
WISCONSIN
NATURAL RESOURCES
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Hunt.
Harvest.
Help.
Savor safe fish
When urban critters win
A better bear count

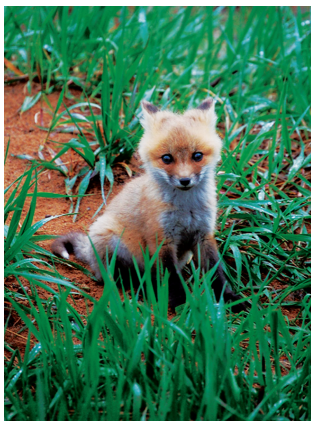
A family of foxes

Close encounters of the kit kind.

Story and photos by Timothy Sweet

Nearly 30 years ago I had my first close encounters with red foxes while backpacking from Windigo to Rock Harbor on Isle Royale National Park in Lake Superior. A friend and I had arrived at our campsite on Feldtmann Lake and slipped off our packs to eat some peanut butter and crackers. We left the container of peanut butter unattended just a few feet away as we sat along the shoreline and watched a bull moose feeding on aquatic plants.

When I turned around, a fox snatched the container and downed the entire supply of peanut butter! A short time later, he was observed drinking large amounts of water from the lake to wash it all down. The next night we witnessed another camp fox at Siskiwit Bay. Some boaters had pulled into the dock from the big lake and were preparing dinner when a fox deftly jumped onto the deck and swiped their 10-pound bag of potatoes. The bold critter ran right past us and into the woods with what seemed to be a bit of a smirk on his face. Now let's fast-forward to the end of last March.



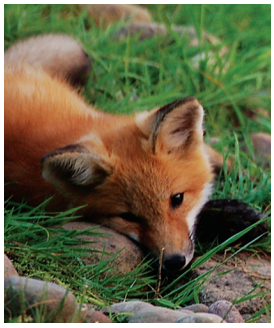
Kits start hunting with their parents when they are 3 months old.

A blizzard struck our area on the 23rd of that month leaving the countryside covered in a pristine blanket of sparkling white snow. I went snowshoeing on our neighborhood golf course early one morning to admire the cold, wind-sculpted beauty of nature. I tromped to the top of an east-facing hill and discovered a partially chewed deer leg surrounded by lots of paw prints.

A quick survey of the surrounding wooded areas did not turn up the rest of the deer carcass so I continued on my walk. Tromping past a storage shed, I stopped to look at the shadows of the trees cast on the jewel-like winter scene, when a fox came running full tilt out of a grove of hemlocks. I barely had time to take a photo before he glided over a snow bank and disappeared into the cedar swamp.

That reminded me of a fox den a friend had told me about located just off the side of a nearby road. I made a beeline in that direction, and sure enough, I found the den with an opening that had been dug out of the snow in the side of a hill.

Within a month, the snow had melted and the grass was starting to sprout. My friend



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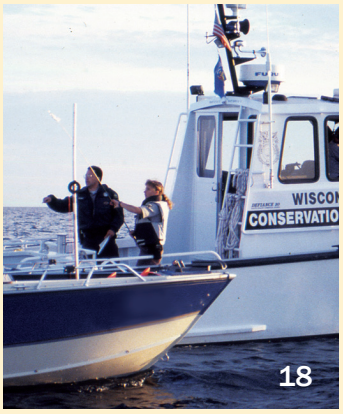
HERB LANGE



DNR FILE

TERRY MARGENAU

FRONT COVER: Minimizing the area affected by the disease and reducing the number of deer infected are crucial to Wisconsin's Chronic Wasting Disease Response Plan.

Shane Rucker

BACK COVER: Diamond Roof State Natural Area in Oconto and Langlade counties. INSET: Braun's holly fern (*Polystichum braunii*). For more information, or to order a guidebook to State Natural Areas for $18.00 (postage and tax included), contact the State Natural Areas Program, Bureau of Endangered Resources, DNR, P.O. Box 7921, Madison, WI 53707 or visit dnr.wi.gov/org/land/er/sna.

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Creative Products Manager Natasha Kassulke
Circulation Manager Karen Ecklund
Art Direction Thomas J. Senatori
Printing Schumann Printers

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Cornering CHRONIC WASTING DISEASE

In case you missed the broadcast of the Deer Hunt 2011 TV special with Outdoor Wisconsin host Dan Small, you haven't missed your opportunity to view it. The complete broadcast can be viewed online at dnr.wi.gov. Search for Deer Hunt 2011.

BOB PFAFF

Wisconsin's CWD Response Plan aims for a healthy herd.

Natasha Kassulke

NASCAR driver Matt Kenseth has given the green light to a new campaign to stop the spread of chronic wasting disease in Wisconsin. "Hunt. Harvest. Help." Public service announcements featuring the famous #17 racer started airing in the state's CWD zone in mid-August, followed by billboards and a website: KNOWCWD.COM

MATTKENSETH.COM

Why Kenseth to carry the message? Because this racing young gun also is pretty good with a hunting rifle. Kenseth, a Cambridge, Wis. native, is a deer hunter who knows a thing or two about teamwork.

"As a deer hunter I am concerned about CWD, but it's going to take more than one person to slow the spread," says Kenseth, the 2009 Daytona 500 winner, about the need for hunters and landowners to work together.

After a decade of CWD management in Wisconsin, it has become clear that controlling the disease in Wisconsin's free-ranging white-tailed deer will be extremely challenging and will require a human and financial resources commitment over an extended time, says Davin Lopez, DNR's former CWD coordinator.

"The Wisconsin DNR needs to start an aggressive CWD outreach plan to inform hunters, landowners and the general public, dispel old or false information about Wisconsin's efforts to manage CWD and compel stakeholders to take action," Lopez says.

As a result, the Department of Natural Resources has developed a response plan recognizing its public trust responsibility for managing wildlife and ensuring the health of wildlife populations in the state. The plan's overall goal is to minimize the area of Wisconsin where CWD occurs and the number of infected deer in the state.

The Department of Natural Resources would like hunters and landowners to become active partners by staying informed and continuing to "hunt, harvest and help."

Hunt. Continue enjoying the Wisconsin tradition of deer hunting.

Harvest. Harvest a deer for the quality meat and trophy that it provides.

Help. Donate a deer or extra venison to a local food pantry and help keep deer numbers at a level that promotes the health of the herd for years to come.

A decade of discovery

Chronic wasting disease was first detected in Wisconsin on February 28, 2002, in Mount Horeb. At that time, the Department of Natural Resources took an aggressive approach to drastically lower the deer herd in a radius around where the infected deer were harvested with the goal of eradicating the disease. But that approach failed, Lopez says, because the disease was later found to have already spread over a larger area.

Managing a disease in free-ranging wildlife populations is generally difficult, expensive and controversial, particularly when significant population reduction is a part of the plan. Controlling CWD in a high density, free-ranging white-tailed deer population had not been previously attempted and there are no proven techniques for control of CWD in free-ranging populations. However, it is well established that lowering the densities of host species (in this case deer) can be effective in reducing the transmission and spread of communicable diseases.

Since 2002, we have learned much more about the disease including its distribution in Wisconsin and how it spreads. As a result, Wisconsin's management strategy has changed considerably and the Department of Natural Resources developed a new CWD response plan. The plan accepts an area of infection in the southern portion of the state and strives to limit CWD to that area, while simultaneously controlling its intensity and distribution. This goal indicates a shift from the state's original management approach.

CWD has the potential for significant, negative impacts on the future of deer and deer hunting wherever it exists. Therefore, decreasing the area of the state where the disease occurs is the responsible goal to pursue.

The agency also has learned much about people's views on CWD and management. Wildlife disease experts agree that without intervention CWD will spread further in Wisconsin. Therefore, managers need to find some balance between the social and biological issues of CWD to maximize the efficacy of their efforts.

The Department of Natural Resources spent about $6 million annually on CWD management from 2002 through 2006. The funding came primarily from hunting license revenue along with some federal funding, mostly from the United States Department of Agriculture and the

Fawns of CWD-infected does are not born with the disease, but contract it from contact with infected deer or exposure to prions in the environment.

JERRY DAVIS

Cornering CHRONIC WASTING DISEASE

Chronic wasting disease-affected deer show weight loss and changes in behavior.

DNR FILE

This 3-year-old doe shows signs of the disease before being shot by a DNR warden in Columbia County, August 2006.

DNR FILE

DNR wildlife staff work with hunters to collect samples for CWD testing from hunter-killed deer.

DNR FILE

Pittman-Robertson fund (supported by a federal tax on hunting equipment).

Why everyone should care

CWD is a statewide issue, not just a southern Wisconsin issue, for the following reasons:

- Without appropriate management where CWD has been detected, the disease will spread to other areas of the state.
- Based on current knowledge of the disease, including information from western states where CWD likely has been for a longer period of time, CWD poses a significant threat to the Wisconsin deer herd's long-term health.
- Projections based on current Wisconsin CWD data suggest that CWD, if left unchecked, will ultimately reduce the number of deer available each year for hunter harvest.
- A healthy deer herd is important for hunting traditions. Wisconsin has nearly 700,000 deer hunters who have harvested an average of over 400,000 deer annually during the past decade.
- Deer hunting contributes more than 7 million days of recreation every year.
- A healthy deer herd is critical to the state's economy. Deer hunting annually generates more than $500 million dollars in retail sales and over $1 billion for the state's economy.

Education and motivation

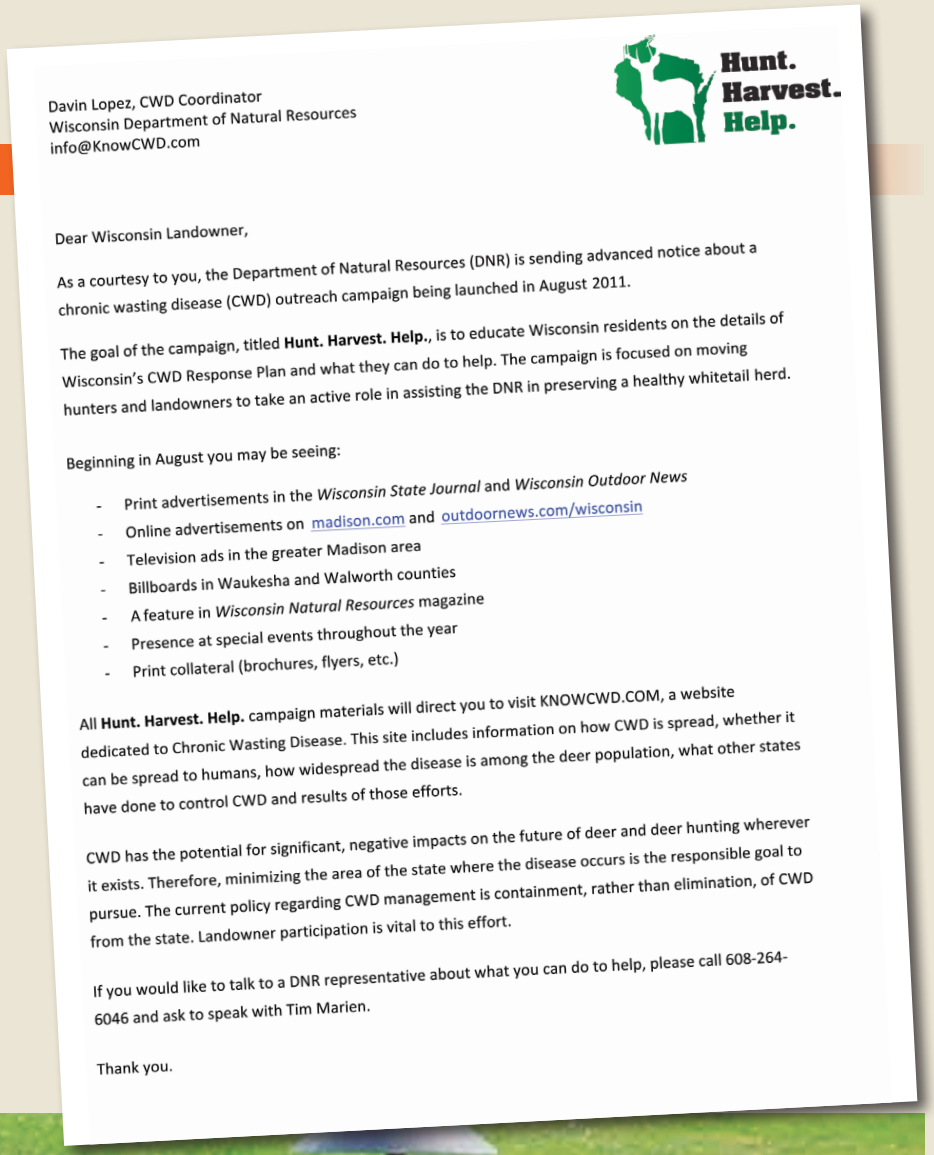
"Our aim is to educate hunters and landowners on the details of the DNR's CWD Response Plan, motivate hunters and landowners to support the plan, and move hunters and landowners to take an active role in helping the DNR with pre-

serving a healthy whitetail herd and the rich hunting culture in Wisconsin," Lopez says. "We also intend to focus on informing lawmakers about the importance of an aggressive CWD management plan, and encourage them to provide more funding for the DNR's management efforts."

Natasha Kassulke is associate editor of Wisconsin Natural Resources *magazine.*

The KEY OBJECTIVES of this response plan are to:

- **Prevent the spread of CWD to areas where the disease is not currently believed to be present**
- **Monitor for and respond to new areas of CWD infection**
- **Decrease CWD's geographic distribution and intensity**
- **Increase public understanding of CWD risks and participation in disease control efforts**
- **Address the needs of DNR's customers**
- **Improve the scientific information about CWD**



Davin Lopez, CWD Coordinator
Wisconsin Department of Natural Resources
info@KnowCWD.com

Hunt. Harvest. Help.

Dear Wisconsin Landowner,

As a courtesy to you, the Department of Natural Resources (DNR) is sending advanced notice about a chronic wasting disease (CWD) outreach campaign being launched in August 2011.

The goal of the campaign, titled **Hunt. Harvest. Help.**, is to educate Wisconsin residents on the details of Wisconsin's CWD Response Plan and what they can do to help. The campaign is focused on moving hunters and landowners to take an active role in assisting the DNR in preserving a healthy whitetail herd.

Beginning in August you may be seeing:

- Print advertisements in the *Wisconsin State Journal* and *Wisconsin Outdoor News*
- Online advertisements on madison.com and outdoornews.com/wisconsin
- Television ads in the greater Madison area
- Billboards in Waukesha and Walworth counties
- A feature in *Wisconsin Natural Resources* magazine
- Presence at special events throughout the year
- Print collateral (brochures, flyers, etc.)

All **Hunt. Harvest. Help.** campaign materials will direct you to visit KNOWCWD.COM, a website dedicated to Chronic Wasting Disease. This site includes information on how CWD is spread, whether it can be spread to humans, how widespread the disease is among the deer population, what other states have done to control CWD and results of those efforts.

CWD has the potential for significant, negative impacts on the future of deer and deer hunting wherever it exists. Therefore, minimizing the area of the state where the disease occurs is the responsible goal to pursue. The current policy regarding CWD management is containment, rather than elimination, of CWD from the state. Landowner participation is vital to this effort.

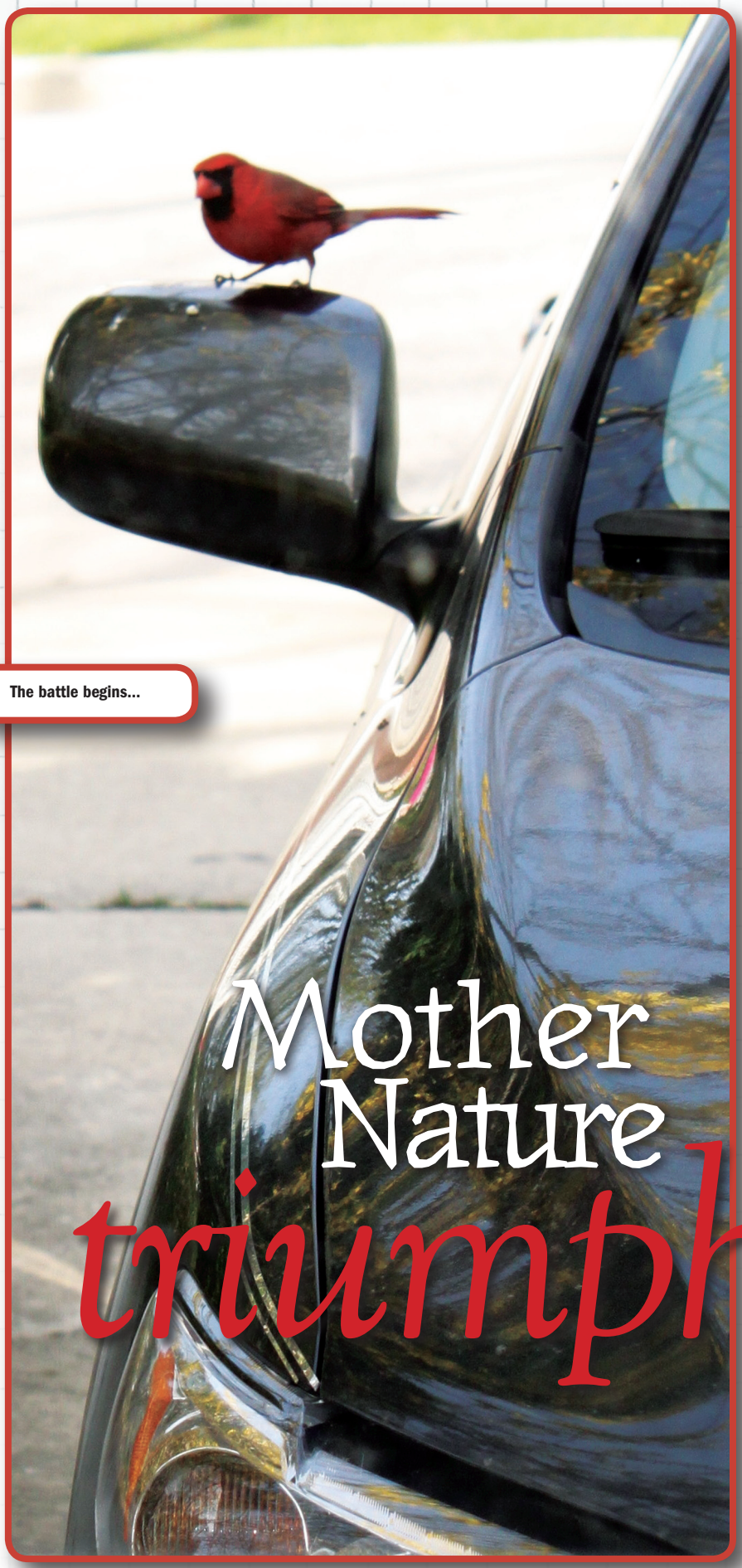
If you would like to talk to a DNR representative about what you can do to help, please call 608-264-6046 and ask to speak with Tim Marien.

Thank you.

Chronic wasting disease (CWD) is a fatal nervous system disease in white-tailed deer, mule deer, moose and elk. It belongs to the family of diseases known as transmissible spongiform encephalopathies (TSE) or prion diseases. Though it shares features with other prion diseases, like mad cow disease in cattle and scrapie in sheep, it is a distinct disease known to only affect members of the deer family.

To read the entire response plan, learn about deer donation stations in your area and find the latest news and research on CWD visit KNOWCWD.COM

DONALD SAVOY



The battle begins...

Mother Nature triumphs

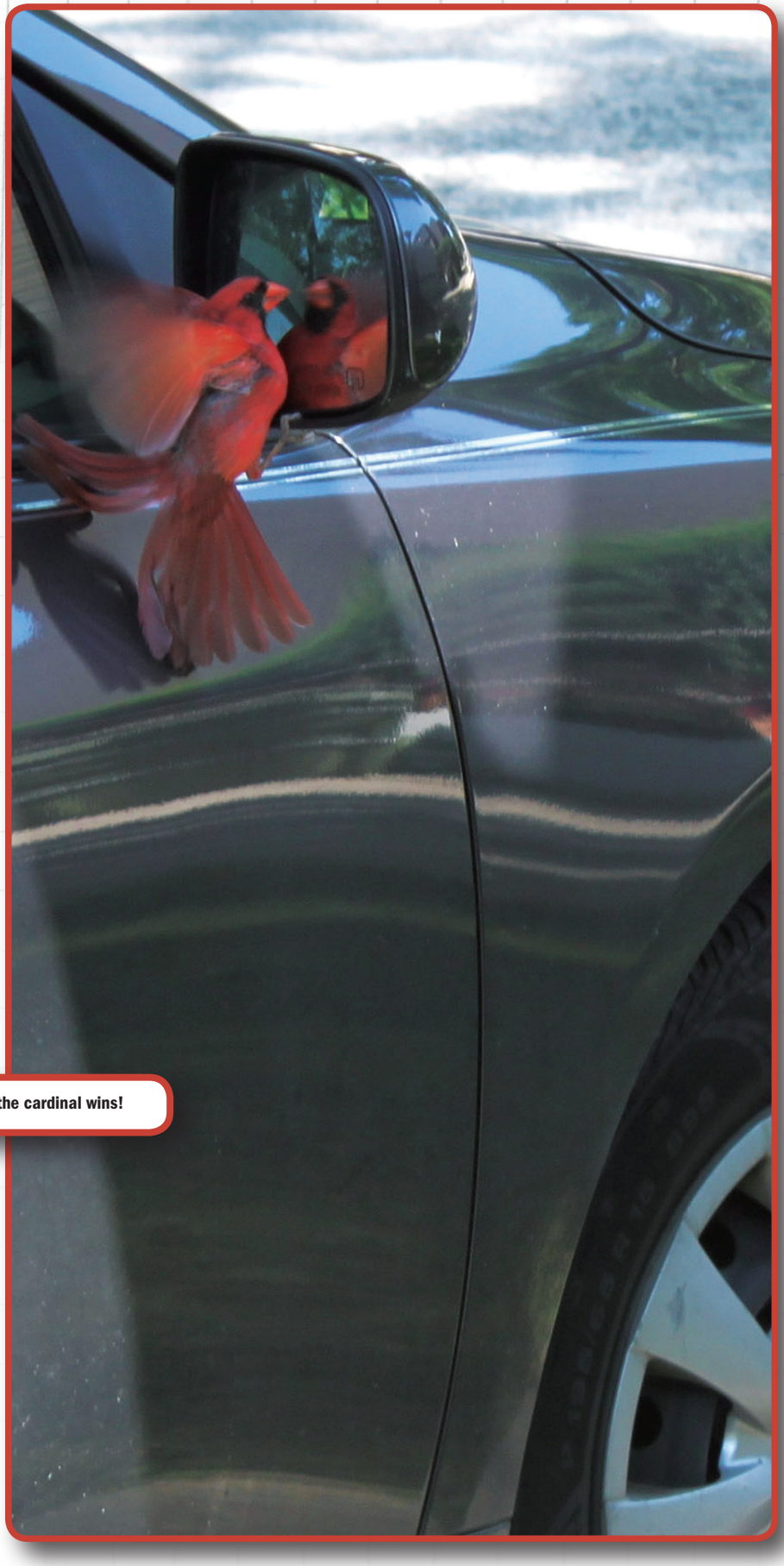
An urban couple confronts neighborhood wildlife and learns a valuable lesson.

Story and photos by Andy Ewert

Newton's Third Law of Motion teaches us that for every action there is an equal and opposite reaction. I learned that this law applies to Mother Nature, specifically in coexisting with neighborhood wildlife. Over the course of the year, my "animal relations" evolved from peaceful coexistence to skirmishing and finally open warfare. This, in turn, sparked a counteraction by my furred and feathered opponents, leading to unintended consequences that forced rethinking my strategy of confrontation.

The origin of my struggle against nature began humbly enough. Every spring for several years, a family of house sparrows nested in a cozy niche above the back door of our East Side Milwaukee home. My wife, Lupe, and I tolerated droppings, fallen nesting materials and an occasional broken egg that decorated the adjoining wall and breezeway. Live and let live was our philosophy then. We learned to instinctively duck when approaching the back door or risk a face full of alarmed sparrow fleeing the nest.

Last spring, my fastidious better half, who takes a less tolerant view of inappropriately placed organic matter, declared that enough was enough. Seeking a quick fix, I plugged the niche with ammonia soaked rags. This worked for a while, until the ammonia evaporated and the



And the cardinal wins!

persistent sparrows pulled out the rags to once again successfully nest. This year, I employed a more environmentally friendly tactic: cramming the nest site full of stiff cardboard. I won that round.

The victory was short lived. During my daily online work sessions, I watched through a window of my home office as a pair of sparrows — very likely the ones I displaced — pecked a hole in the aluminum flashing below our gutter and built a nest. While I was impressed with this avian ingenuity, my wife was not amused by the damage to our home. Every day the birds methodically carried grass, twigs, and dried weeds into the hole, littering the sidewalk below. In cruel irony, when their handiwork was complete, a pair of European starlings showed up, drove the sparrows out, and assumed residency in the nest. Seemingly contemptuous, the interlopers poked their heads from their new home to stare indignantly at me laboring away on the keyboard.

Back in the trap

The downward spiral of man vs. nature entered a new phase. One morning distress cries from my wife summoned me to the backyard. Her cherished tulip sprouts, mounted high on a pedestal to thwart neighborhood varmints, were torn to pieces. Adding insult to injury, potting soil was scattered across the patio underneath.

Squirrels. I know their modus operandi well. A 35-year-old Havahart™ live-catch trap was secured. It was time to take Mother Nature down in size. A generous slather of organic peanut butter spread across a multi-grain cracker proved the irresistible lure. Success was rapid — five young squirrels in quick succession. Their pathetic cries from the car trunk as I transported them to a distant suburban woodland only steeled my resolve to prevail.

When the peanut butter and crackers began disappearing from the empty trap, it was clear a new, fleeter villain was afoot. I adjusted the trap's trip mechanism to hair trigger and, within hours, snared a plump chipmunk. There would be no deportation for this cute little guy. Punishment was a stern lecture and a few digital photographs prior to release. But then things became a bit unhinged when the rambunctious rodent, fattened on my gourmet peanut butter, managed to wiggle halfway through the trap bars but no further. What to do?

My wife suggested donning a pair of heavy leather gloves and either pulling the

creature out of the trap or pushing it back in. This proved hilariously unsuccessful. I took a wire cutter to the bars. The hardened steel gave way and the chipmunk scurried off, no worse for wear. I moved the trap to the other side of the house.

"Do chipmunks learn from their experiences?" Lupe asked doubtfully. "Of course not," I barked. Two hours later, the chipmunk was back in the trap.

Cardinal sins

Mother Nature, the tormentor, provided an ally in my quest against furry thieves. Once while fetching the morning newspaper, I spotted a large female red-tailed hawk, perched on the neighbor's front lawn. Eyeing me with open hostility, she took to the air with a young squirrel in her talons. Glory be. The enemy of my enemy is my friend. This impressive raptor regularly patrolled the neighborhood, keeping small birds and mammals on constant alert. A young Cooper's hawk paid our backyard a visit, futilely diving on nimble chickadees.

My face-off with wildlife was only warming up. One evening while grilling in the backyard, we watched a young male cardinal repeatedly attack its reflection in my car's passenger-side mirror. At first it was pretty funny. After a while, my wife took pity on the testosterone-charged juvenile and suggested putting a paper bag over the mirror so it wouldn't injure itself. Whatever. As I did my good deed, I couldn't help but notice the winged pugilist had smeared my vehicle's mirror and front quarter panel with bird grease, excrement and feathers.

The outcome of my cover-up was less than satisfactory. The bag kept blowing off the mirror, I grew weary of constantly replacing it, and the cardinal expanded his assaults to include our garage windows and the mirrors of neighbors' vehicles. Despite his diversity of targets, he still finds time to visit my car a couple of times a day.

Not hoppy

On to our neighbor's garden. Throughout spring and into summer, rabbits devour the young shoots, stems and leaves of pricey flora and bite off the flowers. My neighbor to the north, dedicated to his greenery, warned me of a large rabbit seen lingering about. He's aware of my vendetta against squirrels. Perhaps he thinks I'll engage nature on a second front.

I confess to a soft spot for cottontails. Little does my neighbor know that this

Sparrows and starlings make messy neighbors.

A striped and speedy escape artist.

Pacquito was really Pacquita and here is one of her prodigy.

particular rabbit is my rabbit. From sightings and piles of tiny berries, my wife and I know it lives smack in the middle of her garden. We bonded when he was a bunny. Slow movements and gentle words won over its trust. One evening it hopped under our feet as we sat in the backyard. In our presence, it innocently nibbled grass and weeds, seemingly oblivious to my wife's flowers. We named it Pacquito and, unfortunately, the bunny didn't remain little for long. To Lupe's chagrin, neither did its appetite nor berries.

One day I watched Pacquito grazing by our neighbor's garage. I rolled down the car window and called its name. To my surprise, the rabbit loped up to the side of the vehicle, looking at me like it expected a handout. I cringed, hoping none of our neighbors witnessed this fraternization with the enemy. Then the thought crossed my mind: What if Pacquito really is Pacquita? Endless broods of hungry bunnies? What have I done?

Sure enough, by early summer, my fears were realized. Out came the Havahart™. Three of Pacquita's little offspring were quickly relocated. Not before, to my wife's fury, numerous treasured plants were cut, nibbled, or completely consumed. Thanks to the deportations, our rabbit situation stabilized. However, I still see momma prowling the neighborhood. I keep a wary eye on her whereabouts and her waistline.

Wake up calls

One of the theoretical joys of working from home is extended weekday sleep. The reality in our neighborhood is very different. At about 5 a.m., the cardinals whistle for the attention of their ladies. Shortly after, it's the cooing of mourning doves, followed by raucous crows cawing. Any remaining vestige of sleep is squashed by the energetic vocals of sparrows, house finches and robins. The 7 a.m. trumpet of hungry Canada geese is overkill. Early morning is for the birds and they won't let you forget it. Earplugs provided needed relief from the sunrise treetop symphony.

Mother Nature displayed her ugly side in summer. During July, flash floods ravished portions of Milwaukee and its northern suburbs. Fortunately, some of us on higher ground were spared. The torrential rains brought Lupe and I an unexpected houseguest. We first noticed a gnawed banana on our kitchen counter. What was it? Obviously something small and hungry. The next morning, another partially consumed fruit. Closer examination revealed rodent droppings. "Get rid of it," she-who-must-be-obeyed decreed. A good husband knows what to do.

With a heavy heart, I drove to the store and purchased three snap traps for about three bucks. No $20-plus Havahart™ for this home invader. Only termination with extreme prejudice would suffice. I baited one trap with organic peanut butter. The next morning, I quietly disposed of our deceased guest, a gray and brown streaked field mouse undoubtedly brought into our home by the flood. I remembered the precocious white mice — Pixie, Jose and George — that were my pets during grade school. I viewed the poor little fellow with sadness before bagging and disposal. At least he enjoyed a fine last meal, for however long it lasted.

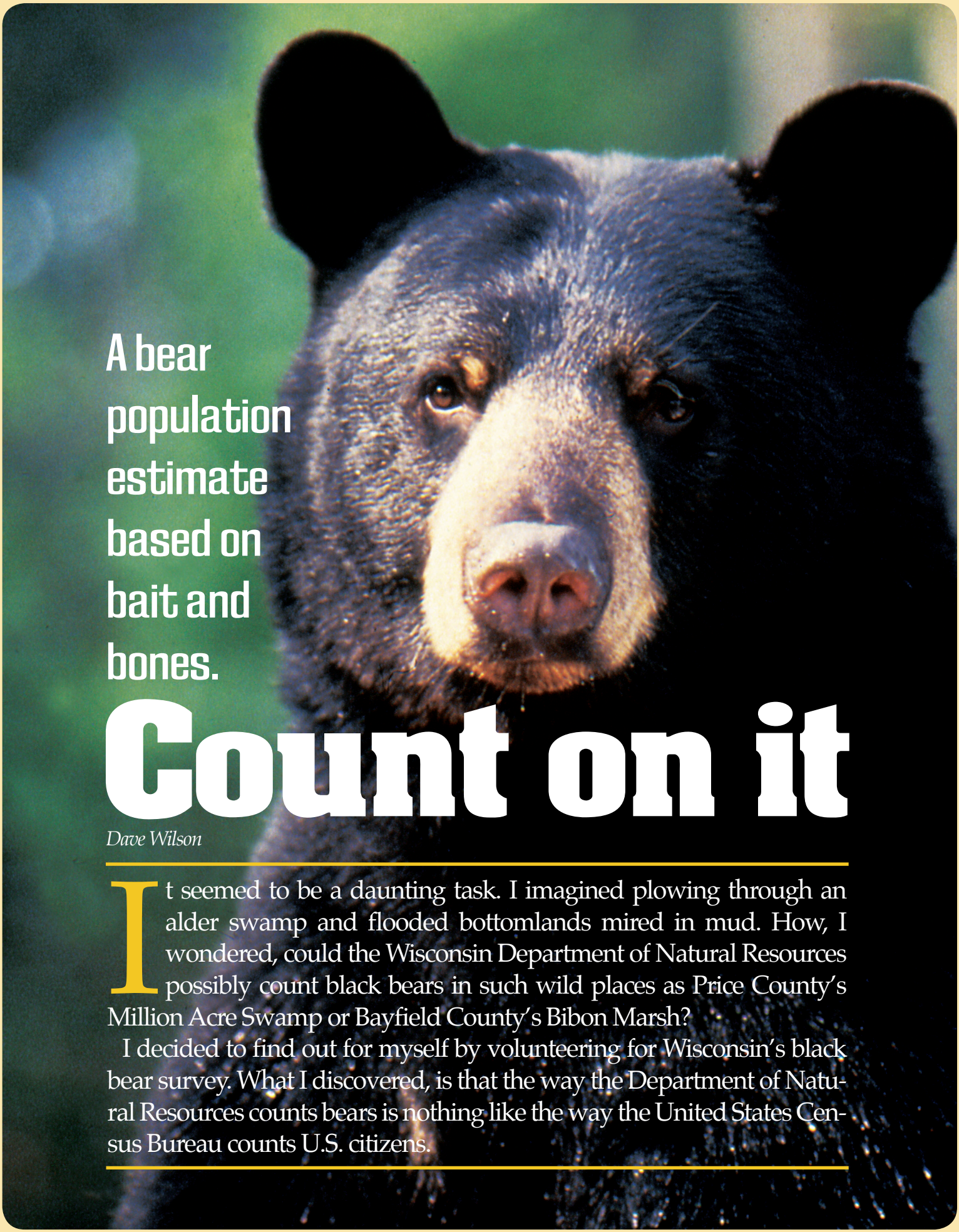
As she confounds, so Mother Nature entertains. Early one fine August morning, I was treated to a classic predator-prey drama two blocks from home. I spotted a fox slinking about in search of breakfast, not the first time I'd seen one in the neighborhood. This juvenile looked like he hadn't eaten in a week. Suddenly he stiffened, stopped dead in his tracks, and flattened out in typical canine stalk mode. His prey? An old, gray, potbellied Chihuahua, out unescorted for his morning constitutional.

Intuitively, the pint-size pet turned, spotted the stealthy intruder and locked eyes with death. Instead of making a run for it, the plucky pooch valiantly stood his ground and issued a staccato of high-pitched yaps. The fox jumped back, startled by the unexpected ferocity of his intended meal. Hearing the racket, an elderly, white-haired lady, clad in bathrobe and bedroom slippers, rushed from the house, down two flights of stairs and, with remarkable agility, scooped up the now very macho Chihuahua, who continued to voice his battle cry as they disappeared with a slam behind a thick wood door.

The moral of these experiences, I've concluded, is that our struggles against Mother Nature are indeed in vain. We're outnumbered. Their will, born from the instinct to survive and evolve, is stronger than ours. In the end, Mother Nature will always triumph.

With this realization I've amended my ways. No more traps. No more bags over car mirrors. No more rages over destroyed flora or organic matter on the walkways. What will be, will be. Peaceful coexistence and appreciation is my only antidote to aggravation, futile actions and elevated blood pressure. It will save me some organic peanut butter, too.

Andrew Ewert writes and records his battles with pesky urban critters from his home in Milwaukee.



A bear population estimate based on bait and bones.

Count on it

Dave Wilson

It seemed to be a daunting task. I imagined plowing through an alder swamp and flooded bottomlands mired in mud. How, I wondered, could the Wisconsin Department of Natural Resources possibly count black bears in such wild places as Price County's Million Acre Swamp or Bayfield County's Bibon Marsh?

I decided to find out for myself by volunteering for Wisconsin's black bear survey. What I discovered, is that the way the Department of Natural Resources counts bears is nothing like the way the United States Census Bureau counts U.S. citizens.

HERB LANGE

I was grateful. I couldn't imagine trying to burrow through the Million Acre Swamp with a notebook and pencil, knocking on bear dens and trying to count boars, sows and cubs.

The new and more accurate method to estimate the state's bear population relies on bears ingesting tetracycline (a biomarker). Bear hunters then sample harvested bear rib bones to detect the presence of the compound.

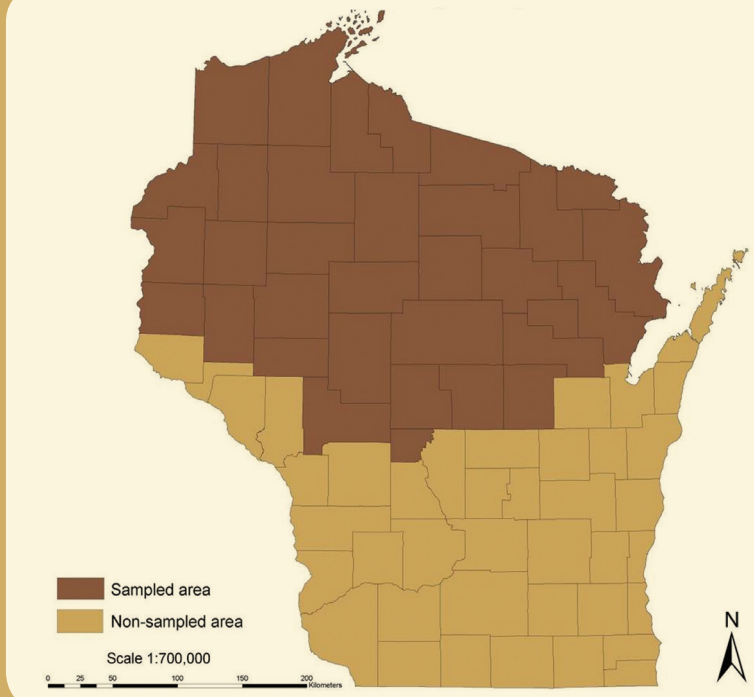
Currently, all DNR bear research and management activities are directed towards managing bear populations within zones and developing harvest strategies to maintain populations at or near prescribed goals. Population goals for each zone are based on habitat suitability and human tolerance levels.

Tetracycline surveys have been used to estimate black bear populations in Minnesota and Michigan since the mid 1990s. Their success led the Wisconsin Department of Natural Resources to explore using this technique here. Research Scientist David MacFarland, in cooperation with the Wisconsin Bear Hunters Association and the Department of Natural Resources, conducted the first Wisconsin tetracycline study from 2006 to 2008. The study found the black bear population to be almost twice as large as previously estimated with the population model survey. The Department of Natural Resources adopted this technique and paid for the first study.

The tetracycline survey involves placing four bait boxes in each township in all counties within the black bear range. The bait packages contain tetracycline capsules embedded in peanut butter and marshmallows. During the bear hunt, successful hunters submit a bear tooth and a two-inch piece of bear rib collected near the vertebrae at the time of registration.

The tetracycline study uses mark-recapture, a well-established tool for estimating wildlife populations, and is similar to duck banding. The technique relies

Black bear tetracycline abundance estimation study area, 2011



DNR FILE

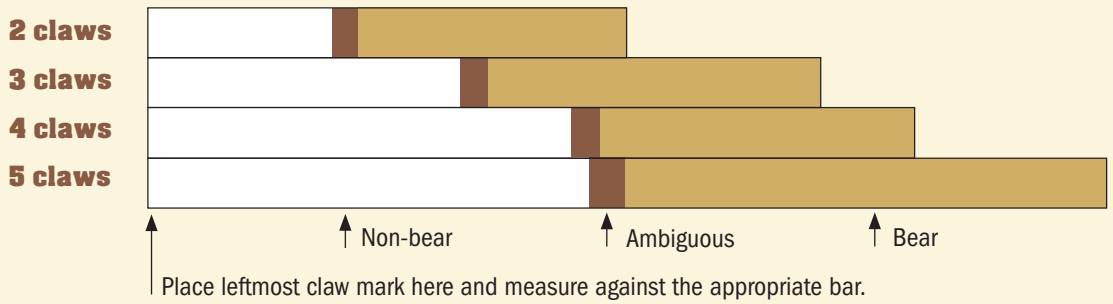
Identifying bear claw marks

1. Choose a set (or sets) of claw marks with the greatest number of adjacent claws visible. A set of marks with 4 or 5 claws will be more useful in distinguishing a bear than marks with only 2 or 3 adjacent claws. Try to find the widest set but be sure all claws in the group are from the same foot.

2. If you cannot find marks with 4 or 5 adjacent claws (or are not sure they are from the same foot) pick the widest set(s) of 2 or 3 claw marks.

3. Match the width of the claw marks against the gauge below. Take the measurement at the widest point of the claw marks.

4. Take several measurements. If they generally come out in the range for bear, and you are sure that each set is from a single paw, record as "bear." If even the largest sets of marks are too narrowly spaced for a bear, record as "non-bear." If the measurements land in (or very close to) the ambiguous zone, record as "ambiguous." If you cannot make a reasonable guess based upon the spacing of the claw marks, record as "ambiguous."



DAVID GARSHELIS, MN DNR

Bears like large forested areas with swamps and streams, habitat found in the northern two-thirds of Wisconsin. In the last few years, however, bears have been seen more frequently further south.

ED CULHANE

This tree shows signs that it was visited by a bear.

DNR FILE

upon two encounters with an animal: the first marks the animal, the second checks for the mark. A population estimate is derived by knowing the number of animals marked and the proportion of marked animals in the second group. For example, if we marked 100 animals in the first group, checked 100 animals in the second, 10 of which (or 10 percent) were marked, we would know that the initial group of 100 represented 10 percent of the total population resulting in an estimate of 1,000 animals.

"In this study we mark bears with tetracycline which is visible in bone tissue," MacFarland explains. "The annual harvest gives us an opportunity to check for marks in hunter-submitted bear rib samples. We can then calculate what percent of bears were marked with tetracycline and use that information to estimate the total population size."

In the autumn of 2006 the Department of Natural Resources estimated 33,657 bears, plus or minus 7,042, older than one year in Wisconsin. Estimates for the current survey will follow in an upcoming *Wisconsin Natural Resources* magazine issue.

Establishing the bait locations

When I volunteered to help with the bear tetracycline survey, I requested to work near where I live. Surveyors assigned volunteers at random to ensure that the baits were located far enough away from each other so the same bear would probably not hit two baits. Price County has 38 townships and had 152 bait boxes placed for this survey. I recorded the GPS coordinates of all my assigned bait locations.

We needed to place the baits seven to eight feet off the ground, preferably in a tree that would support a bear. The tree would also ideally have smooth bark so we could easily see and identify claw marks.

Bait #1

I placed the first bait on the river bottom in an area where I used to bow hunt, in the Price County forest on the South Fork of the Flambeau River. I knew that bears traveled through this area; in fact, a cub climbed the same tree that I was hunting from several years ago.

Bait #2

I placed the second bait on private land about four miles south of the first bait. I called the owner ahead of time to let him know I was coming. The area biologist

had previously secured permission for me to place the bait. I placed the bait in open hardwoods. The landowner said he had seen a bear on his land a few days earlier.

Bait #3

I placed the third bait on land owned by Northern States Power Company. The area is high ground with mixed hardwoods and conifers. This bait was approximately four to five miles east of the second bait.

Bait #4

The private land where I placed the fourth bait was in an old clear-cut next to the Million Acre Swamp. I know bears favor this kind of habitat. I nailed this bait box to an aspen tree about six inches in diameter. This bait was four to five miles north of the third bait.

If a person looked on a map of the Town of Flambeau, the baits appear in a rough square running four to five miles to a side.

Results

More than 600 volunteers and DNR staff deployed and monitored 3,317 baits across 32 counties last spring, 940 of which were consumed by bears. The Wisconsin Bear Hunters Association donated the bait boxes, which stayed in place for at least two weeks and no more than three weeks.

Two of "my" baits were located in open hardwoods. I was not surprised that bears, because of the open habitat, did not visit them. The other two were in low areas — one on a river bottom and the other on the edge of a large swamp. I expected those would be hit but they were not. I returned all the bait boxes to the DNR station in Park Falls. I also removed all the nails used to secure the bait box in the tree and properly disposed of them.

And even though my bait boxes weren't hit, I saw a sow and two cubs on the way home from work the Saturday night before I picked up the bait boxes, and several bears checked out my garbage the night after I picked up the boxes.

The Department of Natural Resources also reported that prospects were good for the 2011 Wisconsin black bear hunting season that opened September 7, and that bears are thriving and continuing to explore new territories in Wisconsin.

The DNR issued around 9,000 permits for the 2011 fall season, which ran through October 11, and the statewide harvest quota was 5,235 bear, the same as in 2010.

"Excitement is high among the bear hunters I have spoken with," said Linda

DAVE WILSON

The baits were placed in small wooden boxes attached to trees and positioned about seven to eight feet off the ground. The wooden boxes are designed to prevent species other than black bears from accessing the bait material.

DAVE WILSON

The bait contained tetracycline that produces a marker in the bones of the animal that consumes the bait.

Last spring, more than 3,300 baits were placed throughout northern Wisconsin counties. Much of the land in the study area was privately held; therefore, landowner participation was critical to the project's success.

DAVE WILSON

Bears enter their dens in mid-October through early November as food supplies dwindle. The bears fall into a deep sleep and their body temperature, heart rate and respiration decrease. The bear's dormant winter state is called "torpor."

ED CULHANE

Olver, bear biologist with the Department of Natural Resources, at the start of the fall hunt. "Many have submitted trail camera photos of bear visiting their baiting sites and there are some pretty impressive bear out there. Whether or not we have a season like 2010, when a new bear harvest record was set and at least three 700-pound bears were registered, remains to be seen but the potential is there."

Bear or no bear, I enjoyed volunteering for the bear survey. I got out in the woods during a beautiful time of the year just ahead of the leaves and mosquitoes. I met some new people in the township where I live, and I came to understand and appreciate the difficulty of how bear populations are estimated in Wisconsin, both with the newer tetracycline method and with the existing population model.

"This research is a great example of what a partnership can accomplish," says Tom Hauge, director of the DNR Bureau of Wildlife Management. "The project and population estimate simply wouldn't have been possible without DNR staff, the Wisconsin Bear Hunters Association and the committed volunteers working together for the conservation of Wisconsin's black bears."

Dave Wilson lives off the grid in a log cabin he built on the South Fork of the Flambeau.

Cubs are born in mid-January. The average litter contains three to four cubs, but litters of as many as six have been reported.

ED CULHANE

Marine Enforcement Unit

Meet DNR's Lake Michigan warden force.

DNR FILE

Last year marked the 25th anniversary of the Northeast Region's Marine Enforcement Unit.

Wardens spend a lot of time working with lake associations, local units of government, boat manufacturers and boaters to resolve on-water conflicts.

DNR FILE

Mike Kitt

It's just after sunrise on a cool morning on the bay of Green Bay. A gill net tug belches smoke on the horizon alerting another boat to its presence. Two wardens speed toward the fishing boat in their 29-foot patrol boat.

As the boat approaches, the wardens can see fish-laden netting being hoisted through the lifting door. The patrol boat slides up to the commercial vessel's stern and a lone warden jumps onto the fantail.

"Good morning Joe. How's the fishing today?" questions the warden.

"Not too bad. Fish are running big today and there's not much for junk," (commercial fishing term for illegal or undesirable species), the fisherman says.

"I'd like to look at your fish and measure your net as you haul it in," the warden says.

"Sure, no problem," returns the fisherman.

The fish are inspected and questionably sized fish are measured. The net is measured to ensure compliance with the law. No violations are found. They exchange a brief conversation about each other's family and the prospects for the Green Bay Packers' season. Then the warden jumps back onto the awaiting patrol boat and zooms off into the ripple-crested horizon.

Thirty years ago, the scene described above might have been very different. The conversation may have gone something like this.

(Fisherman): "What the #%** do you want?!"

(Warden): "I want to look at your fish and your net!"

(Fisherman): "You have no authority to come onto my boat without a search warrant — get out of here!"

(Warden): "You need to get a better lawyer — move over. We're coming on board!"

An answer to challenges

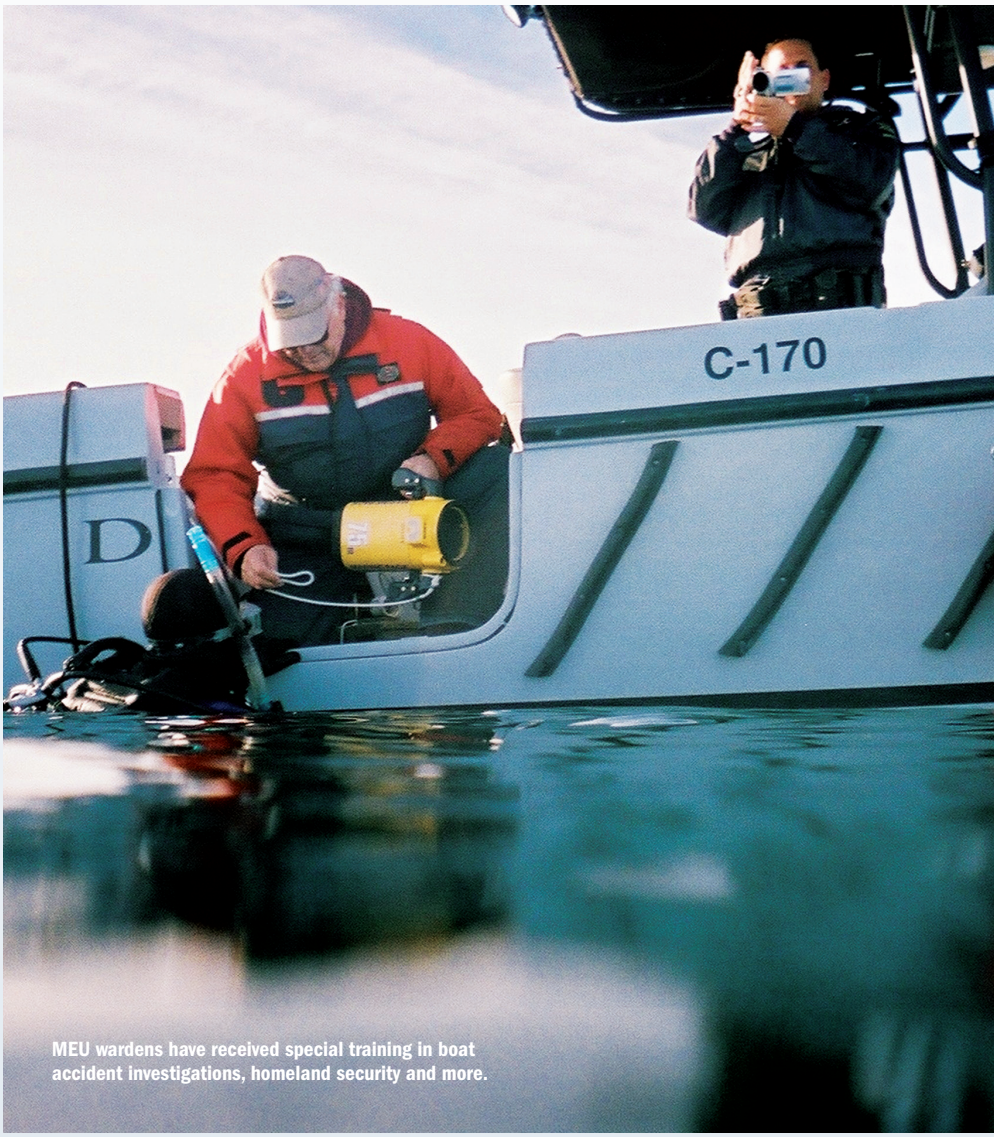
The old Lake Michigan District boasted an area of over 385 miles of Lake Michigan shoreline and millions of acres of water within its boundaries, which included six counties. The magnitude of the resource made managing it a challenge.

In the 1960s, invasive lampreys nearly eliminated native lake trout. Pollution put a stranglehold on the resource. Alewife, a small sardine-like invasive species, inundated the fishery.

The Department of Natural Resources began a stocking effort to revive the suffering salmonid population. And in the 1970s and early 80s, a unique and historical set of events occurred on the Great Lakes, and in particular, on Lake Michigan. Stocking trout and salmon came to fruition and started paying big dividends in sport fishing and tourism.

New environmental protection laws also were aimed at improving water quality throughout the basin and native fish species, particularly commercial species, began to rebound. A booming economy meant people had some spending money and Great Lakes recreational use grew. Along with recreational use, commercial exploitation of the lake's fishery, especially the recovering lake trout population, increased.

Wardens responded with increased enforcement but weak commercial fishing laws and sympathetic court systems severely tied their hands. Many contacts between commercial fishermen and wardens resulted in altercations and increased animosity.



MEU wardens have received special training in boat accident investigations, homeland security and more.

A pivotal case for change

In 1983, "Operation Gill Net," a covert investigation, uncovered the wholesale illegal harvest of fish stocks in excess of one million pounds annually from Lake Michigan. Though the number of prosecutions resulting from the sting wasn't earth shattering, it was newsworthy and the public became keenly aware of the illegal activity and called for more oversight and enforcement. It was a turning point.

DNR fisheries staff developed a plan to award individual catch quotas to each commercial fisherman, capping the amount of specific fish species they could harvest. The quotas started with Green Bay yellow perch. Fishermen had to complete a log after the day's harvest, listing the number of each species caught. They also had to report biweekly to monitor the percentage of quota harvested.

Proper enforcement required many hours waiting at the dock to ensure compliance with catch reporting. Warden duties were growing and the force was stretched thin.

Rollie Lee, then the Lake Michigan District warden, fought for and eventually received approval to form a warden unit solely devoted to Lake Michigan and tributary stream enforcement issues. The "Marine Enforcement Unit" (MEU) was born.

Improving relations

Last year marked the 25th anniversary of the Northeast Region's Marine Enforcement Unit. The initial plan for the unit called for an MEU supervisor and five field wardens to fill stations in Marinette, Sturgeon Bay, Two Rivers, and two positions at Green Bay. A request to also fill stations at Algoma and Sister Bay was denied.

To implement the process, some wardens were reassigned. I was assigned to Marinette, Dave Weber to Sturgeon Bay, Mike Bartz to Two Rivers and Elgin Hunter and Roger Hanson to Green Bay. Chuck Olson was named MEU supervisor.

Over the years, the unit has had several charges. The first and most important involved improving the relationship between wardens and the commercial fishing industry.

In the late 1970s and early 80s the relationship was strained, to say the least. Fights occurred, death threats delivered, knives thrown, and one warden had his jaw broken over a commercial fishing case. Wardens didn't go to the docks alone and usually went in groups of three to six. MEU wardens were told to "make it better."

DNR FILE

One of the biggest complaints from the fishermen resulting out of Operation Gill Net was the perception that the only time they saw a warden was when they were getting a ticket for something, and that wardens did not exercise discretion in the citations they wrote. MEU team members took this to heart.

The first couple of years involved MEU members just showing up at the dock. When fishermen asked a warden what the **%## he wanted, the warden's response was, "Nothing, just wanted to see how you were doing." Unit members made it a point to ask questions, learn the industry and learn about the people. Though tense at first, a bond eventually formed between the wardens and the fishermen. Mutual understanding erased much of the animosity.

Though not always happy with the decisions, most commercial fishermen began to better understand DNR objectives and they didn't want to go back to the old ways. Commercial fishing and wholesale fish dealing laws were antiquated and sometimes downright unenforceable. The MEU, under the steerage of Tom Hansen, worked for legislative change. With commercial fishing industry and wholesale fish dealer input, the DNR worked through sweeping law changes acceptable to both sides.

Salmon snagging, a once useful management tool gone bad, was eliminated and vigorously enforced. MEU members helped institute a whole new mindset within streamside sport fishing ideology.

Over time, the MEU has been able to show the need to upgrade to faster and more seaworthy patrol boats.

DNR FILE

Widely fluctuating water levels and increased recreational and residential shoreline use created new headaches in water regulations and zoning issues. MEU wardens worked closely with local municipalities to ensure proper use and manipulation of shorelines. The unit also took on invasive species control and water-based user conflicts.

On board

In 1999 the Sister Bay station opened adding to the MEU and although the unit's faces have changed, the mission has always been the same — to protect Lake Michigan's wealth of resources.

In its infancy, the MEU's members quickly found the need for equipment and tactics upgrades. Patrol boats were mostly inadequate for the task at hand. Over time and through the tenacity of its members, the MEU was able to show the need for, and receive newer, faster and more seaworthy patrol boats.

The unit is equipped with four 29-foot patrol boats and a 30-foot cabin boat for longer deployments, as well as snowmobiles, ATVs, and other specialized equipment. Team wardens have received specialized training in boat accident investigation, analytical investigations, sound and speed enforcement, homeland security, and more. They are available for special assignments throughout the state. Some wardens are regional dive team members as well.

Team members are well-versed in wholesale fish dealer records checks and can perform a variety of long-term commercial audits. MEU members have been involved in several complex commercial fishing investigations throughout the years, involving multiple participants in different states and countries.

Team members are all expert large boat handlers and have expertise in commercial fishing equipment and practices. MEU members partner with the U.S. Coast Guard as well as local law enforcement agencies for search and rescue events, port security patrols, local disaster planning and exercises, and special event planning and coordinating.

The Marine Enforcement Unit has earned its place in natural resource enforcement in Wisconsin and is the longest-standing active marine enforcement unit in the Great Lakes states and provinces.

Mike Kitt recently retired from DNR. He was one of the original wardens in the MEU and was stationed in Marinette.

Give in to *fish fervor*

STEVE APPS

CATHERINE KHALAR

But chew over this advice before you consume.

Sonya Rowe

Crowded supper club parking lots on a Friday night tell the story. We love fish fries. They've been a time-honored and tasty tradition in the Badger State since the days of prohibition when tavern owners needed a way to lure customers in without liquor. ■ And while an occasional Friday night fish fry is a treat, even more so, many families savor those sunny afternoons out on the lake or river catching fish and then preparing them together using a recipe that contributes to a healthy and balanced diet.

Ice fishing. Fly fishing. Charter boat fishing. Shore fishing. The opportunities to feed a family by fishing and to have fun doing it are available year-round and statewide…with caution.

Nutritionists know that fish are low in fat and high in protein and a great source of vitamins and minerals. Fish, like bluegills and perch, have less than half the calories of a hamburger. Many doctors suggest that eating one to two meals of fish a week can benefit your health.

Even though fish are a great source of nutrition, some fish also accumulate contaminants from their watery homes. These pollutants, such as mercury, are then passed on to wildlife and humans when they eat contaminated fish. Mercury is not peculiar to Wisconsin. Dr. James Hurley, director of the Environmental Health Division at the Wisconsin State Laboratory of Hygiene, recently attended the 10th International Conference on Mercury as a Global Pollutant. He says, "Governments around the world are working toward a global agreement to protect human health and the environment from the harmful effects of mercury."

Mercury levels in some ocean species, for example, prompted the Food and Drug Administration (FDA) to issue national advisories. The FDA sets tolerance and action levels for contaminants in purchased fish, but the FDA and the Environmental Protection Agency (EPA) defer to the various states' fish monitoring and advisory programs for advice on eating fish taken from local waters.

MIKE HRUDEY

Author Sonya Rowe enjoys fishing in Wisconsin.

Mercury and polychlorinated biphenyls or PCBs are the primary contaminants found in fish caught in Wisconsin. The good news for anglers here, though, is that Wisconsin's fish contain less mercury and PCBs than they did in the past.

"The data we've collected over the past 40 years show general improvements in mercury and PCB levels compared to earlier years," says Candy Schrank, Department of Natural Resources fisheries toxicologist. "Studies using our data support assertions that fish respond to sediment cleanup and mercury emission reductions, and this is good news for anglers and for state and local economies."

Where are you in the exposure spectrum?

More than 80 percent of Wisconsin adults eat fish or shellfish, including freshwater and saltwater spe-

cies purchased from grocers, restaurants or fish farms. Many people regularly eat fish from Wisconsin waters, either catching their own or purchasing fish such as lake whitefish or chubs that are commercially harvested from Lake Michigan or Lake Superior.

Some people take great care with how much and what kinds of fish they eat. But others may unknowingly be exposed to unsafe amounts of contaminants by eating too many larger predatory fish such as walleye from northern Wisconsin lakes or king mackerel from the fish market, or by consuming too many fish from waters with high levels of contaminants. It pays to be informed.

As a fish consumer you should ask yourself: How frequently do I eat large predatory fish? Do I know what the consumption recommendations are for my favorite fishing spots? Where did the fish I am eating come from?

Dr. Lynda Knobeloch, a Wisconsin Department of Health Services researcher, recently described seven cases involving 14 Wisconsinites who were found to have high blood mercury levels linked to high fish consumption. Some ate as much as nine fish meals per week before being tested for mercury. Three people reported vague symptoms of mental confusion, sleep difficulty, balance problems and blurry vision. Four of the cases included older anglers who ate their catch from northern Wisconsin lakes. The three people with symptoms reported improvements and saw their mercury levels return to normal after they reduced their predatory fish intake.

In explaining her findings, Knobeloch concluded, "We hope that these documented Wisconsin cases were exceptions, but fear that some avid anglers who fish northern lakes may be eating too many fish with high concentrations of mercury."

Dr. Knobeloch later used hair samples from volunteers to test for mercury exposure. She compared hair mercury levels in 2004 to those in 2008. Participants tested in 2004 that had hair mercury exceeding 1 ppm (parts per million), the upper end of safe mercury exposure, were advised to continue to eat fish but select fish low in mercury. Four years later, this group had significantly lower hair mercury overall. Most reported eating less fish, eating different types of fish, or both, demonstrating that eating species with lower mercury levels or eating less fish can reduce your exposure to mercury.

Another Wisconsin study compared PCBs in the blood of Great Lakes charter captains, anglers and infrequent fish eaters. The participants had eaten fish for an average of 30 years including purchased fish, fish caught from Wisconsin waters and from the Great Lakes. On average, they ate 25 meals of fish per year (or about two meals per month) when the study began in 1993 and 1994 and 18 meals per year in 2005. Over this time period, PCB levels declined in 80 percent of the participants, which was attributed in part, to eating fewer fish meals and to lower PCB levels in fish following restrictions on PCB production and use. During this time, Lake Michigan anglers also switched from eating lake trout — a long-lived fatty fish with higher PCBs — to eating more salmon, fish that tend to be lower in PCBs.

Reducing your exposure to contaminants

People who frequently eat fish from Wisconsin waters should follow Wisconsin's fish consumption advice issued jointly by the Department of Health Services and the Department of Natural Resources. You can still get the health benefits of your catch, while reducing contaminant exposure to you and your family. The advice is a set of recommendations on how many meals of Wisconsin fish you and your family should eat in a given time period.

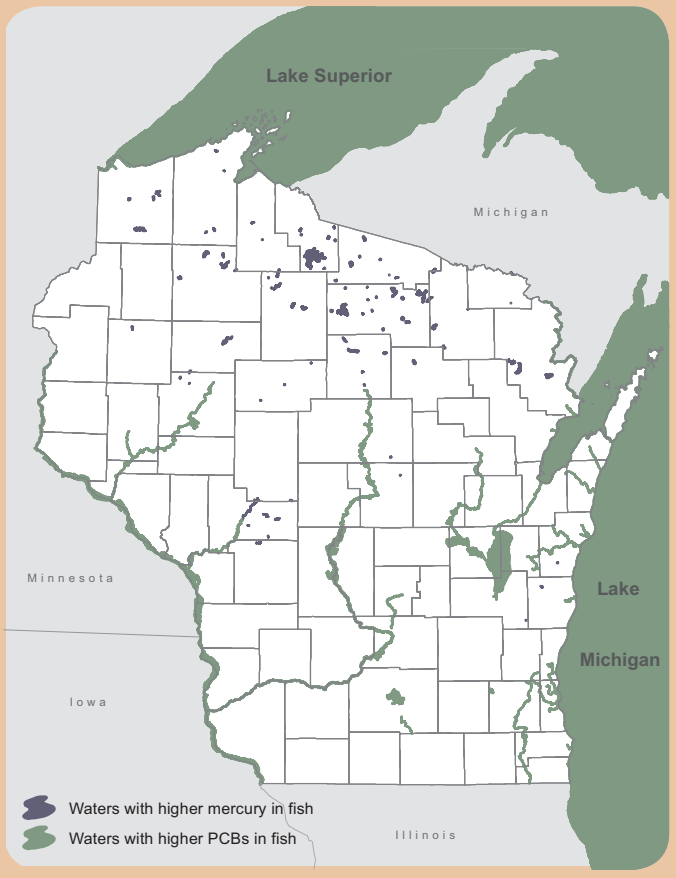
Contaminants vary with the species of fish as well as the size of the fish and water in which it lives. Because most fish contain mercury, start by following the statewide safe-eating guidelines when eating fish from most of Wisconsin's inland waters (dnr.wi.gov/fish/consumption/). The webpage also presents information that compares popular purchased species. Fish buyers may also consult FDA's website (www.fda.gov/food/foodsafety/).

Also, check the exceptions to the statewide advice to find out if your fishing spot is one of 153 areas where higher levels of contaminants have been found in fish and more stringent advice for fish consumption is necessary.

The Department of Natural Resources monitors fish throughout the state on a rotating schedule depending on the type of water, pollutant and if there has been cleanup activity. Contaminants in fillets are quantified by the Wisconsin State Laboratory of Hygiene and by using data from other states for border waters and for lakes sampled by the Great Lakes Indian Fish and Wildlife Commission (GLIFWC).

The *Choose Wisely* booklet, available at your local DNR office or from the DNR website (dnr.wi.gov/fish/consumption/), contains a list of lakes and rivers where some species should be eaten less frequently.

Exceptions to safe eating guidelines



Polychlorinated biphenyls or PCBs

PCBs are man-made chemicals first used in the 1940s in electrical equipment, industrial processes, and carbonless copy paper manufacturing and recycling. Wisconsin began issuing fish consumption advice in the 1970s after PCBs were detected in Lake Michigan, Green Bay and parts of the Wisconsin River. In 1979 the United States banned PCB manufacturing altogether.

PCBs resist degradation, attach to sediments and build up in fish and wildlife. The State of Wisconsin and the federal government have worked with various responsible parties to commit significant resources toward removing PCB contaminated sediments from rivers and harbors that historically received discharges from operations that used or handled PCBs.

Fish take in PCBs from contaminated sediments when they eat plants, algae, insects, zooplankton and crayfish. PCBs and other similar chemicals bioaccumulate (build up) and become more concentrated in larger fish or other animals that eat them. The amount of PCBs found in fish depends on species, age, size, fat content and foraging habits. Fish that live in areas with PCBs in the sediment have higher concentrations of PCBs. Since PCBs bioaccumulate in the fatty tissue of organisms,

Catching catfish brings smiles to anglers, but consult the safe eating guidelines before frequently eating catfish.

BRADD SIMS

Smaller is better when it comes to eating fish like this tasty walleye.

JOHN CICHOSZ

CLIP & SAVE

Wisconsin's safe eating guidelines

How much to eat	Fish you catch in Wisconsin	Fish you purchase
LOW MERCURY		
Men and older women - unrestricted Women of childbearing age and children under 15 2 meals/week		Shrimp, Farm-raised catfish, Pollock, Salmon(except Great Lakes) and most other purchased fish
Men and older women - unrestricted Women of childbearing age and children under 15 1 meal/week	Bluegills, Sunfish, Crappie, Yellow Perch,Bullheads, and Inland Trout**	Canned "light" tuna
MEDIUM MERCURY		
Men and older women - 1 meal/week Women of childbearing age and children under 15 1 meal/month	Pike, Bass, Catfish, Walleye, and all other Wisconsin species**	Tuna steaks, Canned white tuna, and Halibut
HIGH MERCURY		
Men and older women - 1 meal/month Women of childbearing age and children under 15 Do Not Eat	Muskellunge**	Shark, Swordfish, King mackerel, Tilefish

*** Some lakes and rivers contain higher levels of mercury or PCBs. See map at left and dnr.wi.gov/fish/consumption for exceptions.***

fatty fish like carp and catfish may have higher PCB concentrations.

As a general rule, larger older predator fish are more likely to have higher concentrations of contaminants than younger smaller fish from the same waterbody.

Mercury reductions underway

The Department of Natural Resources first issued fish consumption advice due to mercury in 1985 when high levels of mercury were found in some fish species in several northern Wisconsin lakes far from any direct sources. Unlike PCBs, mercury is a naturally occurring element, but human activities such as mining, burning fossil fuels, metals production and waste incineration release mercury to the atmosphere.

Mercury, released as elemental, reactive gaseous, or particulate mercury, ends up in lakes and streams through rain and snow, dry deposition and runoff. Today, coal burning is one of the main sources of mercury entering the atmosphere. Some of the emitted mercury is deposited on land and water locally or regionally. Some may be transported longer distances with weather systems, becoming part of the global mercury cycle.

Deposited mercury must first be converted to methylmercury before it can be taken up by aquatic organisms. This conversion is greatest where oxygen levels are very low and acidity and sulfates are high, conditions typical in some wetlands and northern lakes. That's where certain types of anaerobic bacteria convert mercury to methylmercury that then enters the aquatic food chain and accumulates in fish and fish-eating wildlife and humans.

BOB WIEDHOLZ

Panfish, like this pumpkinseed, provide hours of fishing fun and tend to be low in mercury.

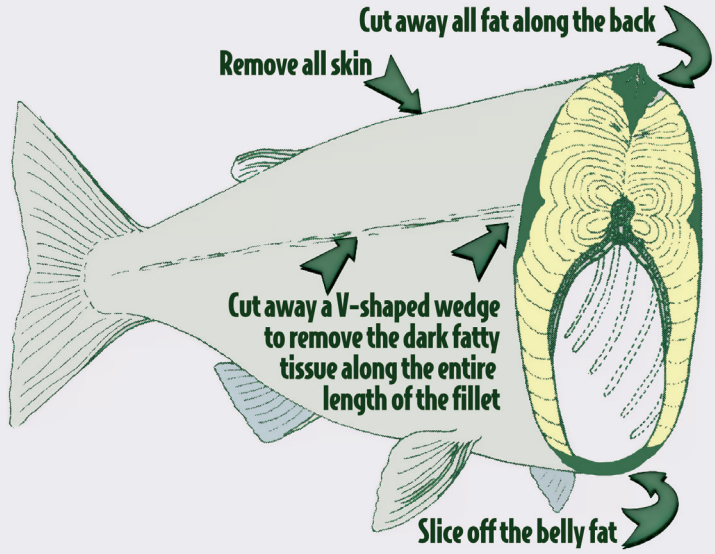
Dr. Carl Watras, a mercury researcher for the Department of Natural Resources and UW-Madison, notes that although levels of mercury in lake water and fish have declined along with recent reductions in "mercury rain," future improvements will depend on further reductions in mercury deposition and several other factors such as climate and acid rain.

Conditions that stimulate methylmercury production and bioaccumulation can affect the amount of mercury in fish. Watras' research in northern Wisconsin indicates that acid rain and extreme changes

More information:

- **Fish consumption advisories at dnr.wi.gov/fish/consumption/**
- **Wisconsin Department of Health Services at dhs.wisconsin.gov/eh/fish/**
- **Are you a Wisconsin male angler 50 or older? The Wisconsin Department of Health Services invites you to participate in a brief online survey on fishing, fish advisories and the fish meals you eat. Your participation will improve information that we provide to Wisconsin anglers on healthy fish consumption. Visit study.uwsc.wisc.edu/anglers**

Fillet your fish to reduce PCBs



in water levels stimulate methylmercury production in our lakes. Extreme changes in water levels may occur more frequently in a future climate that is both warmer and wetter.

The Department of Natural Resources has been working with local communities for more than a decade to reduce the use of mercury-containing products, promote mercury recycling, reduce mercury spills and reduce air emissions from coal-fired power plants and other industrial sources, according to Marty Burkholder, policy specialist for the DNR Air Management program.

Recently, Wisconsin utilities were required to reduce mercury emissions by 40 percent. ERCO Worldwide, which owns and operates a chlor-alkali plant in Port Edwards that until 2009 was responsible for about 20 percent (almost 1,000 pounds) of the annual mercury emissions reported in Wisconsin, voluntarily moved to a new technology that eliminated mercury emissions from its manufacturing processes.

A new law recently banned the sale of certain mercury-containing devices including fever thermometers, barometers, toys and thermostats.

Dioxins, fluorinated compounds and blue-green algae

Dioxins, shorthand for a family of related chemicals (polychlorinated dibenzodioxins and polychlorinated dibenzofurans), are unwanted byproducts of several manufacturing processes and are found throughout the world.

In the past, these contaminants were discharged to some of Wisconsin's waters when companies used chlorine to bleach wood pulp to make paper. Now, with that source under control, the main source of dioxins to the environment in the United States is thought to be the uncontrolled open burning of waste materials such as plastics, asphalt and rubber.

Dioxins can bioaccumulate and, as a result, fish consumption advice for dioxins is issued for carp and channel catfish on some stretches of the Wisconsin River.

A fluorinated compound called perfluorooctane sulfonate (PFOS) is the most recent addition to the list of chemicals that have prompted consumption advisories. PFOS belongs to a group of chemicals called surfactants that have unique properties that make materials resistant to stains, oils and water. Fish consumption advice due to PFOS is in place for bluegills and crappies taken from certain sections of the Mississippi River.

Under certain conditions that are not well understood, blue-green algae can produce toxins that also can be found in fish. The health risks of eating fish exposed to these toxins are largely unknown. Anglers are advised to eat in moderation any fish taken from waters that look like pea soup, green or blue paint, or have scum or puffy blobs on the surface of the water.

When filleting fish from waters that might be contaminated, avoid cutting into the guts where the algal toxins accumulate, and rinse the fillets well before cooking. Or, better yet, choose another water to fish. To learn more about blue-green algae visit dnr.wi.gov/lakes/bluegreenalgae/

How contaminants affect our health

Health experts encourage us to include fish in our diets but to limit the intake of fish taken from contaminated waters, and to try to eat smaller, younger fish. Health risks from eating fish depend on how often you eat it and the contaminant levels in the fish that you eat.

Mercury from the fish you eat can build up in your body, reaching levels that affect the nervous system. Prenatal and early childhood exposures can cause lifelong changes in brain function affecting learning, coordination and reaction times. In adults and older children, mercury can affect cognitive thinking, coordination, balance, vision, hearing and speech. It takes our bodies 60 days to eliminate half of the mercury we ingest, so fish with higher mercury concentrations should be eaten less frequently.

The health effects of eating fish contaminated with PCBs have been widely studied in animals and humans. Studies indicate that people exposed to PCBs are at greater risk for a variety of health problems. PCBs can cause developmental disorders in children born to mothers who eat contaminated fish before and during pregnancy. PCB exposure may cause reduced birth weights and conception problems.

PCBs also are linked to an increased cancer risk, as well as immune and endocrine problems such as diabetes and thyroid problems. PCBs are stored in body fat for years and the burden in the body increases over time as one eats more contaminated fish.

Essential fats are good news

You've probably heard about good and bad fats. In addition to being a great source of vitamins, protein and minerals, fish are one way to add more healthy fats to your diet. Omega-3 and 6 fats are essential for normal brain and nerve function and may lower the risk of heart disease and type 2 diabetes. The only way to get these good fats is from fish, nuts, vegetable oils, flaxseeds or supplements. Some species of fish like herring, mackerel, sardines, wild salmon and trout are excellent sources of omega-3 fats.

Dr. Henry Anderson, state health officer from the Wisconsin Department of Health Services who has worked on fish consumption advice since the 1970s notes, "While there is more to learn about the importance of these essential nutrients and how much is in Wisconsin fish, most people would benefit by adding these foods to their diets."

That means you can help keep the Friday fish fry tradition alive and well in Wisconsin at home or in the supper club. Go ahead and dig out your favorite fish recipe or accept that frequently uttered Friday invite, "Let's go out for fish." Answer the call for coleslaw, tartar sauce and a buttered roll on the side. Mull over your choice of potato, soup or salad. Just be an informed consumer or angler and choose the main dish thoughtfully before feasting on that flaky fare.

Sonya Rowe is a communications specialist for the DNR Fisheries Management program.

Submit your healthy Wisconsin fish recipe

Twenty-five recipes featuring a variety of Wisconsin fish species will be featured in an online cookbook. We'll publish at least two recipes in an upcoming issue of *Wisconsin Natural Resources* magazine.

We'll base our selection on:

- **Originality and creativity**
- **Healthiness**
- **Ease of preparation**
- **Species of fish**
- **Added details on the recipe's origin and how or where you catch your fish**

Recipes must be your own, feature Wisconsin fish species and be cooked (not smoked or pickled). One entry per household.

Submit using our online form at dnr.wi.gov/fish/ by April 1, 2012.

Readers Write

A FOUR-LEGGED VISITOR
I took this photo from my house in Amery (Polk County).

Jack Hayek
Amery

NH-AL UPDATE
Loved the article by Ted Rulseh on the Northern Highland-American Legion ("Hidden in plain sight," August 2011), however, here's a small update. That great little general store west of Sayner on "N" and Razorback Road still has a great variety of reasonably priced "stuff," but they no longer have showers. There are showers just down the road at the Crystal Lake campground. Keep up the good work!

Jim Pieper
Iron Ridge

GOOD GRADE FOR "JAKE'S JOURNAL"
What a great article by Jake Sikora ("Jake's journal," August 2011). Very enjoyable and well written. Deserves an A+.

Sharon Czerniak
New Berlin

AWESOME LEARN-TO-HUNT BEAR EVENT
My son and I were involved in a Learn to Hunt event in August in Drummond. I would like to let you know what a wonderful program this is. Jill Schartner (Conservation Warden, Drummond) ran a very good program in her area. From the hunter safety weekend to the hunt weekend, she was totally involved. From all the guides/mentors to the taxidermist with cooler space in warm weather and even a get-together for all hunters for a brat fry. The whole area knew what was going on and everybody wished us good luck. My son has been involved in the Learn to Hunt Deer program in Minocqua and said the bear hunt was AWESOME! Thanks for the program.

Larry and Josh Leal
Drummond

A YOUNG *WNR* FAN
I just had to send this picture to you. Our 20-month-old girl getting potty-trained while seeming very interested in your magazine. I guess they can't start too early.

Tom Hubbard
Schofield

NICE POSE
I took this photo of a dragonfly a few weeks ago at our family cottage in Langlade. He/she posed very nicely for me for about 15 minutes.

Chad E. Goodrich
Appleton

*Thanks for sharing this nice photo, Chad. Actually, this appears to be a female ebony jewelwing (*Calopteryx maculata*), a species of damselfly. They are in the same order of insects as dragonflies (*Odanata*), but damselflies are smaller and rest with their wings folded. The female ebony jewelwings have dull brown bodies and smoky wings with white spots near the tips. The males have metallic blue-green bodies and black wings.*

NO ACCESS TO THE WEB?
Don't have access to a link we mention in a story? Let us know when you want to follow a link we list. We'll do what we can to get you a copy of the material if it is available free of charge and is relatively short in length.

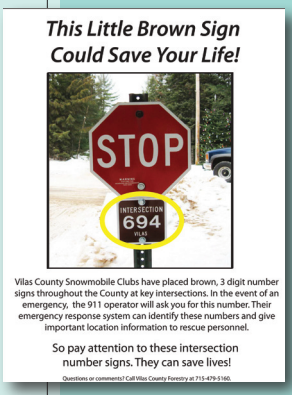
CORRECTION

We apologize for the omission. Thank you to the Bayfield Heritage Association for its contributions to "The Legacy of R.D. Pike" (October 2011). The Association provided information for the article and contributed a photo of R.D. Pike.

SAVING SNOWMOBILERS' LIVES

As snowmobiling season gets underway be aware that many counties use various types of emergency numbering systems to report accidents, improve response time to incidents and help locate lost snowmobilers. Vilas County initiated the program. The DNR Bureau of Community Financial Assistance issues a trail sign handbook that is referenced in state law. Know the emergency response system and trail signage for the county you snowmobile before you sled.

For example, Vilas County calls its numbering system TINS (trail intersection numbers). The system was designed through the cooperation of the Vilas County Snowmobile Alliance, which consists of representatives of the 11 functioning snowmobile clubs in the county, and the Vilas County Snowmobile Safety Committee consisting of representatives of county government, the sheriff's department, Department of Natural Resources and snowmobile clubs.



If a snowmobiler has an emergency situation, he or she locates the nearest intersection number and calls 911. The snowmobiler then gives the intersection number to the dispatcher and the dispatcher enters the number into their computer system and a map appears with that specific location identified along with the best route for emergency responders to access.

UPDATE

NORTHERN HIGHLAND GOES HI-TECH

Losing yourself in the Northwoods may be a goal you strive for, but a new application for iPhone, iPad and iPod users can help people find trail and other information about the Northern Highland-American Legion Forest, even from remote parts of the forest. The free app was developed in partnership with the North Lakeland Discovery Center in Manitowish Waters and is available through the Discovery Center's website (discoverycenter.net).

The app will provide mobile device users — some of the three million annual forest visitors — with another means of finding their way around the forest and save the state money by printing fewer trail guides. Mobile device users can also connect to the DNR website to view maps and trail information. With sometimes spotty cell phone coverage in the forest, downloading this app before embarking on a forest venture ensures you'll have the information at your fingertips when you need it.

Of course, you still might want to slip your trusty compass into your back pocket, just in case. It will still work without charging it up or if you accidentally drop it in the lake.

COMMENT ON A STORY?

Send your letters to: Readers Write, WNR magazine, P.O. Box 7921, Madison, WI 53707 or email letters to dnrmagazine@wisconsin.gov. Limit letters to 250 words and include your name and the community from which you are writing.

From page 2

A family of foxes

called me on May 5, to report she had seen six baby foxes playing near the den site. I made a daily pilgrimage with camera in hand and began to record the growth of the kits during the next six-week period.

Early in the morning on Mother's Day, I quietly approached the den. Five of the kits were sitting up on the hill, and one of them was running down the side of the road to its mother who was standing on a gravel driveway apron. The mother spotted me just a second or two after I saw her. Immediately she let out a series of warning barks as she faded into the tall grass near another pond. The kit turned tail and rejoined his brothers and sisters by the entrance to the den.

In addition to the main entrance, there was a series of three or four side tunnels (fox holes) that allowed the young foxes to duck to safety if they sensed danger.

My most memorable encounter with the young foxes occurred on June 8. It was at about 5:15 a.m. I was on my way to the den, walking between a golf course pond and a cedar swamp. Suddenly, an adolescent fox ran out of some tall grass right in front of me and sat down near a plastic culvert along the pond's edge.

I started snapping pictures with my camera, and then I'd pause and talk to him like I would to a dog. Slowly I moved to within 15 feet and sat down. The fox seemed very calm. He eventually laid down and closed his eyes to take a nap. Occasionally he'd wake up and casually glance over at me and then lick his paws or yawn. Then he chewed on the edge of the culvert like a baby who is teething.

As I got up, the fox slipped into the safety and security of the culvert's interior. I felt a kinship with this wild creature during the course of the 20-minute episode. If you've ever read the story *The Little Prince* by Antoine de Saint-Exupéry you know what I'm describing.

By mid-June, the kits had all left the den. Since then, I'll occasionally find fox scat on my driveway, along the side of the road, and on the manhole covers in our road. It's as if they're saying, "We're still around, but you'll have to wait until next spring to see us."

You can be sure I'll be out looking for them after the snow melts and the first blades of grass start to green up in my neck of the woods.

Tim Sweet tracks foxes and writes from his home in Clintonville.

Comforts

Social media caters to the pet-minded masses

Natasha Kassulke

Love it or hate it, there is no denying that social networking is here and our pets play a huge role in its popularity.

It's an environment where "tweeting" means more than, but might include, bird banter. It's a place where YouTube videos of mean kitty ditties, sneezing pandas and breakdancing birds make such prestigious lists as *Time* magazine's top 50 videos. It's a place where Facebook has fueled spin-off sites such as Dogbook and Catbook. And it's a place where slideshows of pets parading in embarrassing costumes, such as the one titled "Why dogs bite people" (VERY funny and cute dog pictures), become viral. Mashable.com, a barometer for the hottest trends in social media, reports that some pets even have more social media fans than major media outlets. Take Sockington, a normal cat, who has recruited more than 1.5 million Twitter followers to his "Socks Army" (@sockington). There is Boo, a cute Pomeranian, who likes to wear sunglasses and has more than 2.2 million "likes" on Facebook. And there is the infamous Raccoon Willie who won YouTube fame for showing the world why you should never try to domesticate a raccoon if you value your home.

A social networking success story closer to home is that of Braveheart, a mixed breed dog that was found in a commercial trash bin in Kentucky, his body emaciated and riddled with mange and worms. After being transferred to Wisconsin, Braveheart was nursed back to health at the UW Veterinary Care Small Animal Hospital and he received get well wishes and donations to help cover his critical care needs from his more than 12,000 Facebook fans (facebook.com/Braveheartthedog).

This winter, as you cozy up to your netbook or try to ignore in-laws at the holidays by fiddling with your iPhone, it may be comforting for you to know that no matter what kind of pet you have, there's probably an "app" for that.

With iPhones and iPads being all the rage these days, pet owners may be interested to learn that while some apps will cost you a few dollars, there are many pet apps available that are free for you to download and use. Here are a few to get you started.

The "Best Pet Care Services" app is available at your fingertips, is free and can help you find a local veterinarian, doggy daycare or dog park. Go fetch it at itunes.apple.com/us/app/pet-care-services/id327045886?mt=8

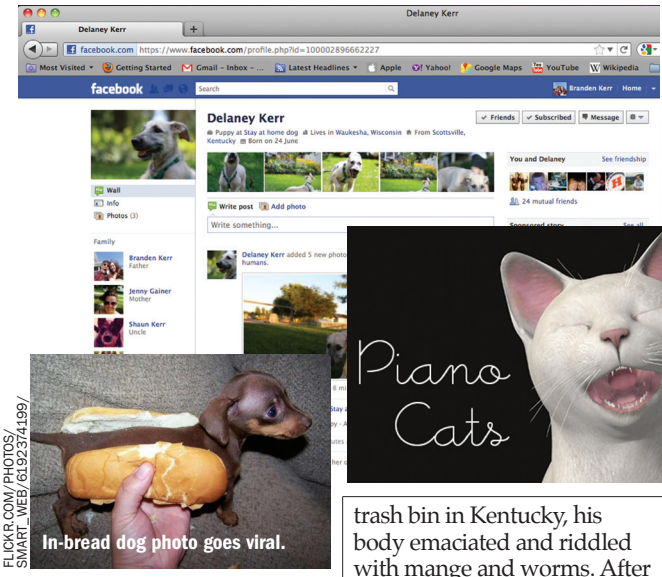
For cat lover entertainment there is the free "Piano Cats" app. Launch the app and you are presented with a kitty keyboard (white cats for the white keys and black cats for the black keys). You can then tap out a tune of meows representing the music notes. Kind of silly but hey, it's better than shoveling or snowblowing, right? To learn more, visit appbrain.com/app/cat-piano-free/com.objectgraph.catpiano

Another free app, "MyPets Info," lets you record data such as your pet's birthday, registration tag or chip number, breed, vet info, vaccinations and medical issues. It also allows you to record upcoming appointments for grooming or vet care. Visit itunes.apple.com/us/app/mypets-info/id318892622?mt=8

Creating a holiday card featuring your favorite furball? Try "My Pets Album," an app that allows you to either use an existing pet photo on your iPhone or access your camera phone and take a new picture. Then you add your own clever captions. Visit itunes.apple.com/us/app/mypets-album/id356326994?mt=8

Remember Napster, that music streaming website that was often embroiled in controversy over copyright issues? Well now there is Dogster (dogster.com) and Catster (catster.com). While the focus here isn't on "meow-sic" as you might expect from the name, the Q&As on these sites feature such advice as how do you keep your puppy from getting too fat and how to calculate your dog's age in people years. Want to know the best way to store wet cat food after it has been opened? Cast your vote for pet food can covers or aluminum foil at catster.com

Think blogs are a passing fad? Think again. Pet blogging even has its own awards program, The Pettie Awards, to recognize the best of the best in pet blogging. Visit dogtime.com/petties to learn who the 2011 winners are or what they wore to the awards.

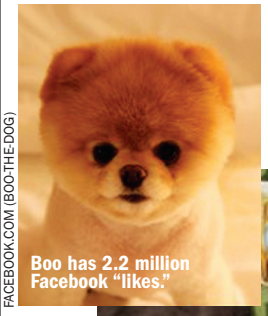


BRANDEN KERR

UPTOWN ARTS

FLICKR.COM/PHOTOS/SMART_WEB/6192374199/

In-bread dog photo goes viral.



FACEBOOK.COM (BOO-THE-DOG)

Boo has 2.2 million Facebook "likes."

BHRESCUE.COM

Braveheart's recovery was a social media success story.

Natasha Kassulke is part of the editorial team of Wisconsin Natural Resources *magazine. Her dog, Stewie, appears with her in her Facebook profile photo.*

Embrace the season

GREGORY K. SCOTT

Kathryn A. Kahler

Just like our furred and feathered friends that make their home in Wisconsin, we humans have three basic ways to deal with winter — we hibernate, migrate or adapt.

Some of us grouse about the weather, hunker down, stay indoors and count the days until warm weather returns. Some of us lock up the house, forward the mail and take flight to someplace warm. Traveler isn't passing judgment, if that's what you prefer. We're just suggesting you take this winter to adapt and embrace the season, start a new family tradition and get some fresh air and exercise while you're at it.

Nature centers across the state will welcome you with open, parka-clad arms and may pass out hot cocoa as an extra incentive. Here are a few suggestions. For more, check out the UW-Extension winter catalog of events at uwex.edu/erc/catalog.html. Many have registration fees and deadlines, so call ahead.

RIVEREDGE NATURE CENTER

Start a family tradition and take part in the Christmas Bird Count near you.

Learn **Winter Survival** by taking a look at ways animals adapt to survive Wisconsin's winters on Saturday, December 10, 12:30 to 3 p.m., at Mosquito Hill Nature Center (N3880 Rogers Rd., New London, 920-779-6433, mosquitohill.com). Find out ways to stay warm, start a fire and build shelter.

Put on an extra layer of clothes and head to the Pringle Nature Center (9800 160th Ave., Bristol, 262-857-8008, pringlenc.org) on Sunday, December 11, 9 to 11 p.m., for the **Geminids Meteor Shower Viewing**. A $5 fee will get you a naturalist-led event, complete with hot chocolate and a warming fire.

The Retzer Nature Center (S14W28167 Madison St., Waukesha, 262-896-8007, friendsofretzer.org) will host a **Winter Jan-Boree** on Sunday, January 22, 10 a.m. to 4 p.m., where you'll learn about winter tracking, animal signs and bird feeding tips, or participate in hiking, snowshoeing and children's activities.

Let the **Winter Games** begin! On Saturday, January 28, 12:30 to 3:30 p.m., Riveredge Nature Center [4458 County Hwy Y (Hawthorne Drive), Saukville, 800-287-8098, riveredge.us] has scheduled creative winter activities, games, team and individual events, with hot cocoa and popcorn provided.

Snowshoeing is a great way to enjoy a crisp walk in new-fallen snow while studying nature. Most events have small fees ($5 to $10 per person) that include snowshoe rental so you can try out the sport before investing in your own equipment. Check out the **Candlelight Snowshoe Walk** at Mosquito Hill Nature Center (N3880 Rogers Rd, New London, 920-779-6433, mosquitohill.com) on Saturday, January 28 from 7 to 9 p.m. (register by January 21); **Guided Snowshoe Hikes** at Ledge View Nature Center [W2348 Short Rd., Chilton, 920-849-7094, www.co.calumet.wi.us (click on Departments:Parks:Ledge View)] every Sunday in January (except January 1) and February at 1 p.m.; **Winter Walk/Intro to Snowshoeing** (Saturday, January 7, 9 a.m.), **Candlelight Ski-Snowshoe Hike** (Friday, January 27, 5:30-7:30 p.m.) and **Snowshoeing Navarino** (Saturday, January 28, 9 a.m.), all three at the Navarino Nature Center, W5646 Lindsten Rd., Shiocton, (715) 758-6999, navarino.org; **Family Holiday Snowshoe Hike** at Riveredge Nature Center [4458 County Hwy Y (Hawthorne Drive), Saukville, 800-287-8098, riveredge.us] on Tuesday, December 27, 1 to 3 p.m.; and **Snowshoe Candlelight Hike** at Beaver Creek Reserve (S1 CTH K, Fall Creek, 715-877-2212, beavercreekreserve.org) on Friday, January 13 from 6 to 7:30 or 7:30 to 9 p.m.

If you'd rather venture out on your own, try one of the designated snowshoe trails at many **Wisconsin state parks**. Visit dnr.wi.gov/org/land/parks/trails/snowshoe.html for a complete listing.

Finally, start a new family tradition and volunteer to help count birds for the annual **Christmas Bird Count (CBC)**. Nature centers and birding organizations across the country help with this Audubon Society-sponsored one-day bird tally that celebrates its 112th anniversary this year. Counts will take place between December 14 and January 5. Visit birds.audubon.org/get-involved-christmas-bird-count, or check out these special events: **Shiocton Area CBC** at Mosquito Hill Nature Center (N3880 Rogers Rd, New London, 920-779-6433, mosquitohill.com) on Friday, December 16, 8 a.m. to 4:30 p.m.; **Riveredge Nature Center Annual CBC** [4458 County Hwy Y (Hawthorne Drive), Saukville, 800-287-8098, riveredge.us] on Saturday, December 17, 5 a.m. to 7 p.m.; and **Wehr Nature Center Annual CBC** (9701 W. College Ave., Franklin, 414-425-8550, friendsofwehr.org) on Saturday, December 17, 8 a.m. to noon. All these events welcome first-time and experienced birders and include a potluck or chili lunch.

RIVEREDGE NATURE CENTER

Visit a nature center this winter for snowshoeing, nature study and exhilarating fun.

Kathryn A. Kahler is a staff writer for Wisconsin Natural Resources *magazine.*

Wisconsin, naturally

DIAMOND ROOF STATE NATURAL AREA

Notable: Diamond Roof is a nearly 1,500-acre natural area complex of upland hardwood forest, fast-flowing rocky creeks, conifer swamp, small lakes and spring ponds. The northern hardwood includes sugar maple, basswood, white ash, yellow birch, paper birch, black cherry, ironwood, beech and butternut. Three creeks wind through the complex: Sasacat Creek, Nine Mile Creek and McCaslin Brook. The boulder-strewn ravine of the latter supports the state-threatened Braun's holly fern (*Polystichum braunii*), an evergreen fern indicative of areas exposed to cold-air drainage. Common streambank species are lady fern, intermediate wood fern, naked miterwort, twin-leaf miterwort, and bulblet fern. Large, decaying tree limbs, stumps and trunks on the ground provide ecological niches for many small organisms and are an indicator of older-growth conditions. Surrounding the creeks are lowland conifer swamp and northern wet-mesic forest dominated by white cedar, black spruce, balsam fir and yellow birch. Of special note is the presence of the state-threatened marsh valerian (*Valeriana uliginosa*), a species found only in highly alkaline environments. Three remote and beautiful lakes — McCaslin Spring and Upper and Lower Hiwanka Lakes — can be found here.

How to get there: Within the Chequamegon-Nicolet National Forest. From the intersection of State Highway 32 and County Highway T in Townsend (Oconto County), go north on Highway 32 3.9 miles, then south and west on Forest Road 2123 (Diamond Roof Road) 3.3 miles to McCaslin Brook. Follow the creek west into the site. Access is also available from Ada Lake Road to the west. Visit dnr.wi.gov/org/land/er/sna/index.asp?SNA=454 for information and a map of the site.