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Hooked on contests

Fishing tournaments in Wisconsin waters

Green invaders on the horizon Superior adventure



/ISCONSIN NATURAL RESOURCES

June 2006 Volume 30, Number 3







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DOUG STAMM, Prairie du Sac STAMMPHOTO.COM

BACK COVER: Summer wildflowers at Muralt Bluff Prairie State Natural Area in Green County. For more information, or to order a guidebook to State Natural Areas, 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.

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



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TWO NEW DNR BUILDINGS ARE EASY ON THE EYES AND THE ENVIRONMENT

ince January 2005, a dozen or so tours of the DNR's Northeast Regional (NER) Headquarters in Green Bay have showcased the green thinking in every phase of the new building's design, construction, operation and landscaping. On every tour, participants nod heads in agreement: "Who else but the DNR to build an environmentally friendly building!"

Whole building design

Everyone knows the Department of Natural Resources aims to protect and enhance the environment. In this project, the agency led by example. The building is Wisconsin's first green state office building to receive gold LEEDTM certification from the U.S. Green Building Council. LEED — Leadership in Energy and Environmental Design recognizes environmentally friendly, energy-efficient buildings that provide a quality indoor environment.

Green building is not a new idea, but Ian Griffiths, project manager at Berners-Schober Associates Inc. of Green Bay, the architectural/engineering firm responsible for the design, spent a lot of time collaborating with his clients to plan a building that could operate in a more environmentally sustainable way.

"The focus of the NER building was not as much on gadgets, controls and technology, but rather on a design that integrated form with efficient building systems to improve both human performance and reduce energy consumption," Griffiths said.

In 2000, then-DNR secretary George Meyer wrote to Bob Brandherm, former administrator of the state Division of State Facilities (DSF) indicating DNR's intent to "construct our new Northeast Regional Headquarters and its environs with strong sustainable building principles in mind." The agencies jointly took on the new building as a green building demonstration project.

When state-owned buildings are built or renovated, agencies must first receive approval from the State Building Commission. With this building, commission members kept hearing

The building incorporated recycled materials: cabinetry and floorboards of wheat straw fiber, concrete that includes incinerator ash, reused fiber in the carpeting and laminate beams. Landscaping off the north side filters and absorbs runoff from the building through naturalized plantings of prairie, wetland and woodland plants that need no mowing.

"over and over again about sustainable design and LEED standards," said Rick Hartig, the DSF project manager. The project became a catalyst for developing sustainable building guidelines for energy standards, use of daylight, and recycling. Currently undergoing peer review, the guidelines will become part of Wisconsin Building Commission Policy in the near future.

By spring of 2005, the new building was ready. DNR offices formerly spread among four buildings in the Green Bay area were consolidated into the threestory, 34,560 square-foot structure with a 13,835 square-foot service building.

"We were spending \$250,000 a year maintaining and renting three of our four offices in Green Bay," said Ron Kazmierczak, director of DNR's Northeast Region. "Now with our regional staff in one building it is much easier to work as a team."

It's more economical too. Energy costs are expected to be less than half that of similar-sized offices and the layout is convenient for workers and customers alike. "It is so wonderful to just

ANNETTE WEISSBACH

© RYAN PHOTOGRAPHY, COURTESY OF BERNERS-SCHOBER ASSOCIATES

walk across the parking lot and get all my field equipment in minutes!" said Mary Gansberg, a water quality biologist previously housed in one of the annex offices.

The NER building shows commercial office space can be built economically and operate efficiently. According to the Department of Energy, buildings consume 60 percent of our electricity and \$40 billion is spent annually in the U.S. to air-condition buildings — one sixth of all electricity generated in a year.

Elements of green style

The designer and contractors focused on five main areas to realize the goal of creating a sustainable structure: making the best use of the building site; incorporating natural light; minimizing, reusing or recycling construction waste; selecting appropriate materials to construct the building and outfit the interior; and using smart energy sources for efficient heating and cooling. Here's how it was done.

Attractive, functional site design

Even the parking lot received careful scrutiny on this project. Combining the entrance road and staff parking area into one roadway resulted in less paved surface and less stormwater runoff. All runoff flows toward the center rain garden, where mesic prairie plants filter and absorb it. Excess water drains slowly toward a pond, solids settle, and eventually the naturally cleaned overflow water enters Lancaster Brook north of the building.

The view to the north is spectacular and will only get better. In a few years when the recently planted native prairie is fully established, the building site and the rest of the property will blend into a succession of vegetation from prairie to wetland to mature forest with trails linking the DNR property to the existing trail network along the Lancaster Brook Greenway. Within walking distance directly to the east, the Village Center of Howard will eventually take shape, with a mix of medium- and high-density neighborhoods, commercial anchors, parks and greenways.

Daylighting

The narrow three-story building is built on a slope, minimizing its footprint on the site and providing ample opportunity for large windows to bring natural daylight far into the interior of the building. Oriented with its long axis running east-west, the building has maximum southern and northern exposure. Ever notice how many blinds are drawn on commercial office windows? Most windows, especially those with east and west exposure, typically let in too much heat and glare. Daylit buildings are designed to take full advantage of open northern exposures and use creative ways to enjoy southern exposures. Along the structure's two-story south side, a combination of interior light shelves, exterior overhangs and a landscape trellis reduce glare and heat gain in the interior. The three-story north side has walls of windows to provide extensive "cool" daylighting.

Recycling construction waste

Green building aims to minimize construction waste. In constructing the DNR's new office building, a strict goal was set to divert at least 75 percent of waste material by weight from landfills through reuse, salvaging or recycling. The construction manager (Boldt Company of Appleton) was directed to significantly reduce the volume of landfill waste and simultaneously feed local recycling businesses. Boldt completed a Construction Waste Plan tailored to the site, the building and local recycling opportunities.

Thinking about reducing, reusing and recycling building materials isn't always the first thing on a contractor's mind at a construction site. However, Dave Shoemaker, Boldt construction manager, said on-site efforts were encouraged on a daily basis and shared with all of the subcontractors. They understood how their efforts really were making a difference. At the end of construction, the company diverted 85 percent of waste (237 tons) from area landfills at a disposal cost savings of \$3,555.

Using recycled materials

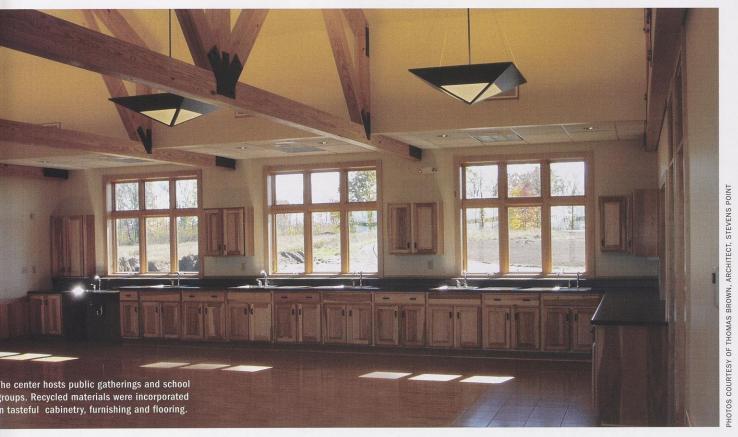
Recycled or reused materials were incorporated in the building and most



were obtained locally, including furniture refurbished by Recycled Office Environments of Stevens Point, Ultra-Touch natural cotton insulation made of recycled old blue jeans, Woodstalk™ cabinetry and floorboards made of post-consumer wheat straw fiber, rotary-cut birch veneer doors, concrete mixed with incinerator ash, a waterless urinal, and carpet squares made with 54 percent recycled content from Interface, Inc. The striking wooden canopy over the entire upper floor is comprised of twenty-one 60-foot laminated wood trusses and roof decking.

Indoor air and energy

High efficiency air filtration and a carbon monoxide monitoring system help maintain indoor air quality. Integrated building management and electrical submetering continuously monitor energy consumption. In a cooperative venture with our local utility provider, Wisconsin Public Service, a monitor in the lobby displays energy savings and information about building design for walk-in customers. Recent calculations show the building is easily achieving goals of meeting an Energy Star rating



of 85 or better.

The DNR building is also the largest commercial customer in northeast Wisconsin purchasing renewable energy through the electric utility's Nature-Wise® program. As part of the LEED certification, DNR is purchasing about half its total electrical needs from NatureWise® for two years. Energy efficiency here is so high Governor Doyle chose the building as the site to sign Executive Order #132, which sets goals for holding energy use in state-owned facilities to a minimum. And in January 2005, Berners-Schober Associates received the first Governor's Award for Sustainable Design and Construction, recognizing its exemplary work on this state office building.

Another sparkling new green gem

Similar strides on a more modest scale produced another green gem of a building at the DNR's George W. Mead Wildlife Area, located about 20 miles northwest of Stevens Point. The new 6,208-square-foot Stanton W. Mead Education and Visitors Center provides

meeting rooms for school and community groups as well as office space for the four DNR wildlife staff who oversee "The Mead" — a 28,500-acre public hunting area that's an equally popular destination for bicycling, bird watching, hiking and nature study.

The new center uses no oil or natural gas to meet heating needs. Instead, a mixture of passive solar design, radiant heat, solar-heated hot water and geothermal heat pumps warm the interior. Winter heat also gets a big boost from a highly efficient masonry woodburner/ fireplace that radiates heat directly and sends a gentle warming flow to a wide bench and in-floor heating system feeding off heat from the chimney flue. Separate zones for the lobby, staff offices and educational areas allow the heating and cooling systems to operate independently as needed, explained Thomas Brown, the Stevens Point architect who designed the building and incorporated the energy-efficient systems. Electricity comes from a wind turbine and a grid of photovoltaic cells. Even the toilets and sinks contain mini-generators to create electricity that is stored in batteries to help power the

fixtures. These systems are wired into the power grid with other energy sources; the excess power is "sold" to the electric utility, or used as a source of additional power to maintain the building.

Eight geothermal heat/cooling pumps are attached to 32 pipes, each 600 feet long. The pipes are buried just east of the building about eight feet down in an area about the size of a football field. At eight feet under the surface, the ground and water in the pipes remain at about 50°F year-round. In winter, heat is extracted from this warmer water. Four pumps help feed the hot water system and the other four circulate through the radiant flooring, providing warmth. In summer, the system is reversed; warm water dissipates heat through the underground grid of pipes, which acts as a heat sink. Heat pumps return three to four times as much energy as they take to run the system.

"We take heat out of the ground and dump it into the building during winter and take heat from the building and dump it into the ground in summer," Brown said.



Like the DNR's Northeast Regional building, the Mead Educational Center relies on cool daylighting to brighten up the interior. Building design allows daylight to reach 90 percent of the interior space. Even the soffits were painted offwhite to reflect light from winter snow into the building. Most days the building needs little additional interior lighting; wide overhangs shield the rooms from harsher summer light and heat.

The interior features tasteful recycled materials like desktops and counter surfaces milled from compressed sunflower hulls fused in resins, carpeting with natural fibers, and paints free of volatile organic compounds. Interior roof beams are composed of smalldiameter yellow pine boards laminated together. Brown estimates 95 percent of the construction waste was recycled for other uses.

Equally impressive, the Friends of the Mead, a support group, raised \$1.5 million in cash and in-kind donations of materials from more than 200 donors, anchored by a donation of more than \$1 million from Marv and Ruth Schuette of Wausau Homes.

Ruth (Rudie) Schuette told the Wausau City Pages she was inspired to help out after a visit to Mead, where a school group was sitting on carpet squares in an unheated machine shed working on a project. "We decided we'd do the building personally, but also on behalf of our employees and customers," she said. "Each generation must care for the creation it is given. This is our turn."

In DNR's strategic plan, we recognize the air, land, and water are interconnected in sustaining all life, in protecting public health, and in achieving healthy, diverse ecosystems and the sustainable economies that depend on these ecosystems. We provide leadership, technical assistance and outreach so people can make informed environmental decisions and get actively involved in setting local and statewide priorities. We meet, and where possible exceed, the public vision for an environment that sustains the economy, ecology, aesthetics, recreation, agriculture and other uses. We promote reduction, reuse and recycling of consumer goods.

So when you put the pieces together, it makes perfect sense. Who else but the DNR to build and promote environmentally friendly building!

Annette Weissbach is a hydrogeologist for DNR's Northeast Region in Green Bay. Magazine editors distilled published information about the Mead Education and Visitors Center.

MORE ON GREEN BUILDING:

Wisconsin Green Building Alliance: www.wgba.org

Focus on energy: www.focusonenergy.com

Building Green: www.buildinggreen.com

U.S. Green Building Council: www.usgbc.org

"Building 'Green': A Consumer's Guide to Sustainable Building," Sherrie Gruder, UW-Extension publication # 615.SG.9903, www3.uwm.edu/Dept/shwec/ publications/cabinet/reduction reuse/Building%20Green.pdf

"Building Green Guide: Sustainable Product Choices," Sherrie Gruder, UW- Extension publication #615.SG.0502, www3.uwm.edu/Dept/shwec/ publications/cabinet/reduction reuse/615.SG.0502%20Update% 2011.pdf

BUILDINGS CONSUME OR ARE RESPONSIBLE FOR:

- 40% of the world's total energy use
- 30% of raw materials consumption
- 25% of timber harvest
- 35% of the world's CO₂ emissions
- 16% of fresh water withdrawal
- 40% of municipal solid waste destined for local landfills
- 50% of ozone-depleting CFCs still

Buildings also affect watersheds, habitat, air quality, and community transportation patterns.

(Source: Worldwatch Paper #124)

For 20 years the Natural Resources **Foundation has** provided the ways and means for individuals to help grow Wisconsin's

Robert Beets

future.

conservation

ometimes big changes and tremendous opportunities begin with small steps. A case in point: decontaminating the former Badger

Army Ammunition Plant and restoring its 7,354 acres remain a vast challenge for 20 groups, including the U.S. government, state agencies, the Ho-Chunk Nation, the community of Baraboo, and local environmentalists, who together have been sorting out issues and tackling problems since 1991.

In the larger scheme of things, the revival of one small quarter-acre parcel near the property's front gate hardly seems worthy of notice. Yet nearly 200 representatives from all the interested parties met at Badger on a fall day in 2004 to celebrate this milestone. With seed money from the Natural Resources Foundation, they planted the Dave Fordham Memorial Prairie on the parcel and

NRF Besadny grants helped many prairies take root, including this one at Pleasant View School.

dedicated it to Fordham, who was Badger's installation director for 25 years. He was instrumental in bringing prairie plantings to the Badger property starting in the 1980s and continuing until his death in 2003.

"Many of us had worked for years in anticipation of a day like this, when we could sow some seeds of hope on this battered land," said Amanda Fuller of the Sauk Prairie Conservation Alliance, which helped establish the memorial prairie. "The planting gave different stakeholders and future landowners a chance to come together in a common purpose. We hope this event sets a precedent for future prairie plantings and continued cooperation among landowners

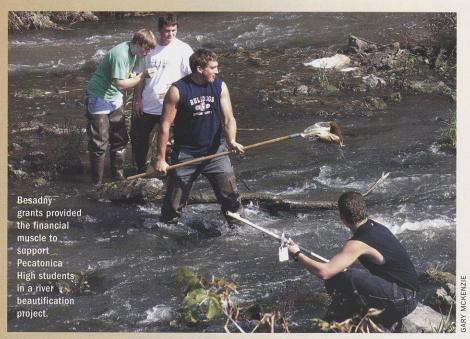
and neighbors at Badger — and we hope the Fordham Prairie, as it grows, reminds us of the rewards of that good work."

Throughout its 20-year history, the Natural Resources Foundation has worked to make those cooperative links and to help individuals carry

out their outdoor values through conservation projects in Wisconsin — projects that bridge a gap between private interests and public needs.

In the mid-1980s, as conservation needs continued to outstrip available funding, the Natural Resources Board proposed that DNR form a nonprofit foundation to accept private contributions for public conservation projects. The Natural Resources Foundation (NRF) was incorporated and developed alliances with individuals, corporations and government to collectively steward Wisconsin's public resources.

Today, the NRF has nearly 2,000 members and secures funds to support endangered resources, protect habitats and help



communities become better stewards of their local resources. Members have donated or raised more than \$1.4 million to promote enjoyment and appreciation of Wisconsin's natural resources.

Building community-based conservation

Since 1991, the foundation's C.D. Besadny Conservation Grants have provided seed money for local community projects in every county. They are not big grants, but when matched with local elbow grease and enthusiasm, the match grants of up to \$1,000 helped more than 300 groups launch conservation projects near home.

One of those projects included cleaning up Marsh Road in Waupaca County. It's just a simple bit of gravel road running through woods and backwaters between State Road 54 and White Lake Road in the Town of Royalton. Like many secluded places, it had become a dumping ground. On one three-mile stretch, concerned citizens counted 73 discarded tires, a couch, a chair, a couple of mattresses and an old refrigerator. The community struggled to collect enough cash to clean up the ditches and roadsides. Then, boosted by a Besadny grant in 2004, the town mobilized volunteers and cleared out more than five tons of illegally dumped refuse along their rural road.

"Plainly put, without the support from the Besadny grant, the Marsh Road CleanUp Project would not have taken place," said DNR Conservation Warden Jeffrey Knorr. "The grant was instrumental for the project. All attempts to secure funds from town, county, and state sources, met with disappointment, until we heard the project was awarded a grant."

The project didn't end after the cleanup. The effort transformed the route from being no one's problem to being everyone's concern. The community kept a close watch and eventually caught the illegal dumpers in the act.

Fostering friends to "adopt" the best of our public lands

Two years ago NRF kicked off a campaign to raise both awareness and dollars for State Natural Areas, the sanctuaries for Wisconsin's finest remnants of ecological communities including oak savannas, prairies, wetlands and oldgrowth forests. These pristine areas protect the best remaining parcels of natural habitat and the rare species they harbor. Although legally protected and designated by state statute, State Natural Areas often lack funds to manage and maintain their unique qualities. Fending off invasive plants, curtailing browsing deer and providing guidelines for curious visitors require caretakers and cash.

The foundation's campaign aims to find individual and corporate sponsors partial to a parcel that will "adopt" nat-

ural areas and contribute to their longterm care. NRF's Natural Areas Coordinator travels across the state to encourage companies and communities to take charge in protecting these vulnerable lands, emphasizing the importance of keeping the remnants for future generations. Five "Friends of State Natural Areas" groups have already formed and are organizing work parties of community members to manage and protect their shared resources. Friends groups help fill the gaps when state land managers cannot meet all the property's needs. The program encourages collective responsibility for the natural heritage we all share.

Putting endangered species on the road to recovery

Over the course of two decades, NRF has helped many enthusiastic supporters find the means to restore endangered populations of timber wolves, trumpeter swans and whooping cranes in Wisconsin. It is gratifying work to see these species rebound and move toward self-sustaining populations. Foundation supporters helped underwrite the costs of the Timber Wolf Monitoring and Depredation Project. The Adopt-A-Swan program, organized by NRF, allowed individuals to personally ensure the survival of each endangered trumpeter swan.

NRF is also a partner in the Whooping Crane Reintroduction Project and has contributed nearly \$300,000 to purchase project equipment, monitor cranes, and help pay the bills for veterinary medicine, research and public education. The project aims to build the population up to a sustainable 125 cranes that will independently migrate each year between their Florida winter home and the Necedah National Wildlife Refuge. NRF's Crane Club members contribute generously to reintroduce cranes and sustain their recovery.

Educating conservation leaders and encouraging a curious public

In 1986, ten minority students from Milwaukee entered the first six-year Minority Internship Program coordinated by Milwaukee Public Schools and the

DNR's Southeast Region, and funded in part through a grant from the Natural Resources Foundation. Through 2003, the internship program has given 150 students work experiences, career guidance and training to consider careers in resource management and environmental studies in Wisconsin.

The foundation also feeds curious minds by helping underwrite publishing costs for some of DNR's most popular field guides and timely reports. NRF provided initial funding for three field guides to Wisconsin's lizards and turtles, amphibians, and snakes. NRF provided financial support for several publications: Wisconsin Naturally — A Guide to 150 State Natural Areas, Understanding Chronic Wasting Disease, Land Legacy Report, Checklist of Wisconsin Birds and several

State Park (1991), Kettle Moraine State Forest — Southern Unit (1993), and Potawatomi State Park (1995). Five cabins at Wisconsin State Parks with accessible kitchens, bathrooms and bedrooms, and two one-room rustic cabins, allow disabled individuals to participate in outdoor camping activities.

Endowing a wild future

Besides tending to pressing conservation needs over the last 20 years, the foundation is helping people make even longer term plans to protect the unique places and outdoor experiences they cherish.

"We're telling people, give us your conservation dream, and we will ensure that it lives on for future generations to

enjoy," said Charlie Luthin, executive director of the Natural Resources Foundation. The Wisconsin Conservation Endowment will pool, invest and manage individual financial gifts. The interest from the endowed funds will form a legacy to sustain projects for years to come.

For Carla Butenhoff of Elm Grove, that meant taking steps so the next generations could experience the long, quiet walks she took with her parents: "Walks in the woods

were an important part of a wonderful childhood," she said. Mrs. Butenhoff and her husband, Neal, created the Norma & Stanley DeBoer Quiet Trails Fund to support nonmotorized public trails throughout Wisconsin. At the agreement signing Carla wore her mother's old hiking boots and her dad's hiking shirt. Both of her parents were inveterate hikers and her dad had worked as a game supervisor and a district director for the Department of Natural Resources.

"My husband and I created this fund

to honor my parents so that others might create their own memories like those I hold so dear from our times quietly walking Wisconsin's trails," she said.

For Bob Jostes of Mokena, Illinois, it was love at first sight coming to the Wisconsin Northwoods as a child.

"It was always a magical feeling visiting the lakes and forests, and our family eagerly anticipated each trip," Jostes explained. He's an avid outdoorsman whose working days are confined by the skyscrapers of downtown Chicago. "These natural areas are even more important to me as a refuge from the stress, demands and fast pace of city life," he said. "People need sanctuary where they can reconnect with the natural world, places where distractions are few, the scenery is beautiful and your spirit can be reinvigorated."

He created the Robert M. Jostes Wisconsin State Natural Areas Fund to provide perpetual funding for projects to raise awareness and appreciation for these special parcels. His is an "acorn" fund in which annual contributions will eventually build up to provide a living conservation legacy.

In a similar fashion, people who want to realize a conservation dividend from their lifelong investments can direct portions of their retirement funds, real estate or other assets to the endowment program.

"The Wisconsin Conservation Endowment will enable us, in our state, to create the intellectual and practical foundations for a better world," said Nina Leopold Bradley, daughter of the late ecologist Aldo Leopold. "Never has there been a greater need for private funds to energize a genuine commitment to harmony between men and the land. Were my father alive today, I think he would be pleased with this important initiative."

Big dreams start from humble beginnings. Through individual actions, shared values and collective vision, contributors to the Natural Resources Foundation are building partnerships to seed and spread enduring support for a wild future throughout Wisconsin.

Robert Beets is communications coordinator for the Natural Resources Foundation in Madison, www.wisconservation.org.



NRF Executive Director Charlie Luthin (left) and project partners don crane costumes before viewing whooping cranes at Necedah Wildlife Refuge. Foundation members are helping establish a migratory flock of whoopers in eastern North America.



sponsored fund honors and encourages quiet trail walks that were an important part of their family tradition.

guidebooks in a five-part series, Great Wisconsin Birding & Nature Trails.

NRF's annual Field Trip Program offers guided weekend day trips from spring through fall. On the trips, which are open to all, participants can visit natural places and learn how wild lands are managed. DNR employees lead the trips and share their knowledge and passion for protecting public resources.

Further, the foundation helped finance building cabins accessible to campers with disabilities at Mirror Lake

Do fishing tournaments fit on Wisconsin's waters?

Contemplating COMPETION by Patrick Schmalz





ompetitive fishing events have grown in popularity and spread across North America since the first organized bass tournaments were held in Alabama in 1967. Increasing numbers of participants led fisheries biologists to examine how and if tournaments change fish populations, disturb other people enjoying the water or change the nature of the angling experience. In Wisconsin, as in many other states, concern over competitive sport fishing is on the rise. Let's briefly examine the types of tournaments held here and how the Department of Natural Resources evaluates strategies for managing tournaments to protect our fish resources and reduce user conflicts.

Hooked on competitive sport fishing

Early fishing tournaments targeted largemouth and smallmouth bass. By 1978, an estimated 12,000 bass fishing tournaments were held nationwide; by 1990, anglers participated in more than

20,000 tournaments.

A few tournaments were held in Wisconsin in the 1970s, but they did not draw much attention from the Department of Natural Resources. A decade later, the increasing number of fishing tourneys and participants prompted a closer look. Results from

studies conducted in the mid-'80s led the Natural Resources Board to set policies on tournaments in 1987. DNR fisheries managers began keeping records on the number of fishing tournaments in 1994, when a permitting system was created. From 1994 through 2002, the number of permitted fishing tournaments held annually in Wisconsin rose from 318 to 397. However, only larger tournaments require permits. Fisheries biologists estimate Wisconsin hosts 600-700 fishing events annually - similar to figures from Minnesota and Michigan, but five to six times more than in Iowa and Illinois.

Fishing tournament characteristics

We define a fishing "tournament" as an organized fishing event, in which anglers fish for prizes or recognition in addition to the satisfaction of catching fish. Wisconsin tournaments range in size from a few folks in jon boats up to a couple thousand anglers piloting a flotilla of watercraft. Events are held at all times of the year, in all regions of the state, in open water and on the ice. Each year, the Mississippi River pools host about 50 permitted tournaments and the Winnebago chain of lakes average about 30, the highest number of fishing tournaments respectively. Black bass are the most commonly targeted species followed by walleye, northern pike and muskellunge.

By nature, fishing tournaments focus on competition, but many Wisconsin tournaments are held as fundraisers for various charities. Most Wisconsin fishing tournaments are organized locally and sponsored by fishing clubs, private businesses (resorts, bait shops), and local government organizations (chambers of commerce, tourism bureaus). Wisconsin hosts several national events, such as the Professional Musky Tournament Trail and the Professional Walleye Trail.

Several different tournament formats are used. For bass and walleve tournaments, fish typically are held in live wells by anglers, then brought to a central location at the end of the day to be weighed and subsequently released; the heaviest total weight wins. In many catch-and-release muskellunge tournaments, musky length is measured boatside by a witness. The witness may be a fishing partner in the same boat or a tournament official summoned to the angler's boat. Each fish is released immediately after it is measured; the longest total length wins. Other tournaments award prizes for the largest single fish caught. In still other tournaments, fish are harvested and displayed.

Do tournaments have a negative effect on fisheries?

Fisheries professionals and anglers alike share concerns about how tournament practices affect various fish species, the anglers who pursue them, and other surface water users. Fish caught in tournaments may die from handling, be displaced from familiar habitat, or experience more subtle biological effects like long-term changes in reproductive fitness as a consequence of being caught, held in a live well and released in a different part of a lake or river. Tournaments may create conflict between anglers or with other water users. Ethical conflicts may arise with people who object to introducing the notion of competition into the fishing experience. Let's take a look at these issues.

Biological effects — Many studies have examined whether bass held in live wells die before or during a tournament weigh-in (initial mortality) or expire after they are released (delayed mortality). A few studies also looked at walleye mortality following tournaments. Professor Gene R. Wilde at Texas Tech University in Lubbock examined results from 130 bass tournaments held in North America between 1972 and 1996. He concluded initial mortality declined from an average of approximately 20 percent to less than 7 percent due to more careful handling of the fish, but delayed mortality remained pretty steady over those years at 24-28 percent. In both cases, more fish died when water temperatures were higher and



Many fish species are homebodies. Research shows if some species are moved even a few miles from their home habitat, they don't find their way back.



Bass may be more adaptable in finding suitable habitat near release sites.

fewer fish died from larger tournaments, suggesting the fish handling methods used in larger events did a better job of keeping bass alive initially. Delayed mortality, however, appeared to increase with increasing tournament size. Other studies show fewer bass die at tournaments held farther north where the waters are a bit colder; this may reflect genetic and physiological differences between northern and southern strains of bass.

Somewhat more limited research shows a higher percentage of walleye die following tournaments that require anglers to bring in fish at day's end for a weigh-in at a central location. In the four studies I reviewed, total mortality of tournament-caught walleyes ranged from 0 to 80 percent, most fish expired before weigh-in, and both higher water temperatures and bad weather resulting in rough water conditions led to higher mortality rates.

There's little scientific research on musky tournament mortality, but most musky anglers know these fish do not do well when confined for extended pe-



Another challenge tournament managers want to meet is affirming tournament results, and preserving the drama and thrill of weigh-ins while limiting fish mortality.

riods. That's why catch-and-release is so common among musky anglers and why most musky tournaments choose to verify the catch and measure the fish for total length boatside, then release them immediately.

Fisheries biologists also study longer-term consequences for individual fish and fish populations exposed to fishing tournaments. Studies indicate tournament mortality is a small share of the total mortality of a fish population, but biologists and tournament sponsors want to know if the way fish are handled and the way tournaments are structured can further reduce mortality, conserve fish and enhance quality fishing experiences.

What happens when fish are released at weigh-in stations located some distance away from the habitat they normally frequent? A 2002 study by Mark Ridgeway of the Ontario Ministry of Natural Resources showed only 37 percent of largemouth bass moved from their home returned to where they were captured; no fish displaced more than five miles returned. Do these re-



Resource managers that measure fish and collect data on the tournament catch can supplement their knowledge from other fish survey work and creel studies.



Careful handling can reduce immediate fish mortality from tournaments and may provide methods for reducing fish losses at future events.

sults bode ill or well for bass? It depends: Bass may not be able to find their way once moved from their home, which could be detrimental if the fish are released in habitat with less than ideal conditions. Then again, bass may also be quite adaptable and choose to settle in suitable habitat near release sites.

Sociological effects

 Fish aren't the only creatures affected by tournaments. Anglers and other water users also react to tournament activities. Competition for limited access to and space on the water can create animosity among tournament anglers, vacationers and shoreline residents. Excessive, unsafe boat traffic as a consequence of a tournament can cause friction among lake and river

Philosophical gulfs separate tournament anglers and other fishers. Those differences were paramount to the Natural Resources Board, which stated in its 1987 policy on tournament fishing: "Sport fishing should remain a true amateur sport which

combines the pleasures and skills of angling with wildlife and scenic enjoyment, contemplation, and other subtle pleasures, not competition."

The Department of Natural Resources recognizes tournament fishing as a legitimate activity, but the "contemplation not competition" sentiment

remains strong among many who enjoy recreation on Wisconsin's waters. The commercialization of natural resources and the notion of private gain from public resources is another common philosophical conflict between tournament anglers and other users. Such tension is not unique to the fishing tournament experience: The sheer variety of water recreation, from jet skis, ski boats and lake tours to on-shore festivals and events, means clashes are bound to occur between users. Alleviating onwater conflicts and balancing different types of water recreation are important goals in tournament planning and regulation.

Is there an upside to fishing tournaments?

User conflicts aside, fishing tournaments can have a positive impact on fish resources. Tournaments provide biologists with opportunities to gather fish population data without having to collect fish in sampling nets; the information helps biologists form a clearer picture of a lake or river's current ecological status. Tournaments also play a role in promoting sport fishing and conservation, both of which are vital to the future of Wisconsin's fishery. There's an economic dimension to tournaments, too - participants and spectators purchase food, lodging and supplies in local communities where tourneys are held, increasing income for area merchants and service providers. Out-ofstate anglers introduced to Wisconsin's outdoor charms in a fishing tournament may return to enjoy other kinds of recreation, and help boost tourism through word-of-mouth.

Regulating the tournament fishing experience

The mix of biological and social concerns detailed above prompted many states, including Wisconsin, to develop regulations specific to tournament fishing. Wisconsin's program began with the 1987 board policy, which in turn led to the creation of a tournament fishing committee consisting of DNR staff, anglers and other interested parties. On



An advisory committee of tournament sponsors, fishing groups and DNR fisheries managers is developing strategies for preserving natural resources while minimizing conflict with other water users.

the committee's recommendations, the permit system was instituted in 1994 to gather information on the nature and extent of tournament fishing in the state. The definition of "tournament" was narrowed to "any organized fishing activity, on any water of the state where competition is the primary intent, where prizes are awarded which, in total, have a value of more than \$500, where the total number of participants is greater than 40 individuals or 20 boats, where the waters to be fished are identified by name by the sponsor, and where participants are required to fish on the same dates." Any event that didn't meet that definition didn't need a permit. The permits were free of charge, but did carry a few restrictions, including prohibiting tournaments on the opening weekend of fishing season in early May. There were no restrictions on the number and frequency of tournaments that could be held on a given waterbody, the size of those tournaments, or specific conditions related to fish handling or sponsor training.

Further authority to regulate tournaments required legislative action. Bills in 1999 and 2001 died in committee, but a 2003 proposal was passed and enact-

ed in April 2004. The new legislation contained three major components: It provided the Department of Natural Resources with specific regulatory authority over fishing tournaments; it launched a bass fishing tournament pilot program; and it established an advisory committee to aid in developing rules and in carrying out the bass tournament pilot.

The advisory committee, which represents both tournament and non-tournament interests, is actively discussing what permits might be warranted depending on the size of the lake or river on which an event is planned, the number of participants, methods for measuring the catch, limits on the number of tournaments on a given water, differences between open-water and ice-fishing regulations, strategies to reduce the transport of invasive species, and setting fees to better reflect tournament monitoring costs and help support research into strategies for safe handling and releasing of tournament-caught fish. The Department of Natural Resources plans to have new rules in place by April 1, 2007.

The bass fishing tournament pilot program requires DNR to issue four

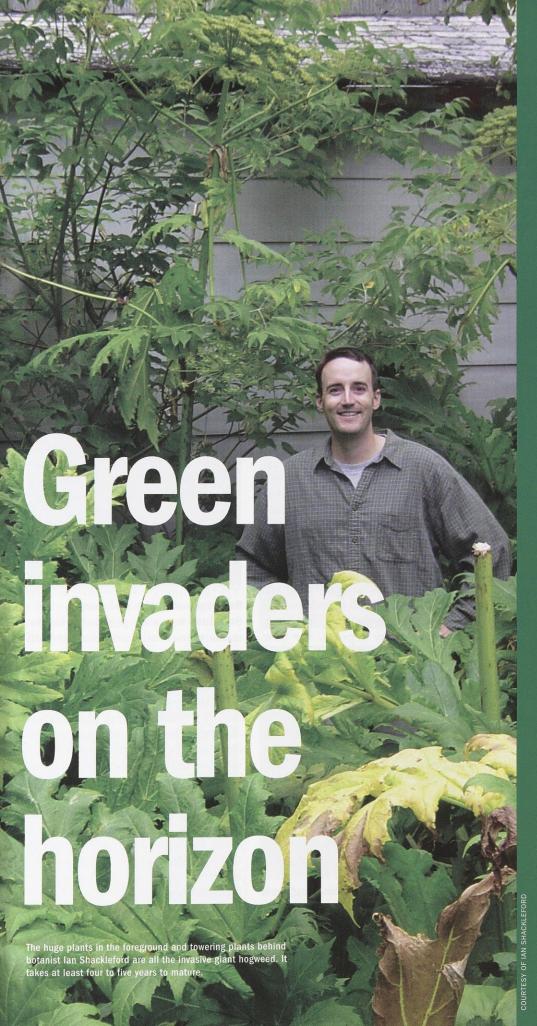
permits a year in 2005 and 2006 to bass fishing tournaments that will allow participants to fish for and "cull" bass. A common practice in fishing tournaments in many states, culling lets anglers continue to fish after reaching their bag limit, and to replace fish in their live well with larger fish. Under current Wisconsin fishing regulations, any fish taken into an angler's possession and not immediately released must be considered part of that angler's daily bag limit. Organizers of large tournaments have avoided hosting their events in Wisconsin due to our bag limit regulations.

Evaluating the pilot events to determine the extent of biological, social and economic consequences requires expertise from a variety of disciplines. DNR staff will work with the Wisconsin Cooperative Fishery Research Unit from the University of Wisconsin-Stevens Point to estimate fish mortality rates associated with the pilot tournaments; the researchers will also simulate bass culling to specifically target the mortality associated with this practice. DNR researchers will survey pilot participants and others to explore their perceptions and attitudes toward tournament fishing in general and culling in particular.

The potential economic benefit to be gained from large bass tournaments provided much of the impetus behind the bass tournament pilot project. To assess the economic impact of big bass tournaments, the DNR is working with the University of Wisconsin Department of Urban and Regional Planning to gather data related to tournament angler and spectator expenditures in host communities.

With appropriate communication, cooperation and research, tournament fishing can maintain its niche as an alternative form of angling without harming Wisconsin's fishery. Opportunities for competition may induce more people to take up an outdoor activity for which Wisconsin is justly famous—and that slight edge can help secure the future of the sport of fishing.

Patrick Schmalz is a DNR fisheries biologist who works on emerging policies and treaty fishing issues.



Your help can keep troublesome new plants from taking root.

David J. Eagan

upped hands and a muffled voice imitate a radio-dispatched call: "Plant alert! Attention! Invasive Fiddle-berry spotted in Sector 4-4-7! Repeat, Sector 4-4-7! Mobilize the SWAT team! There's not much time! Mayday!"

The mock alert teasingly was rendered by my teenage sons when I announced my new job working to control invasive plants. The irony is such an alarm truly is justified, though rarely heard, for some invasive species. Had the sirens gone off when the first purple loosestrife plants jumped from home gardens into Wisconsin wetlands, millions of dollars in control efforts might have been avoided.

While there's no such thing as Fiddle-berry, there are plenty of real plants whose appearance within our borders would be cause for alarm. Picture a grass that takes over the forest floor like a green flood, or a dense, floating mat of leafy plants covering acres of onceopen lakes and backwaters. Such plants exist, but fortunately haven't found their way into Wisconsin — not yet

Wisconsin's Invasive Plants of the Future project hopes alert volunteers will quickly recognize and report when new invasive plants arrive. Unlike most projects created after the fact to deal with invasive plants that are established problems, this initiative aims to find new invasions and nip them in the bud. This collaborative effort of the Wisconsin Department of Natural Resources and the Wisconsin State Herbarium is funded by a grant from the EPA Great Lakes National Program Office.

A team of plant experts helped choose the project's 15 target species. All are serious invasives in other states with similar climates. Half of the species are already present in Wisconsin, but in small or localized populations. The rest — as far as we know are not here yet. And not surprisingly, there are plenty of other potential invaders that could pose a threat, but this list is a good starting point and more will be added in time.

On the lookout

Here are the "mean 15." You can also get a closer look at them online at dnr.wi.gov/invasives/futureplants, or we can send you a brochure that you can keep in your car, boat, or backpack to keep a lookout for these culprits as you travel.

New terrestrial invasives in uplands/lowlands

- 1. wineberry or wine raspberry (Rubus phoenicolasias)
- 2. Japanese hops (Humulus japonicus) [WI]*
- 3. black swallow-wort (Vincetoxicum nigrum) [WI]
- 4. pale swallow-wort (V. rossicum)
- 5. European marsh thistle (Cirsium palustre) [WI]
- 6. common teasel (Dipsacus fullonum subsp. sylvestris) [WI]
- 7. cut-leaved teasel (D. laciniatus) [WI]
- 8. giant hogweed (Heracleum mantegazzianum) [WI]
- 9. Japanese hedge-parsley (Torilis japonica) [WI]
- 10. field hedge-parsley (T. arvensis)
- 11. Japanese stilt grass (Microstegium vimineum)

New aquatic invasive plants

- 12. flowering rush (Butomus umbellatus) [WI]
- 13. hydrilla (Hydrilla verticillata)
- 14. European frog-bit (Hydrocharis morsus-ranae)
- 15. water chestnut (Trapa natans)
- * [WI] notes plants already present in Wisconsin

Stay watchful and report in

It's one thing to know which plants to watch for, but quite another to make sure enough eyes are out there looking for them. That's why we ask for your help. Last year we launched the Wisconsin Weed Watchers program to train a statewide network of volunteers to spot these plants in local parks and natural areas, along roadsides and on private land. To date, more than 200 people from 40 counties have signed up and dozens of infestations have been reported.

These Weed Watcher reports have added greatly to our knowledge of where these target plants are spreading in the state. For instance, the easily-recognized teasels (both common and cut-leaved) have been running rampant in Mequon, along Black Earth Creek in Dane County, and in the Fox Valley. A small infestation was even found up north in Ashland. Thanks to many reports, we now know that teasel, Japanese hedgeparsley and European marsh thistle are much more widespread than originally thought. That's bad news, but it gives us a chance to act quickly to keep these early infestations from taking giant steps and expanding their footprint in the state.

A rogues gallery

The following thumbnail descriptions and photos should help you get to know these 15 unsavory characters. If you think you've found a target plant, we provide advice on our website and in our brochure on eradicating each species, or you can call the project office. Control methods include handpulling and digging, mowing, herbicide application and prescribed burning. Your removal projects might be enough to get the job done, but don't hesitate to ask for help from local and state agencies, invasive plant specialists, and park or natural area "friends" groups.

If you are not 100 percent sure of a plant's identity, check with local experts, e-mail a photo or send a sample to the Wisconsin State Herbarium. Be sure to note the precise location using landmarks when you document your discovery, send a pressed specimen or forward photos. Report forms and instructions for making voucher specimens are also on the website.



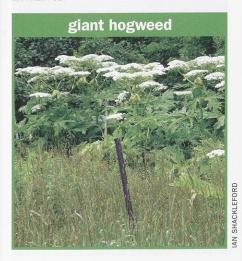
Swallow-wort (black and pale)

Swallow-worts are perennial, herbaceous vines that readily invade both shady woodlands and sunny fields. They have smooth-edged, heart-shaped leaves in pairs along a slender stem. The vines trail on the ground or climb nearby vegetation rising to ten feet. A member of the milkweed family, swallow-wort makes slender pods whose seeds are topped with a downy plume. Over time, the plant can dominate the understory, shading out shrubs, wildflowers and other natives. The nonmilky juice of the plant is toxic to insects, including Monarch butterflies that are fooled into laying eggs on the leaves. When larvae hatch and begin to feed, they soon die. Deer and other herbivores refuse to eat it. There are two known infestations of black swallowwort: near Mukwonago in Waukesha County and around Potosi in Grant County.



Japanese stilt grass

This weak-stemmed, fast-invading annual grass can blanket forests, roadsides and river corridors. Its pale green leaves are relatively wide, 1-3 inches long and lightly hairy. A faint silvery stripe down the center of the leaf, caused by reflective hairs, is distinctive. It can reach five feet in height, but tends to grow one to three feet in a sprawling, mat-like manner. Narrow flower spikes appear in September and abundant seeds soon ripen. Stilt grass has become a huge problem in many eastern and midwestern states. It takes hold where soils are scoured or disturbed, such as along streambanks, floodplains, ditches and trails — spreading due to human activity and floods. Dead plants are a serious fire hazard. Although not yet known in Wisconsin, it is one of the most potentially troublesome future invasives.



Giant hogweed

Native to Russia, giant hogweed is found only at a few sites in northern Wisconsin's Iron County but is a widespread

problem in the Upper Peninsula. A close cousin to our native cow parsnip, this mammoth plant towers 8-15 feet when in bloom. It takes four to five years to mature enough to flower, developing everlarger leaves and a growing taproot. Its three-part leaves can be over five feet long. Both stems and leaves have short, bristly hairs rising out of distinctive purple bumps. It poses a serious hazard to people with sap that can cause blisters on skin exposed to sunlight. This is due to the same photo-sensitizing chemical found in wild parsnip, cow parsnip and angelica.

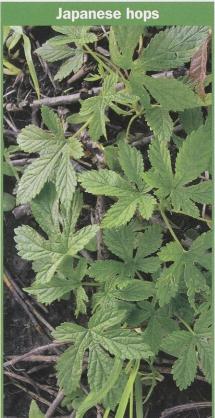




Teasel (common and cut-leaved)

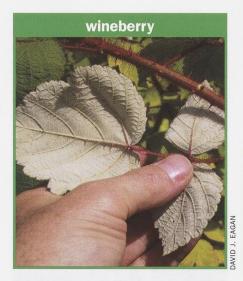
In its first year, teasel forms a large, ground-hugging rosette of long leaves. A flower stalk rises in the second year, armed with sharp spines and topped with a distinctive flowerhead that looks

like a porcupine on a stick. Older stands dominate infested areas, with first- and second-year plants choking off most other species. The bristly dried flower heads were once used to "tease" or raise the fuzzy nap on woolen fabrics, hence the name and origin. They now are a popular addition to dried flower arrangements, but commercial sale of these spiny bouquets spreads seeds and accelerates the invasion. Both species are present in the state.



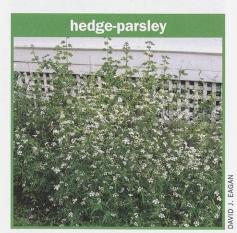
Japanese hops

This climbing, annual vine resembles our native hops, but tends to form patches that engulf neighboring vegetation. Leaves are opposite and typically five-lobed, and the sprawling vines have sharp, backward-pointing barbs that allow it to climb nearby vegetation. It can be distinguished from other hops by leaf stems that usually are longer than the leaf length. The female flowers do not look like the "hops" familiar to the brewing industry. This plant prefers moist soils of lakeshores and river corridors. Currently, it is found in only a few southern and southwest counties.



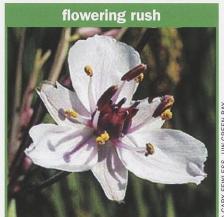
Wineberry

With its arching and thorny canes, wineberry resembles our native red and black raspberries, but its stems are densely covered with both weak prickles and sharp thorns, giving a reddish appearance to this perennial shrub. Leaflets are relatively wide, with undersides covered in white, wooly hairs. Fruits are red and tasty, tempting landowners to ignore its expanding presence until too late. Seeds are dispersed by birds, and patches expand where the curved canes touch the ground and take root forming new plants. So far, no wild plants occur here.



Hedge-parsley (Japanese and spreading) Japanese hedge-parsley is rapidly expanding its range in southern Wisconsin, though the nearly identical spreading hedge-parsley has not been seen. Dense patches of parsley- or fern-like compound leaves are evident in late spring, and the small white flowering umbels (that look like umbrellas) rapidly devel-

op into clinging, hooked fruits. This invasive starts on the edges of forests and trails and spreads outward. Japanese hedge-parsley behaves as a biennial in our state. Seedlings form a rosette of leaves in the first summer. Plants remain green all winter, then develop flowering stalks the following spring.



Flowering rush

This is the only rush-like plant with showy three-petaled white or pink flowers atop a three-foot stem. It can grow as an emergent plant on shores and shallows or as a limp-leaved submersed plant in deeper water. Until it blossoms, its upright leaves resemble bur-reed and sedges. Flowering rush spreads mainly by underground rhizomes and via uprooted plants that migrate due to boat traffic, muskrat homebuilding and winter ice movement. It is found along the edges of a growing number of Wisconsin lakes and ponds, and is sold commercially as a water garden ornamental.



European marsh thistle

This prickly biennial is spreading fast in northern counties, and is easy to spot in low areas along roadsides in June. It has a distinctive compact cluster of purple flowers at the top of a relatively leafless stalk. All parts of the plant are fiercely armed with sharp prickles, which help distinguish it from our native marsh thistle whose stems are relatively thornless. First-year plants hug the ground like a spiny dandelion. Second-year flower stalks ripen into fuzzy seed heads, inviting the wind to spread the plant far and wide. Now that people are watching for this plant, it has been reported in many wetland types including pristine natural areas.



European frog-bit

Resembling a miniature water-lily with a showy, three-petaled flower, frog-bit is a free floating aquatic plant that prefers calm waters. It can blanket the surface of ponds and backwaters rapidly, spreading via runners and by plants that break away and form new colonies. Frog-bit survives cold winters by producing compact buds — called turions — that sink to the bottom in fall and rise when the weather warms. It is available for sale at garden stores and on the Internet, and may already be in Wisconsin, but no wild populations have been reported.



Hydrilla

Said to out-compete Eurasian watermilfoil (one of Wisconsin's worst aquatic invasives), hydrilla is a serious future threat to lakes and streams. It forms thick mats of submerged plants, clogging shallow lakes and harming boating and recreation. Narrow green leaves occur in whorls of 4-8 leaves along a slender stem. Tiny teeth along leaf edges and bumps on the underside of the midrib distinguish hydrilla from native waterweeds like elodea, which have smooth-edged leaves. Survival tactics include tubers which lodge in the mud forming compact buds that live over winter. Its stems are easily broken and can float to new locations. It becomes a ready hitchhiker on boat trailers and sport vehicles. Experimental plants have survived Minnesota winters but, so far, no infestations have been discovered here.



Water chestnut

No relation to the crunchy vegetable in Asian restaurants, this water chestnut is a leafy aquatic plant that forms dense surface mats hindering boats and swimmers. It roots to the bottom in shallow waters, with a vine-like stem that connects to a floating rosette of triangular, toothed leaves. Leaf stems have an air-filled bladder that keeps the plant afloat. Notorious for its rapid growth, water chestnut is also infamous for its foot-puncturing barbed fruits. Ouch!

What to do?

If you see one of these species or think you've found one but want an expert to confirm your identification, check out the website, call or request a brochure to get guidelines for submitting a sample.

Collect a good fresh or pressed specimen. Take detailed and close-up photos showing the plant's features like flowers, general shape, seed heads, leaf shape and arrangement. Then fill out one of the Invasive Plant Report Forms obtained from the website or the project office.

Send specimens and photos to: Invasive Plants Project, Wisconsin State Herbarium, 160 Birge Hall, UW-Madison 430 Lincoln Drive, Madison, WI 53706.

Pressed plant specimens (and even good photos of these invasives) sent to the herbarium will be identified by staff and may be entered into the state's permanent plant collection. If so, you will be listed as the collector and your name and record will appear (eventually) on the WISFLORA website. Most important, your scientific contribution adds to our growing knowledge of plant life in Wisconsin.

Each new growing season brings new opportunities for these unwanted weeds to invade Wisconsin. With your help, we have a chance to keep them from taking up permanent residence.

David J. Eagan coordinates the Invasive Plants of the Future program based in Madison.

CONTACTS AND LINKS

Visit the Invasive Plants of the Future website: dnr.wi.gov/invasives/futureplants for information about target plants, Weed Watchers, plant reporting and more. Send an e-mail, call with your plant questions or write for a brochure. Invasive-Plants@mailplus.wisc.edu or (608) 267-7612. Write us at Invasive Plants Project, Wisconsin State Herbarium, UW-Madison, 160 Birge Hall, 430 Lincoln Dr., Madison, WI 53706.

WISFLORA: Wisconsin Vascular Plants: www.botany.wisc.edu/wisflora

WDNR Invasive Plants Photo Gallery: dnr.wi. gov/invasives/photos



On the greatest of the Great Lakes, a self-powered cruise of the nearshore islands is high adventure.

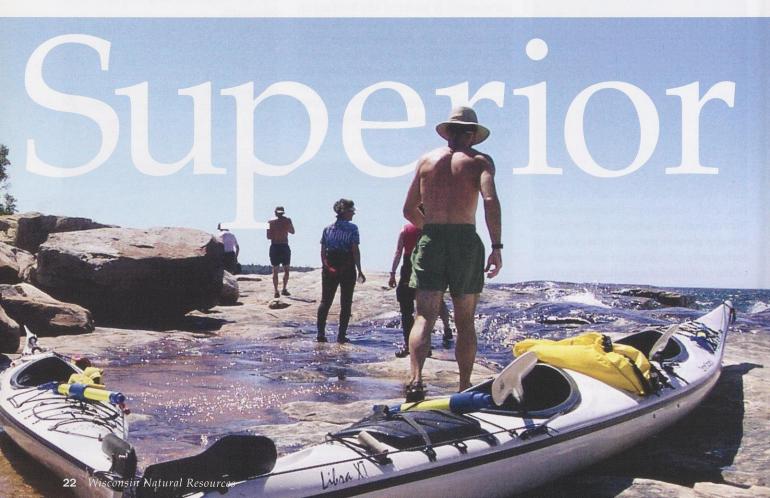
Story and photos by Timothy Sweet

had been putting it off for years, telling my friends, "You know, I really want to try sea kayaking on the Great Lakes," but chores like staining the house before summer's end always seemed to keep me from giving it a try. ■ This past spring was different. When a flyer from a Bayfield outfitter advertised guided trips, I didn't just read it, dream of paddling through sea caves, then reluctantly pick up a paintbrush. Instead, I called and reserved a spot on a beginner's outing to the Apostle Islands National Lakeshore during the first week of August. We'd cover 25-30 miles of paddling over the course of a three-day journey.

The outfitter suggested some pre-trip conditioning including sit-ups, pushups, swimming and calisthenics to strengthen shoulders, arms and abs. An equipment and clothing list suggested what would provide a greater measure of safety and comfort while paddling. Wool and synthetic clothing that dry quickly and stay warm in wet or cool conditions along with a rain jacket were

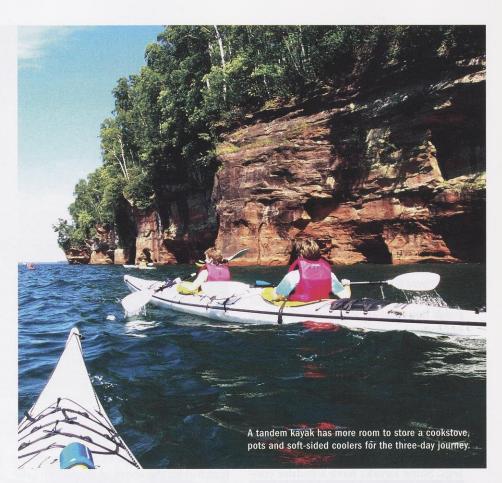
the fashions of choice. A hat, sunglasses and sunscreen were essentials to wear on the open water. I whittled my original three dry bags full of clothing down to one. The outfitter furnished wet suits, life jackets and spray skirts.

All participants take a required three-hour safety course before embarking on a trip. Our guide gave instruction in paddling techniques, wet



exits (how to get out of your kayak if it flips upside down), open water rescues, and weather concerns. I strongly recommend that beginning kayakers get some kind of similar instruction from a reputable outfitter before heading out on Lake Superior or Lake Michigan.

There's safety in numbers and in preparation. The guide also carried a map/chart of the islands and a couple of compasses that we could use to navigate in fog. Fortunately, the weather remained brilliantly clear during the sojourn. A GPS unit would be a helpful navigational tool, but we did not have one. Don't expect cell phone reception in wilderness areas. We had a marine radio with us for contacting the National Park Service rangers or the Coast Guard in event of an emergency. An extra paddle is good insurance in case the unexpected happens. Also leave an itinerary with a trusted family member or friend on shore, and never travel alone. Don't forget to bring your common sense and good judgment when traveling in a small boat on a large, unforgiving body of water.



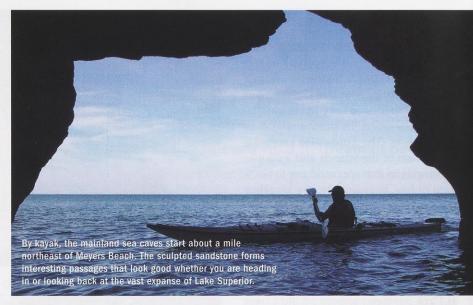
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Six novice paddlers and an experienced guide comprised our group. Two people piloted a tandem kayak; the rest of us were in solo boats. The tandem had room enough to pack in a twoburner stove, cooking pots, utensils, some of the small soft-sided nylon coolers and other gear in its middle hatch. The coolers each contained all the food necessary for one meal and were labeled accordingly. We all shared a filter to purify lake water for drinking. Moderately sized waterproof dry bags worked well for packing clothing and sleeping bags in the fore and aft hatches of both the tandem and solo kayaks. Tents were shared by groups of two paddlers. These were stowed in cargo holds bow and aft along with the other equipment.

You sit in a canoe, but I learned to appreciate that you "wear" a kayak. Young, short, coordinated people have a definite advantage when it comes to getting into and out of such sleek craft. Before I managed to squeeze into the cockpit, I had some help adjusting the foot pegs to match the length of my legs. Some kayaks have a rudder controlled with these pegs as well. The rudder helps maintain a straight course in choppy seas or strong currents. There is additional space in the cockpit that provides limited storage for small items like a camera or snacks that you need easy access to while paddling. The cockpit is made relatively watertight through the use of a spray skirt that fits around your body and stretches across the kayak opening. Each of us also carried a bilge pump bungee-corded to the deck of our kayaks that we could use to remove excess water that may enter the cockpit during launch or seep in through the spray skirt when waves splash over the deck.

Beaches are the preferred choice for embarking and landing. We started our trip from Meyers Beach located near the tip of the Bayfield Peninsula just four miles east of Cornucopia. This stretch of shoreline features the Mainland Sea Caves that begin to appear in the red sandstone cliffs east of the milelong beach. One can only enter these caves when the lake is calm as it was on the day we visited. We spent about



three hours leisurely exploring this fourto five-mile stretch of the national lakeshore taking lots of time to check out the caves. One member of our group was so awed that he said the experience felt like being inside a grand cathedral.

I hear these lovely caverns take on a different kind of inexplicable grandeur in wintertime. Some hardy hikers venture out on the shore of the frozen lake in February after consulting the Apostle Islands National Lakeshore Ice Line that provides up-to-date information on the conditions leading to the caves. Icy terrain can make the going difficult. Sturdy winter boots with crampons are a must and layered clothing helps to deal with cold and windy conditions. Depending on snow depth, snowshoes may make the trek easier. Use extreme care whenever traveling on ice, especially around the caves.

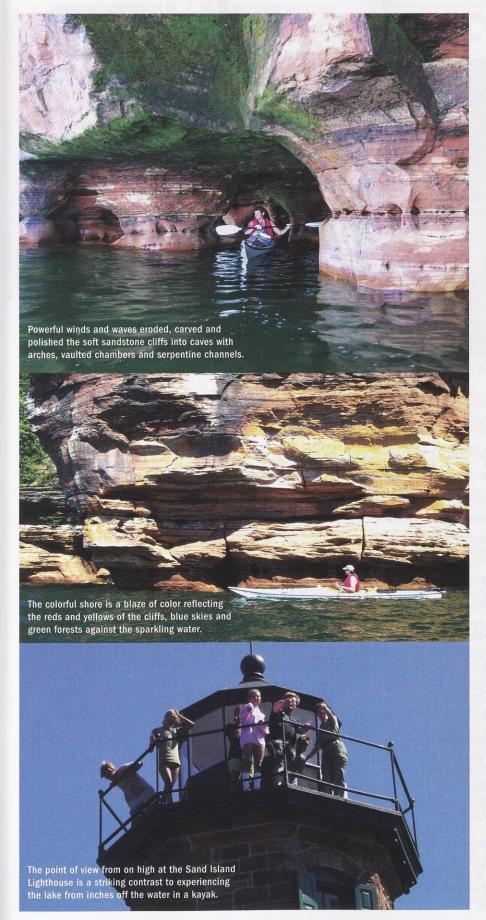
After spending a quiet night camped in the woods above the secluded beach near Sand Point, we made the one-mile crossing over to Sand Island. Distances can be deceiving. A mile doesn't seem very far until you become a boat's only means of propulsion through the choppy seas of the world's largest lake.

This 2,949-acre island supported a population of more than 100 people back in 1918. Most were Norwegian immigrants who eked out a living farming and fishing. They even established a post office on the island for a time, but getting the mail in and out during the winter months was so difficult that ser-

vice was discontinued after only five years. We set up our second camp along a lovely deserted beach, had lunch, and then paddled another mile or so to the Sand Island Lighthouse. A park service volunteer took us to the top of the 1881 light tower where we could soak in the view of the vast expanse of Lake Superior's sparkling blue waters surrounding the densely wooded island. Old-growth forests remain near the lighthouses on Devils, Outer, Raspberry, and Sand islands due to reserves established long ago by the federal government in order to ensure an adequate supply of firewood for the light keepers.

Along the east side of Sand Island are the wondrous Swallow Point Sea Caves honeycombed into the sedimentary sandstone. Here secret passageways beckon adventurers to explore rock formations shaped by the pounding surf through eons of unrelenting wave action. Large pleasure craft anchored in nearby Justice Bay watched enviously as our kayaks carefully negotiated narrow openings between towering pillars of water-chiseled sandstone. Sitting inside one of the sea caves and looking out at the lake must compare to the feeling and the view Jonah had after being swallowed by a whale.

On the way back to camp I enjoyed the wind in my face, the rhythm of paddling, the rocking waves, and the prospect of whitefish almondine for dinner! I admired the kayak's sleek profile — designed to slice through the



waves or skim across calm waters with amazing efficiency.

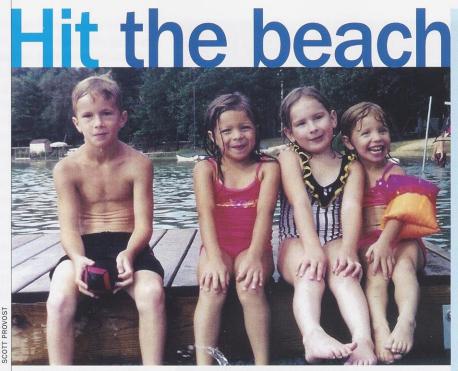
I discovered that spending three beautiful days exploring Lake Superior's Apostle Islands in sea kayaks with a group of friendly, interesting people sure beat staining the house. However, paddling 30 miles wasn't as easy as I thought it was going to be. I'm convinced that sea kayaks were designed more for people who are less than 40 years of age. My back and neck muscles kept reminding me that I am pretty far over the hill.

But don't let your age hinder you from checking off such a wilderness experience on your life list. If you've always had an itch, an urge, or a hankering to exchange a paintbrush for a paddle, then what's wrong with right now? Who knows what next year will bring. Sign up for a guided trip with an outfitter, get some safety and paddling instruction, and find out for yourself what an adventure you can have on Wisconsin's sweetwater inland seas.

Timothy Sweet writes from Clintonville.

WHEN VISITING THE APOSTLES:

- Madeline Island is not part of the national lakeshore. Island attractions include Big Bay State Park and the Madeline Island Historical Museum. Car ferries run from spring breakup to winter freeze. Contact the Madeline Island Ferry Line: www.mad ferry.com
- All campers need permits to stay in the Apostle Islands National Lakeshore. Contact: (715) 779-3397 or www.nps.gov/apis/home.htm
- On December 8, 2004, President Bush approved legislation that classified 80 percent of the Apostle Islands National Lakeshore as federally protected wilderness now known as the Gaylord Nelson Wilderness to honor the late Wisconsin governor and senator. Basswood, Long, and Sand islands are included in the wilderness designation. However the waters of Lake Superior, the park's 12-mile mainland strip, the lighthouses and other previously developed areas within the park's boundaries are not included in the wilderness designation.
- Bayfield Chamber of Commerce: (800) 447-4094 or www.bayfield.org



Little friends enjoy a day at the beach on Little Silver Lake, Waushara County.

Nineteen spots to soak up some sun, dunk your toes and celebrate summer.

Editor's note: On a cold wintry morning, we were thinking of warmer times and sunny skies. We asked staff to take a one-minute vacation and tell us about some of their favorite places to swim in Wisconsin — natural waters where you could enjoy a cool, refreshing dunk on a hot day, a picnic with the family, a beautiful sunset. Our list is by no means comprehensive; we've just dipped our toes in the water in a state with 15,000 lakes and more than 40,000 miles of flowing streams and rivers. Here are a few gems to try.

NORTHERN WISCONSIN

NAME: Loon Lake Beach inside Copper Falls State Park **LOCATION:** Take State Highway 13 to the north side of Mellen and turn northeast on State Highway 169. Continue about 1.8 miles. The park entrance will be on your left. WHY GO? Loon Lake offers a small, secluded sand beach with a nice grassy area surrounded by woods. A gradual ramp from the beach right into the water makes the water accessible to all. Biking and hiking trails also begin at the beach, so after cooling off, take a one-mile hike to see picturesque Red Granite Falls. You can hike or drive to Copper Falls, or just relax and enjoy a burger or ice cream treat at the central picnic area. The site is adjacent to the North Country National Scenic Trail.

AMENITIES: Restrooms, parking for cars and bikes. An accessible ramp for folks with limited mobility and a rustic cabin accessible to disabled campers make this beach part of a great weekend getaway.

NAME: Buck Lake, also called Almond Recreational Area, operated by Oneida County Forestry and Parks Department.

LOCATION: Three miles south of Rhinelander off Hixon Lake Road in Oneida County. WHY GO? Clear water and a great sand beach on a relatively remote northern lake. **AMENITIES:** Restrooms, hiking, shelter, picnic area.

NAME: Big Bay Beach **LOCATION:** Madeline Island near the Apostle Islands National Lakeshore off the coast of Bayfield, six miles east from the Town of La Pointe on Hagen Road. WHY GO? The pure sand of

Big Bay Beach stretches more than a mile and a half along the Madeline Island shore. It's a great place to sunbathe. **AMENITIES:** The day use area has picnic tables, grills, water, changing stalls and restrooms.

NAME: Amnicon River **LOCATION:** Amnicon Falls State Park is about 12 miles east of Superior. Take U.S. Highway 2/53 southeast out of Superior. From the junction of Highways 2 and 53, take U.S. 2 about a mile east to County Highway U. Turn left (north) on Highway U and travel about 0.3 mile. The park entrance is on your left.

WHY GO? Waterfalls, whirlpools and scenic beauty are plentiful here. The river is a great place to swim. Given a choice of four waterfalls in the park, a person can find a place that matches his or her comfort zone. The river also has a number of smaller pools below cascades. These spots again provide opportunities for a unique swimming experience. Caution: Swimming here is not suitable for small children and is not accessible to people with disabilities. There are steep, sharp dropoffs; strong rapid currents and slippery rocks. At times, the river is too high for anybody to swim below the falls, especially the upper falls. During this kind of flow, teenagers, young adults and adults will still be able to get into the pool below the lower falls.

AMENITIES: Picnic area with hand pump, covered bridge, open air shelter, primitive campground in park.

NAME: Wisconsin Point on Lake Superior

LOCATION: Off Highway 53 on Moccasin Mike Road at the southeastern edge of the City of Superior.

WHY GO? This may be the longest freshwater sand beach in the world with crystal clear, sand-bottomed water. Sand dunes are full of uncommon species and you can comb the shore for cool beach glass, rocks and driftwood. The shallow flats are ideal for little tykes, and the beach is easy to reach by boat. On days with a west wind and lots of sunshine, the water warms up. The area is wild, undeveloped and there is ample public access and parking. Visit a Native American spiritual site at the tip of the point in a patch of boreal forest or hike to a neat lighthouse at the entry to the St. Louis River Estuary. The coolest part? You can open your eyes under water and see for quite a distance, and it actually feels great on the eyeballs because the water is so pure!

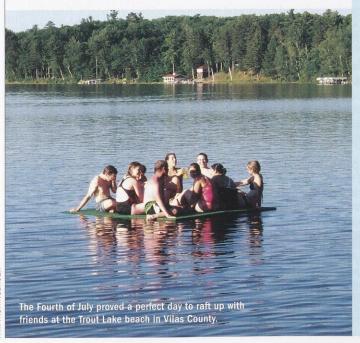
AMENITIES: None. That's part of the attraction. Take a cooler full of beverages, snorkeling gear, a horseshoe set, a bunch of friends and spend the day. At times it feels like you are on a deserted beach in Florida.

NAME: North Trout Lake Campground

LOCATION: In the central part of the Northern Highland American Legion State Forest in Vilas County, just south of Boulder Junction between State Highway 51 and County Highway M. Take Highway 51 north from Minocqua about 6.2 miles to County Highway M, turn right, go 6.8 miles to the entrance of the North Trout Lake Campground. Follow signs to the swimming area.

WHY GO? At 3,816 acres, Trout Lake is the biggest lake in the county — a beautiful deep, clear water lake with towering white pines and a rocky shoreline reminiscent of Lake Superior. It has two lobes, north and south, without much development. You'll find a swimming area in the north campground where you'll enjoy a real Northwoods feel. True to its name. it is one of only two lakes in Wisconsin with a native lake trout population (Black Oak, also in Vilas County, is the other.) The two-mile scenic Ben Bendrick Drive along the eastern shore of Trout Lake has wonderful views and picnic areas. **AMENITIES:** Boat ramp, hiking

AMENITIES: Boat ramp, hiking trail, well, vault toilets and a dump station. There's also a paved bike trail that connects to Boulder Junction and Sayner.



NORTHEASTERN WISCONSIN

NAME: Veterans Memorial Park

LOCATION: Fourteen miles northwest of Crivitz in Marinette County. From Crivitz take County Highway W west 10.2 miles and turn right onto Parkway Road. Follow Parkway Road 3.1 miles to the park.

WHY GO? On hot summer days there may be dozens of swimmers below Three-Foot Falls, cooling off in the river as it bounces off rock edges.

AMENITIES: The park is accessible to the disabled, fishing, camping, picnicking facilities, restrooms and hiking trails.

NAME: Whitefish Dunes State Park

LOCATION: 3275 Clark Lake Road, Sturgeon Bay. **WHY GO?** There's a relaxing beach and three miles of sandy shores with rocky bluffs to explore at this day-use park. A boardwalk keeps your feet dry on a walk through wetlands. Explore the dunes, read about archaeological digs here and travel down the road to scenic Cave Point County Park.

SOUTH CENTRAL WISCONSIN

NAME: Big Green Lake, Green Lake County

LOCATION: Three locations: Dodge Memorial Park - County Highway K; Sunset Park, County Highway A; Hattie Sherwood Park, Lawson Drive.

WHY GO? Big Green Lake is the deepest natural inland lake in Wisconsin. Clear water and vast area make this a favorite spot for many people — local and abroad. The City of Green Lake on the north shore has many smaller shops, restaurants and other attractions. All area parks are monitored weekly for bacteria by the Green Lake Sanitary District from Memorial Day weekend to Labor Day weekend.

AMENTITIES: Each site has bathrooms and sandy beaches. Hattie Sherwood Park boasts a diving pier and lifeguard.

NAME: Cox Hollow and Twin Valley Lakes, Governor Dodge State Park

LOCATION: From Madison, take Highway 18 west about 48 miles to Dodgeville. Bear right on State Highway 23 and travel three miles north. The park entrance is on your right. You can also reach the park via Highway 23 south from Spring Green or north from Mineral Point. Hikers and bikers can get to Governor Dodge by way of the Military Ridge State Trail. There's a surfaced access trail from the Military Ridge to the park just east of County Highway Z. AMENITIES: Both beaches have bath houses. Cox Hollow has a concession stand and adjoins hiking and mountain bike trails. Both lakes have pet swimming and picnic areas.

NAME: Yellowstone Lake State Park beach

LOCATION: From Madison, head west on Highway 18/151. Near Mount Horeb, take the Highway 78 exit south to Blanchardville. Cross the Pecatonica River. At the top of the hill turn right on County Highway F about eight miles to Lake Road. Turn left and follow the sign to the park office about one mile down the road on the right side.

WHY GO? The 455-acre manmade lake offers fun for swimmers, personal watercraft, boats, kayaks, canoes and anglers. Since 1997, more than 400,000 pounds of carp have been removed from Yellowstone Lake. The lake has become clearer and has an abundant population of crappies and walleye.



SOUTHEASTERN WISCONSIN

NAME: Pike Lake

LOCATION: The Pike Lake Unit, Kettle Moraine State Forest is about two miles east of Hartford via State Highway 60. Turn south on Kettle Moraine Drive.

WHY GO? Pike Lake is a 446-acre. spring-fed kettle lake. A designated swimming area is marked with buoys from Memorial Day weekend through Labor Day weekend. AMENITIES: Bathhouse, picnic area, shelter, parking.

NAME: North Beach

LOCATION: From I-94, take Highway 20 east to downtown Racine. Turn north on Main Street (Highway 32). then right (east) on Kewaunee Street that dead ends at North Beach Park on Lake Michigan. WHY GO? This beach boasts more than 2,500 feet of sandy shoreline. If watching the beautiful Lake Michigan horizon can't hold the kids' attention, a 20,000-squarefoot play structure awaits them. AMENITIES: Volleyball courts, concession stand, bathhouse, picnic area, shelter, restrooms, fishing and playground.

WESTERN AND CENTRAL WISCONSIN

NAME: Buckhorn State Park swimming area

LOCATION: Juneau County, south of Necedah on County G.

WHY GO: This peninsula on the Castle Rock Flowage has many shoreline and backpack campsites. The lake and park are not heavily visited and offer wonderful sunsets.

AMENITIES: The park has two picnic shelters along the lake, a boat launch, fishing pier, picnic area with swimming area, grills, playground, horseshoe pits, volleyball court and a cold-water rinse shower.

NAME: Sunset Lake Beach

LOCATION: This Portage County park is located about 20 miles east of Stevens Point. From town, travel east on Highway 10 to County SS. Turn left onto SS and follow to a stop sign at Highway 161. Turn left through Nelsonville for about 3 miles to County A. Turn left (north) on A for 2 miles to MM. Turn right (east) on MM for about a mile and take a left on Sunset Lake Beach Road. WHY GO? This 40-acre park is the stuff of memories. Towering pine trees shade a scattering of picnic tables near the beautiful sand beach. Families with kids will particularly enjoy the sandy lake bottom and swim raft. Parents will love the view: a long stretch of undeveloped shoreline. uncommon in this part of the state, thanks in large part to the Central Wisconsin Environmental Station along one shore. Scuba divers enjoy the 53-foot-deep waters of this 63-acre lake. AMENITIES: Picnic tables, changing rooms, pit toilets, a soda machine and lots of parking.

NAME: South Park Beach on Shadow Lake, Waupaca County

LOCATION: In Waupaca on Shadow Road (County Highway K), north of Highway 10. WHY GO? The lake is within the City of Waupaca, so it's easy to get to. Located on a slow-nowake lake that is very quiet.

AMENITIES: Two swimming docks, two water slides, playground and new beach house with changing rooms, restrooms and showers.

NAME: (Little) Silver Lake, Waushara County

LOCATION: Two miles east of Wild Rose on County Highway H at the Little Silver Lake Resort. WHY GO? Little Silver Lake is a 48-acre natural kettle lake with a maximum depth of 52 feet. The water quality and clarity are very good. The beach is privately owned, but is open to the public for \$1 per person.

AMENITIES: Restrooms, concessions, some playground equipment, picnic tables and even a campground on the property. The beach is very popular with local residents as well as vacationers.

NAME: Alma Beach

LOCATION: One mile north of Alma, off State Highway 35 in Buffalo County. WHY GO? Alma Beach offers a natural sand beach on the Mississippi River. The swimming area

is roped off and lifeguards are on duty most of the summer. The main river channel passes along this beach so visitors can enjoy watching barges go past while resting in the shade or sunning on the sand.

AMENITIES: A park with tennis courts and playground equipment adjoins the beach. New changing rooms and restrooms were built a few years ago. There are lots of picnic tables. The beach is sunny with lots of shade trees around the picnic area to escape from the sun.

NAME: Round Lake County Park

LOCATION: Northern Chippewa County, located about one mile north of Highway 40 on Round Lake Road (117th St).

WHY GO? Families with young children will love this place as a large and gently sloping beach meets the water and remains shallow for a good distance with no drop-offs. The water is crystal clear and bluegills will delight the youngsters by swimming around their legs and often coming in for a gentle nibble.

AMENITIES: This day-use park was recently renovated with a picnic shelter, restrooms, disabledaccessible boat ramp and loading dock. The fishing area is located just down from the beach in a separate area. The park is a popular gathering hole for locals and area vacationers. Get a spot in the sand for your lawn chair and have a wonderful, sunny, relaxing afternoon.

Tips to enjoy your days at the beach:

- · Never swim alone.
- Stay in designated swimming areas.
- · Drink plenty of fluids.
- · Wear sunglasses that absorb at least 90 percent of UV sunlight.
- · Wear sunscreen and wide-brimmed hats.
- · Spend part of your day in shaded areas.
- · Wash your hands before eating.
- Shower after swimming.
- · Don't swallow the water.
- · Avoid swimming after a heavy rain.
- · Don't swim near storm drains.

To help keep beaches clean:

- Dispose of litter in containers, especially used diapers and pet waste, or pack it out.
- · Do not feed gulls and waterfowl.
- · Don't enter the water if you are ill.
- · Change diapers before children enter the water.
- · Don't dump anything in storm drains.

Silent whistle

The quail pair stays together through the breeding season, scraping out a shallow softball-sized nest, lining it with grasses and leaves and concealing it with a dome of longer grasses. The birds are splendidly camouflaged for life in a hedgerow mixed with grasses, pasture and vines. The males have reddish brown feathers stippled with white and black ending in a gray tail. Their dapper white chin and eye stripe are offset by a black stripe under their eye that sweeps towards the back of their head and curves into black chin feathers. The females are similarly mottled, but lack the black collar. Their eye stripes are more buff than white. If these birds feel threatened and freeze all motion, they blend right into the background.

Females lay an egg a day until a clutch of 10-15 small white eggs fills the nest. Both male and female incubate the brood for about 23 days and the chicks grow rapidly

into strong fliers within a few weeks. The young stay with their parents through early fall forming a covey of 12-15 birds before winter with family members, stray males and unpaired birds living nearby. Most quail spend their whole lives in a quarter-mile to half-mile territory venturing the minimum distance needed to find food. The covey provides both warmth and protection. In winter, birds huddle in a tight circle facing outward to watch for predators. Covey life provides early warning of predators who can come from underground, land and air. Skunks, raccoon, possums, mink and weasels eat quail eggs and prey on chicks. Fox, cats, hawks and owls hunt down adult birds. Some quail are mown down by haying and an estimated 60 percent of the population in Wis-

Quail are at the northern edge of their range in Wisconsin and don't weather harsh winters well. Mild weather and restoration of their hedgerow habitat would help them hold on to their farmland/woodland/ grassland niche. WISCONSIN'S PRIMARY Bobwhite Quail Range

consin perishes in severe winter weather.

They find safety in numbers hiding out in brushy fencelines, wooded edges, thickets of berries and hazel tangles adjoining pastures and cropland. Quail feed in the early morning and late afternoon on a mixture of weed seeds, grain and insects. This time of year they will add legumes, wild grape, hoppers, crickets and beetles to their diet. In winter, they eat a lot of weed seeds from the "sneezemakers" — ragweed, smartweed and foxtail as well as gleaning waste grain and picking through animal manure for undigested seeds.

Studies show that these small birds have never been plentiful here and are at the very northern edge of their range in southern Wisconsin. A total population of fewer than 40,000 birds range mainly in southwestern Wisconsin

counties that border the Wisconsin and Mississippi rivers. Quail populations here have steadily declined since the late 1940s. They are so dependent on hedgerow and thicket habitat that the combined losses of brushy areas, fewer grasslands, decreasing numbers of small farms, grazed woodlots, browsing deer and invasive

plant species all squeeze birds from shrinking habitat. Mild winters and efforts to restore grassland habitats and buffers might help a bit.

Natural resource managers have surveyed quail populations since the summer of 1949, driving roadside transects through the 15 counties across the bobwhite's primary range. Annual surveys gave way to biennial counts in 1991. The surveys take place between June 15th and July 5th each year starting at sunrise on days with less than 40 percent clouds and light winds

of less than 5 mph. On each route, surveyors make 20 stops approximately a mile apart recording the number of whistling male quail heard in a twominute period. Last year 25 routes were surveyed and the number of whistling males decreased 30 percent from 0.1 in 2003 to 0.07 in 2005, well below the long-term average of 0.57. Given that the winter of 2004-5 was mild and precipitation was normal, one would have predicted stronger numbers. Surely some bobwhite quail will remain in Wisconsin, but their future remains in flux as the combined effects of weather, predation and changing land use squeeze the habitat of these whistling bevies.

David L. Sperling edits Wisconsin Natural Resources magazine.

READERS write

UNTIMELY METAMORPHOSIS

[Last February] my husband found a beautiful small butterfly in our garage. We put it into a ventilated jar to which my husband added a few blades of grass and a small twig. How can it survive in the winter? Where did it come from, and what will happen to it? We will keep it in the house. Would you let us know what we might do to help it survive until summer? Mrs. Edward Kuckkan Watertown

We received several letters last winter from folks who found butterflies hatching in a garage or basement. Our advice to this reader at the time was that she might have luck sustaining adult butterflies for a short period with sugar water or a mineral mix in which some wet stones are placed near the butterfly. One might also experiment with tiny pieces of fruit or a little honey water to see if the butterfly is attracted to any of these mixtures. Don't be disappointed, however, if the butterfly only lives a short while. In the wild, adult butterflies live from one week to six months, depending on the species.

RIGHT PLACE, RIGHT TIME

I went ice fishing over the weekend on a small lake in northern Wisconsin. I drilled a couple of holes and started getting bites right away. The fish bit very lightly, but were pretty constant. After about 45 minutes, I finally hooked one and to my surprise, I pulled a bullhead through the ice. I caught a second one a little while later as I was raising my jig. I never caught any other kinds of fish. Is this unusual to catch bullheads through the ice? Everything I have read on bullheads says they are very lethargic in the winter. It's a small lake. Do bullheads cohabitate with other fish well?

Dan Kauzlaric Conover

According to fisheries biologist

Karl Scheidegger, you're right. Bullheads and catfish are lethargic in winter and it is unusual to catch them through the ice, but they still need to eat. Scheidegger says: "Bullheads are clearly warmwater fish. As water temperatures decrease, their metabolism slows and their need for food also decreases. Anglers shouldn't expect to catch many through the ice, but it certainly can happen. The catch rate is so low, however, that bullhead fishing would have to be considered non-existent in the winter months. I'd say Mr. Kauzlaric was just in the right place at the right time."

ENLIST YOUTH HELP

Regarding Michael Wessinger's letter in the August 2005 issue ("Disrespect for Pine Island," Readers Write), why not enlist the aid of scouts and high school students to clean up the mess on Levee Road, and shop classes to make "no dumping" signs? Aldo Leopold would say "Take it away boys!" More power to you!

Carol H. Dahl Colfax

BLACKSPOT FISH PARASITE

My son has two spring-fed ponds with bluegills and bass. When we fillet the fish, some have dark spots in the meat. I remember reading about it in one of your magazines and cannot find the article to determine if the fish are okay to eat. If so, what are the dark spots and does it only happen in spring-fed ponds? Also can we stock trout with the bass and bluegills?

Glen Bawek Arcadia

Fish Health Specialist Sue Marcquenski responded to a similar letter in October 2004 regarding black spots in perch. Here is her updated response: The black spots you see in the muscle of the bass and bluegill are larval stages of a parasite, cleverly called "blackspot." The adult parasite lives in a fish-eating bird

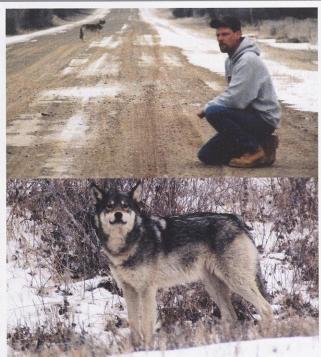
such as a kingfisher or gull. Parasite eggs are shed in the bird's feces and when they contact water, the eggs hatch and the first larval stage emerges and infects snails. These larvae mature and in time are shed from the snail into the water. The larvae have tails and swim until they find a fish host, and then burrow into the skin or muscle of the fish. Here, they develop into a third larval stage and black cyst walls are produced, covering the larvae. The black spots we see in the meat are actually the black parasite cysts. When a bird eats the infected fish, the larvae mature into adult parasites and the cycle begins again. Thoroughly cooking the fish will kill the parasites, and in any case, they cannot infect people;

they can only develop in birds. Almost all fish are susceptible to the blackspot parasite, so if you stock your pond with trout, it is very likely that they will become infected too. In the past 10 years or so, the number of fish-eating birds has greatly increased in the Upper Midwest, and snail populations have survived well over our mild winters. The blackspot parasite has taken advantage of this situation and will maintain its life cycle as long as the birds, snails and fish remain abundant in a lake or pond.

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

EXCEPTIONAL PHOTO OP



I took the enclosed wolf photograph in the Black River State Forest in February 2006. Since this wolf hung around for a while, I decided to be bold and get out of my truck to be photographed with it. When I take a crew out to various job sites in the forest, I always have my camera along to be ready for any photo taking opportunities.

G. R. Twesme Black River Falls

Several wolves have been sighted here feeding on roadkills. They lose their fear of vehicles and can become habituated to traffic. Help keep wolves wild. Don't feed them or approach them.

wisconsintraveler

Chow Main Street

ome June, when the strawberries ripen and the cream flows thick and rich, it's time for PDEs in Wisconsin. You must attend at least one of the massive Public Displays of Eating most every town and village in the state likes to host, or else you'll miss out on one of summer's true delights. After all, when the state's agricultural bounty is at its best, a celebration is surely in order. So loosen the belt buckle, pack up the Pepto-Bismol and the Alka Seltzer, and have a chow down Main Street and environs.



Make your first stop Park Falls; there, on June 16, you're invited to Pig Out & Polka. The menu has yet to be confirmed — TRAVELER suspects hearty sausages and BBQ may star — but the polka bands have been booked and Main Street will be cleared for dancing. Don't know how to polka? Where are you from -Mars? That's OK...even if you have five legs, three arms and one eye, someone in Park Falls can show you the steps. Holding down your dinner while twirling your partner, you'll just have to learn on your own. See www.pricecountywi.net or call (800) 762-2709.

The Wisconsin tradition of the dairy breakfast begins in June and carries on throughout the summer. Held on farms across the state, dairy breakfasts showcase the quality milk, cheeses, eggs, meats and baked goods produced nearby. Warning: Portions hearken back to a time when a body could actually consume that much food and burn it off doing farm chores before noon.

The Burnett County Dairy Breakfast, on June 17 in the Grantsburg area, features Uncle Jack's wild rice pancakes, savory ham, fresh fruit syrups, juice and loads of fresh milk. This year it's hosted a mile north of Webster. Follow State Road 35 to County A to Krause Road, then follow the Dairy Breakfast Cow Signs. Kids will enjoy the petting zoo. (715) 327-8861. At the

Kenosha County Dairy Breakfast in Wheatland, also on June 17, feasters will enjoy country omelets made fresh in six-foot fry pans and delicious Danish pastries. (262) 878-5271. For details on other dairy breakfasts, visit The Wisconsin Dairy Producers website www.wisdairy.com - and while you're there, be sure to peruse the Cheesecyclopedia.

When plump, sun-ripened strawberries are in season, the folks in Waupaca take note. The town's Strawberry Fest, June 16-21, is one berry big blow-out. Consume strawberry shortcake to your heart's content, and when you're done, have a slice

of strawberry pie. See www. waupacaareachamber.com or call (888) 417-4040 for a schedule of events. Cedarburg celebrates its 21st Annual Strawberry Festival on June 24-25. Indulge in strawberry crepes, strawberry slush, strawberry schaum torte, chocolate-covered strawberries, et cetera, et cetera, et cetera. Go

If strawberries don't satisfy your sweet tooth, there's always Two Rivers, where Ice Cream

to www.cedarburgfestivals.org

or call (800) 237-2874.

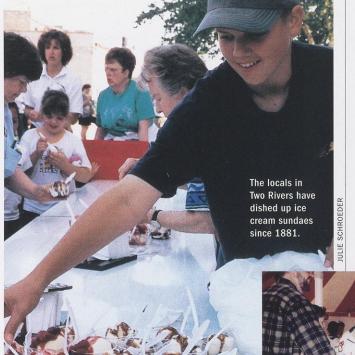
Sundae Thursday, June 22, honors the birthplace of the famous soda fountain treat. The dishing begins at 5:30 p.m. (920) 793-5590.

north of Webster hosts the Burnett Co. **Dairy Breakfast** on June 17. Don't care to dine alone? Feast

The Krause Farm a mile

with the Beasts on June 17 at Madison's Henry Vilas Zoo. While the monkeys, lemurs, giraffes and ostriches look on, restaurateurs from around the city prepare specialties including Thai, Jamaican, Italian and Greek foods for human delectation. See the online zoo at www.vilaszoo.org or call (608) 266-4732.

Savor Wisconsin's many flavors at the 17th Annual **Chequamegon Chef's** Exhibition, June 15 in La Pointe, Madeline Island. The tasting extravaganza features Chequamegon Bay's best restaurants, recipes and chefs. Tickets: \$25 in advance, \$30 at the door; tickets purchased in advance include complimentary passenger ferry fare. Visit www.madelineisland.com or call (888) 475-3386 for details.



00.

Dig into a country omelet cooked in a six-foot fry pan at Wheatland!

