery has led to many positive things, including a monitoring system that is second to none. We now have much more data by which to manage fisheries in Wisconsin. The truth is that the exploitation rate on walleye populations has gone down from the days of less restricted angler fishing before 1985. Many populations were being over-harvested, well in excess of 35 percent, before tribal fishing began. Since then the current management system of tribal quota, angler bag limits and size limits has kept the risk at less than one chance in 40 that walleye exploitation rates will exceed the court mandated level of 35 percent.

There are still ample opportunities to harvest walleye in Wisconsin. Anglers harvest more than 200,000 walleye in the ceded territory annually. Angler harvest in the ceded territory has ranged from 132,067 to 385,144 since 1990 when the current management system went into place, compared to tribal harvest of 24,002 to 30,367 in the same time period.

OTHER PERSPECTIVES ON NORTHERN INITIATIVES

"Keeping the North the North" in the October 2005 issue was a very interesting article about a subject of concern to many people in Wisconsin. The article seemed skewed toward recreation and tourism, and the authors could have broadened their sources of information beyond the DNR employees and people engaged in tourism and preservation.

The primary employer in most northern counties is the timber industry, not the tourism industry, yet the timber industry perspective was missing from your article.

Contacting the timber industry could have saved the authors at least one misleading — if not downright incorrect — statement. The authors stated, "Wood and other products sold from certified forests earn a premium

price." A DNR forester is then referenced as having said that "certified forest lands make Wisconsin's wood products more valuable in the global marketplace."

That has been the hope, but it does not reflect reality. I challenge the authors to find one professional logger who has consistently been paid more for producing certified wood. I further challenge the authors to find one retail lumber outlet that will verify that certified wood commands a higher price in the marketplace.

The struggle about Wisconsin's rivers could easily have been improved by contacting any of the river "friends" groups that have formed in the last few years, as well as the development interests they are confronting.

Keeping the North the North means different things to the people who live there versus those who only play there. It's unfortunate that an article by the same name dealt primarily with those who only visit and play.

Dave Wester
Elroy, WI

Author James C. Bishop responds: Certification may not consistently get loggers and processors more money, but the certification process promotes good logging practices that verify the safety, health and welfare of workers and the forest. It's a bit like buying clothing from places that certify good working conditions instead of potentially buying from sweatshop operations. Some fiber buyers want to show customers that they buy wood from well-managed sustainable forests that also guarantee loggers are equally concerned about the resources and the land they came from.

I agree that wild rivers chapters could have been handled differently.

The authors who wrote this piece equally have lived and worked in the north for decades, if not their whole lives. Whether we leave home to recreate or stay nearby, we are visitors who are

concerned about the overuse and abuse of northern Wisconsin resources. We're concerned about maintaining the quality of those resources and both the article and the Northern Initiatives program attempt to address those issues.

Who pays the taxes on the thousands of acres of land purchased under the Northern Initiative ("Keeping the North the North," October 2005)? My family and I own land in northern Wisconsin, none of which is accessible. Our taxes have gone up 1,000 percent in the last few years. Is this because of the "Initiative?" If this land is taken off the tax rolls it seems to me the private landowners in the Northwoods are getting a raw deal. If this "Initiative" wants all this land for public use there should be stiff use fees to pay for the taxes on the purchases. There is also a question with open hunting on these lands. I saw nothing in the article addressing this. If these lands are shut off to sportsmen and women there will be a bigger problem with deer overpopulation, which accounts for millions of dollars in insurance costs per year due to accidents. Is the "Initiative" going to add to this cost by not allowing hunting on these lands?

Bryan Hatleback
Denver, CO

You raise good questions. We tried to be clear that the goal of Northern Initiatives is not to buy up every available parcel. We work with communities to decide where lands warrant protection and what form that should take through reasoned zoning, incentives to landowners, planned development and occasionally purchase. When purchases ARE considered, communities discuss which parcels may be purchased, which will be protected through conservation easements or other land use tools, which the communities want to protect for other purposes and which will be zoned for future development. The object is to take deliberate looks at what

we need to do to protect the character of rural communities and create green space near developing areas.

For lands purchased since 1992, the Department of Natural Resources compensates local government for the full amount of property taxes that would have been paid had the property been privately owned. This applies to lands purchased for parks, hunting grounds, fish hatcheries, game farms, natural areas and other land for recreation. For lands bought before July 1969, DNR pays 88 cents per acre. On lands bought between 1969 and 1991, DNR pays the full property tax the first year; then taxes are reduced by 10 percent each year for 10 years. Thereafter, the state compensates locals at 10 percent of the first year's payment or at least 30 cents per acre. Further, the private land surrounding these public purchases typically goes up in value because the owner knows that surrounding properties will not be developed and development will not encroach on these lands.

You might also take a look at a feature story we carried back in 1999 explaining the host of tax incentives provided to sustain the local tax base when public land purchases are contemplated. "Good value, just compensation," was published in our February 1999 issue and is still available at our website (wnrmag.com/stories/1999/feb99/taxes.htm) or for purchase as a back issue.

As for hunting, lands purchased with public funds are usually open for public recreation. Lands on which the state provides tax incentives, like the Managed Forest Law program, provide greater tax relief to those landowners who choose to make their property available for public hunting and recreation.

WHAT GOES AROUND COMES AROUND

While on active army duty this past year one thing that continued to plague my thoughts, other than the usual worries of a man separated from his family, was the

fear that my oldest son Zachary would not be able to attend hunter safety training due to limited space and the high demand for these workshops. Luckily I live in an area where hunter education is not just an after-thought but a priority by dedicated individuals using an innovative approach for injury/accident reduction.

After contacting the DNR to locate hunter education offerings, I was referred to John Walsh, Director of Trauma Services at the Affinity Health System, Mercy Medical Center in Oshkosh. John's aggressive approach to injury prevention through education was evident by the innovative approach of offering public safety courses at a health care facility! Enrollment went smoothly and the entire experience was positive from start to finish.

The class itself was very interesting and well attended by students' parents who were encouraged to participate as well, a refreshing change from hunter safety programs I attended in the past in Montana and Texas. A new twist to the class this year was a PowerPoint presentation purchased with a grant from the Mercy Health Foundation that made the information more understandable, fun to watch and easy to digest, even for the parents! I understand that Mercy has generously donated this program throughout the state to aid other communities and agencies in hunter education.

The hands-on experience was very valuable to get firearms in the kids' hands as much as possible to ensure familiarity. The class was run to emphasize discipline and stress the gravity and serious nature of the paths these students were about to embark upon. I was so inspired I volunteered my time for the next program and am in the process of becoming certified as an instructor.

The proof is in the pudding! Three days after completing both the hunter and the bowhunter education offerings at Mercy, Zach and I had the pleasure of



WILLIAM BECK

experiencing the youth waterfowl hunt. DNR's youth waterfowl and big game offerings are a terrific opportunity for kids and their parents to experience these magical first outings without the stress and competition of typical opening day trials and tribulations. Zach not only shot four ducks, but most importantly was always safe and frequently recited the basic rules of firearms safety, even pointing out some safety flaws of his father. It gets better! On the next day we went bowhunting and Zach shot a beautiful mature whitetail doe. Not only was this a magical experience to witness, but to watch how he handled himself was beyond words.

If what goes around truly comes around, the people at Mercy, John Walsh and his group of instructors must truly have bright futures.

*William Beck, RN
Captain US Army Reserve*

HAWAII COULD LEARN FROM WISCONSIN

I'd like you to know *Wisconsin Natural Resources* magazine has no equal when it comes to well written, informative, descriptive and entertaining articles. Your breadth of coverage in every issue is outstanding and keeps me looking forward to the next one. I've received your magazine for over 20 years while traveling worldwide serving with the Air Force. I was born and raised in Superior and your magazine keeps me in touch with my home state and what's happening there. Wisconsin has so much to offer anyone who lives

there and your magazine helps to ensure a great quality of life. Keep up the fantastic work!

I currently live in Oahu, HI. This island could learn a lot from Wisconsin on preserving, conserving and stewardship of all natural resources. Recycling programs are lacking with oil and antifreeze absorbed or put in the trash with magazines and alkaline batteries. There is no curbside pick-up program. There is also no control of illegal dumping around the island and abandoned cars along roadways and parks are standard here. For an island of limited land resources they could stand to improve in all these areas. They do have some limited programs in the works and are trying in other areas with minor success but seriously need to get up to par like many other states and educate the population for buy-in and participation.

We recycle the few items allowed (newspapers, cardboard, containers and green waste) by taking them to collection sites, but most do not. I see all these items sticking out of trash cans everywhere during pick-up days. At the work place it's no different; very few participate. It's not convenient for most people.

I'll get off my soap box. Again thanks for your excellent publication and keep it up. We're looking forward to them for years to come.

*Gary Smith
Ewa Beach, HI*

BRING BACK RECYCLING

I sure do believe in recycling too. At our home in the Beloit area we recycle everything; but unfortunately at our summer home on the west end of the Chippewa Flowage, only paper is recycled. Metals, plastics and glass recycling containers used to be available, but no more since spring of 2005. It all goes in the garbage! We bring ours back to Beloit, not wanting to add to the landfills. Isn't there a way to bring back to the greater Hayward area a more complete and comprehensive re-

cycling program so our north country can last a few more years? And I certainly do agree with your header on the pull-out on your October issue: "Wisconsin — where recyclables are too valuable to waste!"

*Steve Karstaedt
Beloit, WI*

Recycling Team Leader Cynthia Moore responded: Thank you for your interest in recycling. Businesses and individuals like you have helped Wisconsin's recycling program avoid new construction or expansion of between five and eight landfills since 1990.

Wisconsin's Recycling Law delegates responsibility to local government units (or responsible units) to implement municipal recycling of materials banned from Wisconsin landfills, like newspaper, office paper, cardboard, glass/aluminum/steel/plastic beverage containers, and yard waste. Rural communities of less than 5,000 or a population density of less than 70 persons per square mile may provide some or all of their recycling services through a drop-off center. It may be that the responsible unit for your summer home only collects paper through a curbside program and uses a drop-off center for the other materials. Your best bet is to contact your local town chairman, village clerk or treasurer for drop-off center information.

OLD CLASSIC HITS HOME

Life is ironic. My husband and I were on a two-week road trip last September and I had gotten an old classic book on tape, "Old Yeller," from a local library. I thought it would be entertaining to hear it again. One of the exciting parts of the book was when Old Yeller fights the feral pigs. Little did I know that Wisconsin had feral pigs. It was only reading the August issue of your magazine ("Wild hogs in the woods," August 2005) that night, that it all came together. I read with interest the article and could relate to a 50-plus-year-old classic. Thank

you for your timely and interesting article.

*Pat Pamperin
Marion, WI*

UPDATE

FERAL PIGS ON THE INCREASE

Before last fall's deer hunting season, DNR wildlife officials urged hunters encountering wild pigs to shoot them on sight. With the population on the rise and sightings reported in at least 29 counties across the state, the goal is to aggressively remove feral pigs from the landscape.

Wildlife Manager Bryan Woodbury says that besides the self-sustaining population in Crawford County, there are a significant number of pigs in Douglas County, largely due to escapes from a game farm. "The number of sightings of small groups — between one and six pigs — has increased in other counties as well," says Woodbury. "These pigs are most likely escapes, either intentional or unintentional."

Woodbury and his colleagues in west central Wisconsin distributed and posted "Wanted" posters to call the public's attention to the threats of feral pigs and asked people to report sightings. Rooting by feral pigs has resulted in damage to agricultural and forest land. They also cause serious soil erosion and water pollution and have a negative impact on wildlife species.

Feral pigs are considered unprotected wild animals and may be hunted year-round without limit. Landowners may shoot feral pigs on their own property without a hunting license. Other hunters need only a small game license and landowner permission.

For more information on hunting feral pigs, see dnr.wi.gov/org/caer/ce/news/on/2005/on051018.htm or for a fact sheet on feral pigs in Wisconsin, see dnr.wi.gov/org/land/wildlife/PUBL/wlnotebook/Pig.htm.

Treemendous

Desolate indeed would be our dwellings were their environs entirely treeless.
— Increase Lapham, 1856

Your TRAVELER can't be certain, but it's likely Wisconsin's premier natural scientist spoke those words after a journey to North Dakota. Trees enliven the landscape, particularly in winter, when their leafless silhouettes etch intricate patterns on darkening skies.

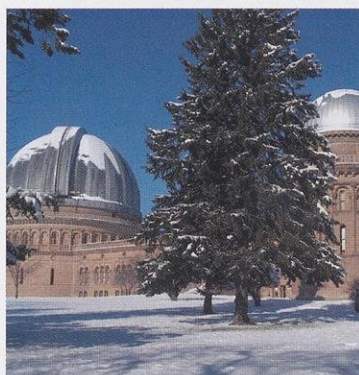
Make a point of visiting a Wisconsin arboretum now — while the water is hard and chill winds bite deep — and you will distinguish yourself as a true contrarian. Leave the blooming herds of frail summer folk. You, winter tree seeker — hardy, stalwart, intrepid — will enjoy unparalleled privacy in a public space as you contemplate the shape, structure and utter majesty of a Wisconsin tree specimen on a brisk 10°F afternoon. Bring along a sketch pad and pencil if inspiration strikes, and remember, many trees are easier to identify without leaves.

MacKenzie Environmental Education Center, Poynette.

Marvel at the more than 100 species of trees growing on the

280-acre property that formerly was the State Game Farm. Some state-record size trees thrive here, including an amur maple, bigleaf linden and Black Hills spruce. Allow time to visit MacKenzie's Conservation Museum and the live native Wisconsin wildlife exhibit featuring deer, bison, wolf, eagle, mountain lion, lynx and turkey. The grounds are open year-round; winter hours for the museum and exhibits (November 1-April 30) are 8 a.m. to 4 p.m., weekdays only. Visit dnr.state.wi.us/education/mackenzie/on the web.

University of Wisconsin Arboretum, Madison. In 1853, Increase Lapham first proposed the state's institutes of higher education preserve "at least one good specimen of each tree and shrub that grows naturally in Wisconsin." Three-quarters of a century later, the Board of Regents heeded Lapham's distant call and established the UW Arboretum. Today the 1,260-acre property is a living laboratory for ecological restoration. Look



© HEATHER J.D. CUDWORTH

At Yerkes Observatory, trees, landscaping and ornate architecture complement a visit to the telescopes. RIGHT: The General MacArthur white pine in Forest County was a towering giant, as recounted in the book we review on p. 23.



STABER W. REESE

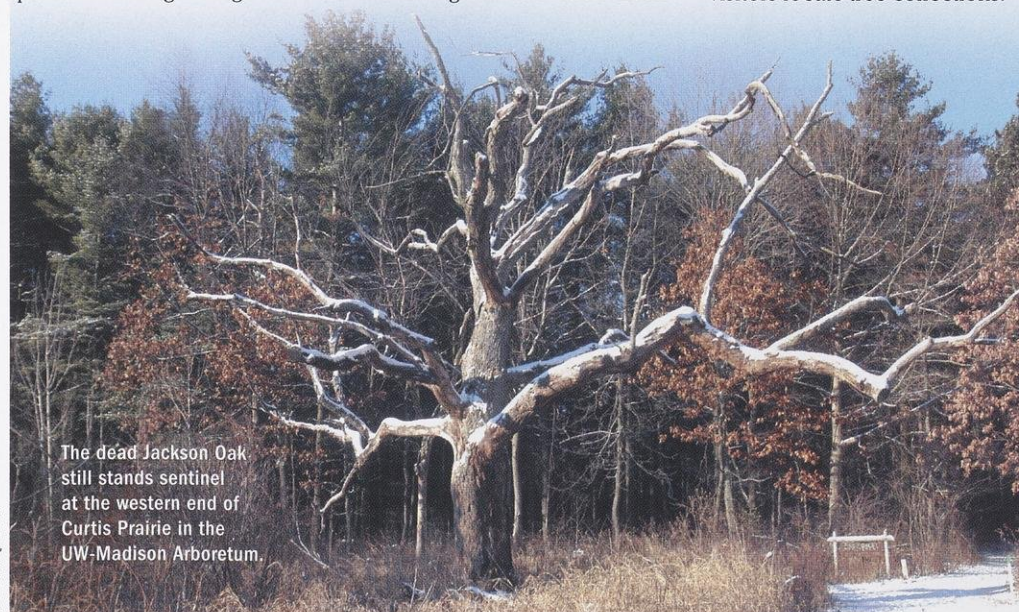
for magnificent bur oaks in the Wingra Oak Savanna and 150-year old white oaks in Noe Woods. See uwarboretum.org/ on the web.

Boerner Botanical Gardens, Milwaukee. Boerner's 1,000-plus acre arboretum spans Whitnall Park and stretches along the Root River Parkway. Trees and shrubs are arranged in groves according to plant family. Engraved plaques indicate specimens of noteworthy size and age; maps help visitors locate tree collections.

Visit boernerbotanicalgardens.org/ for details.

The Trees at Yerkes Observatory, Williams Bay. Olmstead Brothers, a firm run by the son and stepson of Frederick Law Olmstead, the famed landscape architect of New York's Central Park, designed the graceful, picturesque grounds of the observatory situated 190 feet above the shores of Lake Geneva. The 77 acres of broad lawns surrounding the telescope's dome feature handsome mature hardwoods, including beeches, chestnuts and ginkgos. Visit soon — the University of Chicago, which owns and operates the observatory, has put the property up for sale. See astro.uchicago.edu/yerkes/ for details.

Want to explore more? Read *Every Root an Anchor: Wisconsin's Famous and Historic Trees* by R. Bruce Allison, published by the Wisconsin Historical Society Press. It's online at dnr.wi.gov/org/land/forestry/Publications/everyrootanchor.html. Order softcover copies for \$21.95 from wisconsinhistory.org/shop/publications/books/every_root.asp



The dead Jackson Oak still stands sentinel at the western end of Curtis Prairie in the UW-Madison Arboretum.

Wisconsin, naturally

GERMAIN HEMLOCKS STATE NATURAL AREA



Notable: Cradled between three lakes, Germain Hemlocks features steep-sided stony ridges that support an old-growth forest dominated by large hemlock along with white and red pines, yellow birch, sugar maple and red oak. Canada mayflower, club mosses, wood fern, wintergreen and shin-leaf cover the forest floor. Large, standing snags and decaying, downed timber add to the site's diversity. Black-throated blue warblers, pileated woodpeckers, Blackburnian warblers and red-eyed vireos are among the birds seen and heard here. The site is named in honor of Clifford E. Germain, the first ecologist and coordinator of the State Natural Areas Program, who helped protect many such places during his career.

How to get there: From the intersection of Highways 8 and 47 in Rhinelander, go north on 47 about 10 miles through McNaughton, then west on Fawn Lake Road about 2.8 miles, then south on South Doe Lane 0.2 mile to a boat landing on Long Lake. Walk southwest into the area. Visit dnr.wi.gov/org/land/er/sna/sna355.htm for a map and more information.



**GIVE A GIFT SUBSCRIPTION BY PHONE, 1-800-678-9472
OR ONLINE AT WWW.WNRMAG.COM**