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WISCONSIN NATURAL RESOURCES

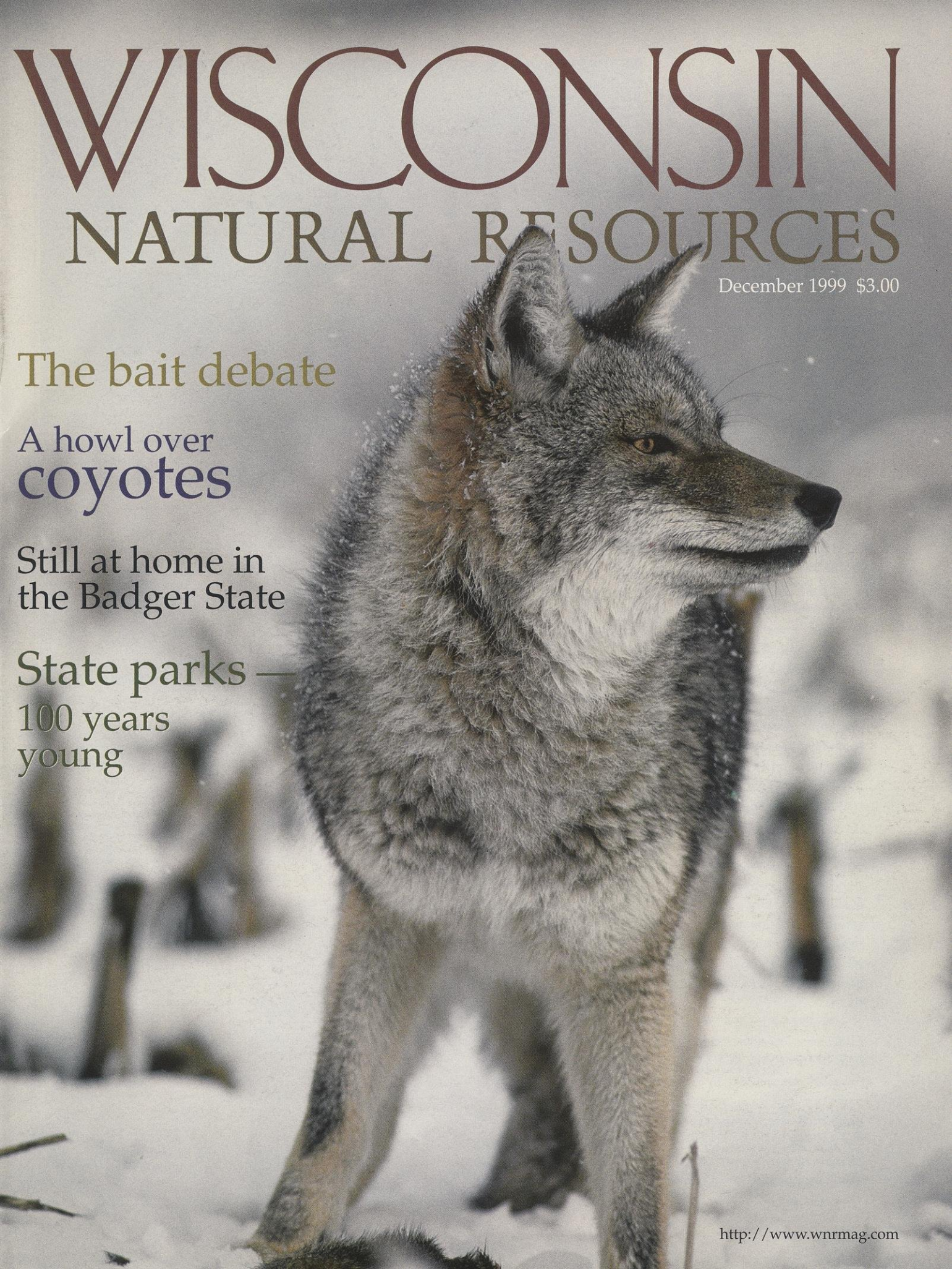
December 1999 $3.00

The bait debate

A howl over coyotes

Still at home in the Badger State

State parks — 100 years young



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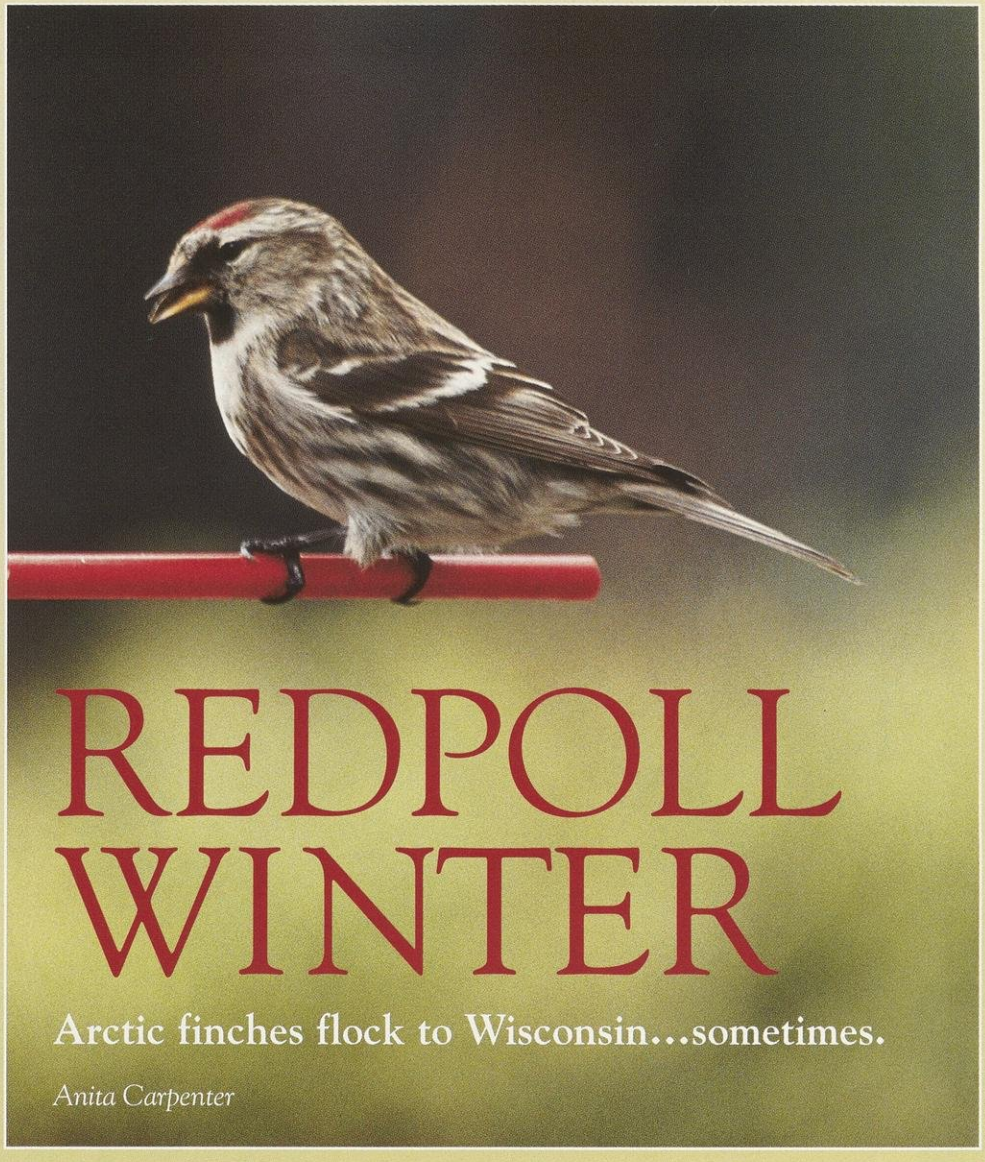

REDPOLL WINTER

Arctic finches flock to Wisconsin...sometimes.

Anita Carpenter

STEPHEN J. LANG

Common redpolls have an extra-thick layer of feathers. These finches feast on calorie-rich birch seeds to stave off cold in the arctic. They typically wander south to Wisconsin in winter searching for food.

Sunshine, cold crisp air, clear blue sky, sparkling snow — all the elements of a perfect winter day. I must go for a walk. As the snow crunches underfoot, a white-breasted nuthatch "yanks" while spiraling around a silver maple. A downy woodpecker "peeks," a bluejay gets sassy, one vigilant crow caws, and a bright red male cardinal chips as it crosses my path. Nothing unusual or unexpected happens until I pass under a tall white birch and realize the tree is raining seeds. Looking up, I discover 300 common redpolls, many are upside-down. Each one clings to a spindly branch while intently feeding on the drooping catkins, devouring minute seeds and discarding the inedible bracts. Three hundred birds and not a peep from any of them.

Common redpolls, *Carduelis flammea*, are always a delight to see because they are never as common as their name implies. Home for these tiny sprites extends from the boreal forest tip to the southern edge of the arctic tundra. In winter, they wander in search of food; some years blanketing Wisconsin, other years appearing in scattered flocks or they may be absent altogether. Of all the winter finches, the five-inch common redpolls are best adapted to withstand colder temperatures and tend to stay farther north or arrive later. Their esophagus has a special out-pocketing, which they fill with seeds just before darkness so the birds can digest the food overnight to produce warming energy. Redpolls tend to be active earlier in the morning and later in the twilight to lengthen the time spent feeding. Their food preferences help survival. Common redpolls prefer birch seed, which is one of the highest calorie-rich seeds available on the winter landscape. As much as 80 percent of a redpoll's diet may be birch seeds. An extra-thick layer of downy feathers insulates their tiny bodies to reduce heat loss.

continued on page 29

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WISCONSIN NATURAL RESOURCES

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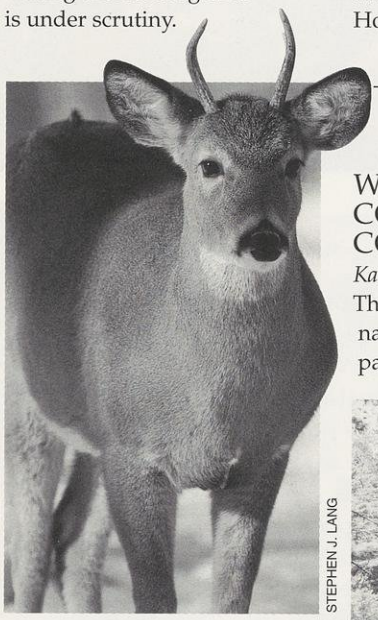
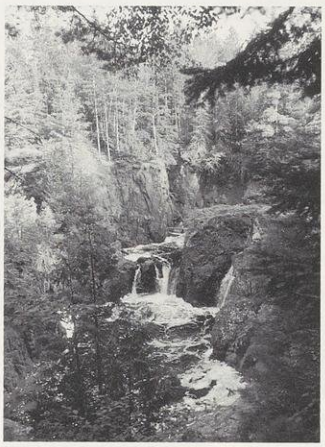


STEPHEN J. LANG



KATHERINE ESPOSITO

OSCAR C. WILLIAMS

DNR BUREAU OF PARKS AND RECREATION

FRONT COVER: Coyotes have adapted well to suburban living. See our story on page 14.
HERBERT LANGE, Hazel Green, Wis.

BACK COVER: Huge white pines tower over Giant White Pine Grove State Natural Area in Forest County. For a map or more information, contact the State Natural Areas Program, DNR, Box 7921, Madison, WI 53707.
THOMAS A. MEYER, Mount Horeb, Wis.

THE BAIT

Feeding deer and hunting near baited areas raises health, safety and ethical concerns that the Deer 2000 study is sorting out.

David L. Sperling

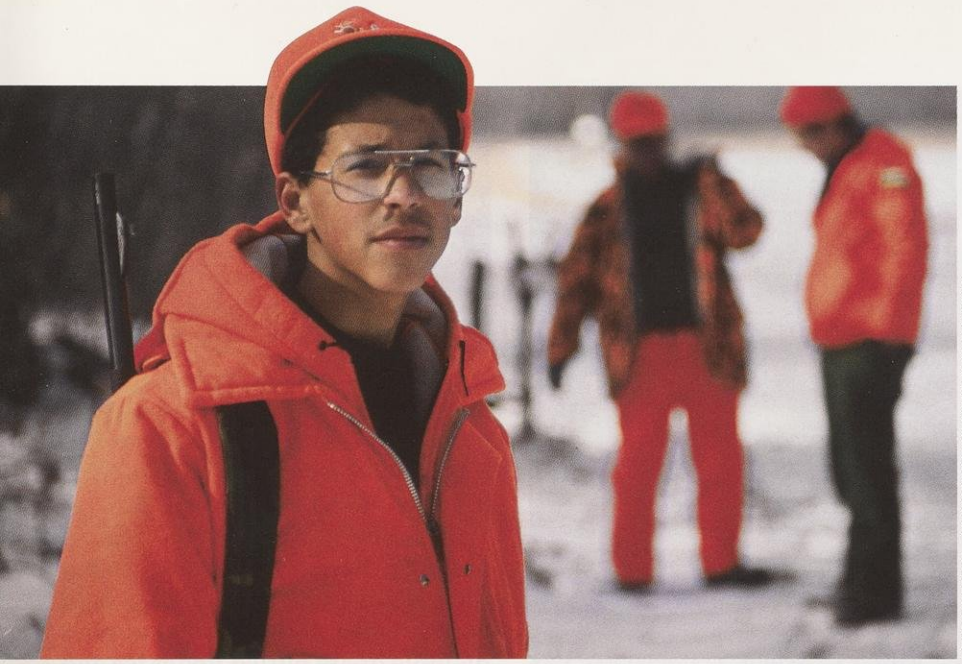
To bait, or not to bait — it's a wedge issue with the potential to divide hunters from each other and from nonhunting neighbors.

Those who don't hunt or follow the sporting press may not know of this hot-button hunting issue. "Baiting" is the practice of placing piles of foods that deer favor near hunting blinds and stands. Hunters who bait hope to draw-in deer within close shooting range. By baiting deer over a period of time, they expect to improve their chances of getting a closer shot during legal hunting seasons. State law limits the volume, content, location and times when baits can be legally placed for white-tailed deer and black bear, but some hunters and nonhunters don't view baiting as "fair chase." They consider the practice unethical and believe hunting should test a human's ability to read the landscape, match the animal's instincts and habits, and pursue game stealthily and skillfully.

"Feeding" is different, as the aim is just to watch wildlife by providing supplements to natural foods. State law does not regulate or limit the foods, locations or timing when wildlife feeding can occur.

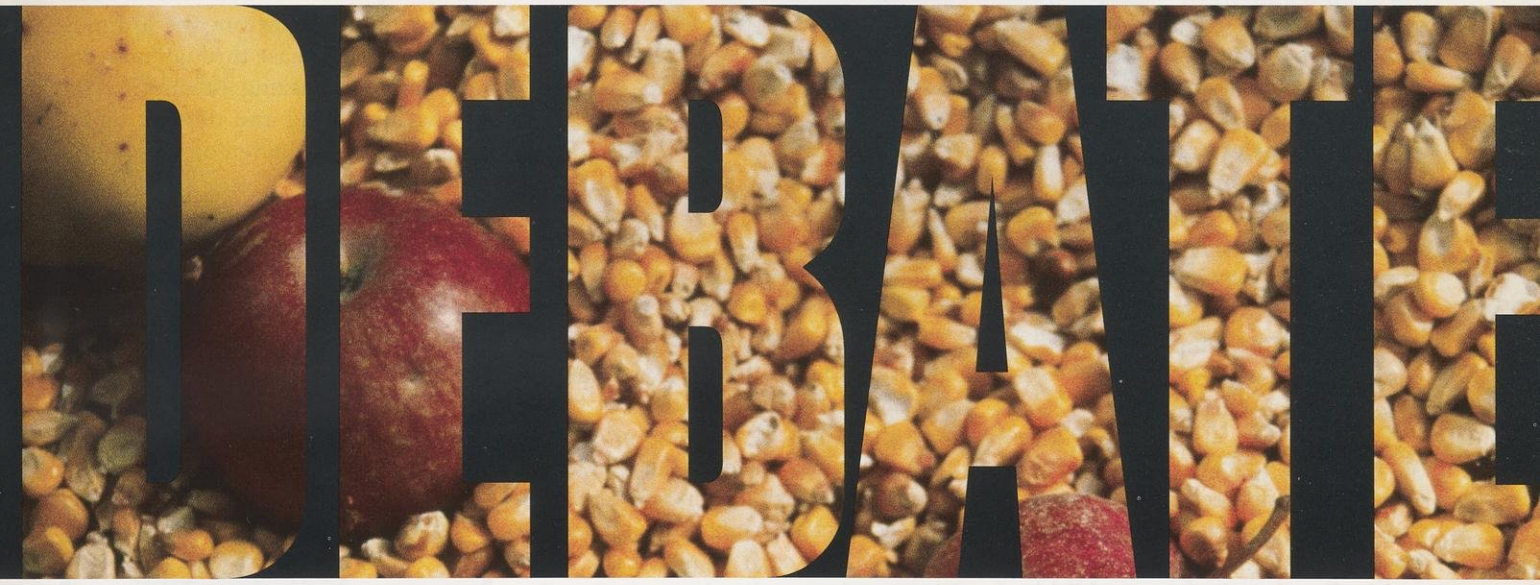
Both practices can change wildlife's normal habits and both practices are under scrutiny.

The issue has split hunters into many factions. One group holds that Wisconsin has allowed baiting for black bear and the practice has recently been adapted for white-tailed deer. Others approve of baiting bear because they are much more difficult to find, but view deer baiting with little enthusiasm. Some would hold that baiting is acceptable for bowhunters who must get much closer to their quarry to assure clean kills, but isn't warranted for gun hunters. Some of the baiters think the debate is more about class warfare: Those who can afford to buy private hunting lands just have their "bait" growing on stalks in food plots, while the "masses" are just trying to give themselves an edge on public hunting grounds. A much larger percentage of the public doesn't care about baiting at all. People who like to feed deer in their back yard don't want the bait debate to cut them off from the pleasure of viewing nearby deer.



ROBERT QUEEN (FAR LEFT AND BELOW) PATRICK GORSKI

Baiting deer draws them to artificial food piles. Some conservationists shun the practice. They believe that hunters, especially young hunters, should learn the animal's habits, read the landscape, and hone marksmanship skills to better appreciate challenges in hunting.



Artificial feeding and baiting raises a host of technical questions: How do baiting and feeding affect the deer herd? Does the practice affect other wildlife and domestic animals? Who benefits economically from baiting? How does the practice change agriculture? And what are the consequences for other forms of outdoor recreation?

Comfortable in the hot seat

Two people aiming to sort out these issues are Jerry Aulik of Deerbrook in Langlade County, and Dave Nowak of Fredonia in Ozaukee County. They volunteered to lead the Baiting and Feeding Study Group of the Deer 2000 and Beyond project—a grassroots project led by the Conservation Congress to examine current policies of managing deer.

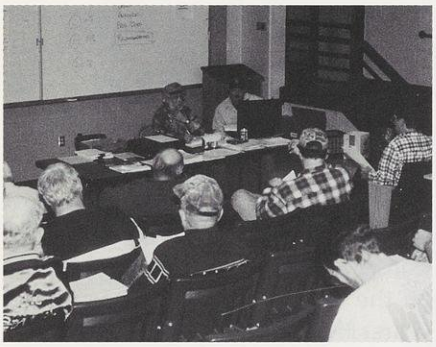
Deer 2000 study groups will forward recommendations by next summer, but the Baiting and Feeding group is under the gun to forward recommendations to the State Assembly Natural Resources Committee by January. Rep. DuWayne Johnsrud, who chairs the committee, tabled legislation that would have banned deer baiting in Wisconsin pending some fresh ideas from the study group and the Department of Natural Resources.

Aulik and Nowak have made a long-term commitment to guide the process. Jerry Aulik has managed 480 acres of hunting land and a three-acre game farm for more than 20 years. He feeds, watches, hunts and videotapes deer regularly. Aulik has served on the Conservation Congress Big Game Committee for 12 years and also serves on the Executive Committee. Nowak hunts extensively statewide, has served on the Conservation Congress for 11 years and on the Big Game Committee for six years. He works as the Parks Director for Ozaukee County.

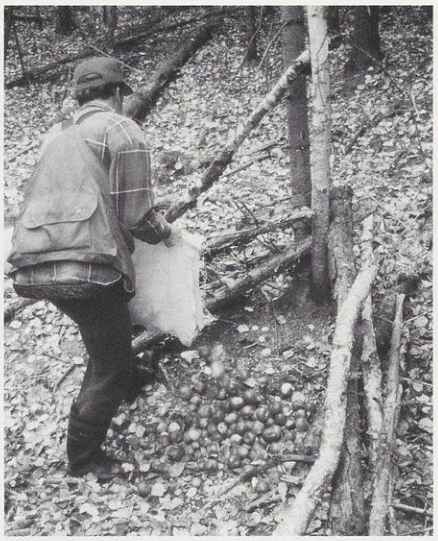
Aulik got involved in the Deer 2000 and Beyond study because so many of his friends were asking what was happening statewide with deer feeding and baiting.

"A lot of people have different opinions about the ethics of baiting," Aulik says, "and I can see all sides of that debate. It's hard to separate these issues. My hunting ethics could be totally different from someone else's, but they are both valid. We have not found anything written in stone that says 'you have to hunt this way or you can't hunt over bait.' We're trying to separate the herd management issues in those statements, and it's hard.

"It's interesting how positions and issues change as we keep talking about



KEVIN WALLENFANG



PATRICK GORSKI

(above) Deer 2000 and Beyond drew hunters statewide to consider deer herd issues.
(right) Proponents say baiting can help reduce herd size by giving hunters access to more deer.

baiting," Aulik notes. "When we start talking, strong feelings about whether baiting is ethical is one of the first issues that comes out. However, as we keep talking with each other, some hunters who were strongly against baiting begin to see that it isn't so much a matter of whether the practice is right or wrong, it's just a choice that people make for a variety of reasons. We're hearing from some people who are strongly anti-baiting that they want the ethics part of the discussion left out or minimized in the final recommendations because they realize it's not the main issue."

"Feeding" carries responsibilities

The Baiting and Feeding Study Group thought that northern forests had a greater concentration of both baiting and feeding than the farms and fields of southern Wisconsin. "People told us otherwise," Aulik said. "They told us there is more recreational feeding in the south, but supplemental feeding remains more of a northern Wisconsin practice."

"Recreational feeding" consists of stocking a deer feeder in a back yard or scattering a small amount of corn outside a window so people can watch a couple of deer from their house. "Supplemental feeding" happens on a much larger scale. Pickup loads of corn or culled potatoes may be dumped during hard winter weather to feed a deer herd. The amount of food people spread depends on what feeds are available and how healthy they gauge the herd is.

Artificial feeding is popular, but discouraged. DNR wildlife biologists generally recommend against feeding deer because most of the herd can't travel to the feed, artificial feeding causes deer to concentrate, the practice is expensive and most people do not supply deer food mixes that provide a balanced, digestible diet.

Many people feed straight corn or large quantities of other culled foods like apples, pumpkins or hay. A pure corn diet, high in starch, can cause high acidity in the deer's rumen stomach, that can kill the bacteria deer need to digest their food. Straight hay diets are also a poor feed choice in the winter. As food supplies dwindle, deer are less able to digest alfalfa fiber. Formulated pellets with a mix of corn, alfalfa, oats, soybeans, molasses, vitamins and minerals are available at some feed mills, but are more expensive. Moreover, once you start to feed, feeders must be continually stocked right through to snow melt, as the animals become more dependent on the food supply.

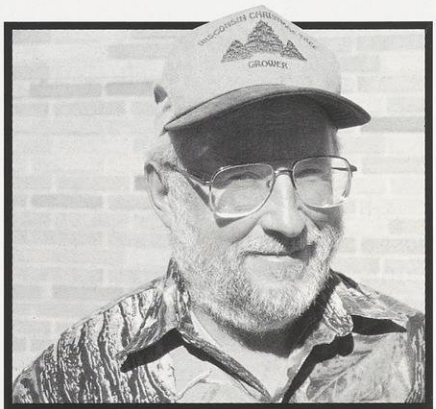
"We feed," says Aulik, "but I sure see some problems with the practice. More and more young does are bred late in the year. Fawns may be born in late July or even August. These animals don't grow full coats or fill out enough to ride out the cold, and it's a cruel truth to say that they shouldn't survive the winter, yet artificial feeding can sometimes pull them through to spring, which only adds to the population problems."

Nowak also notes the lack of clear definitions distinguishing baiting and feeding. He thinks the study group could help DNR formulate guidelines describing what you can use, how often and where the public can feed deer.

A way to spread disease

Among the many issues the study group is grappling with, the most serious is the potential for disease spread. Since the 1930s wildlife biologists have been concerned that artificial feeding and baiting can change the normal feeding patterns, behavior and migrations of wild animals, particularly in winter when natural food supplies dwindle or are buried under ice and snow. As deer concentrate around a bait pile or feeding station, the animals could spread disease through nose-to-nose contact, sneezing, breathing, salivating, urinating and defecating on feed that may be eaten or inhaled by other animals.

In Wisconsin, the current concern is bovine tuberculosis, a contagious killer that spreads as a bacterium among deer, elk and wild scavengers like coyotes, foxes, raccoons, skunks and opossum. Bovine TB could also infect goats, dairy



KEVIN WALLENFANG

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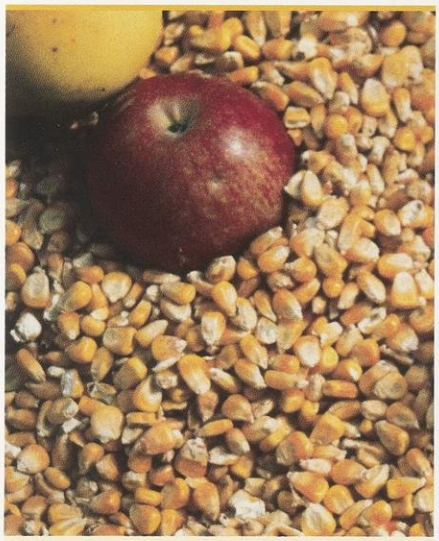
Jerry Aulik



PATRICK GORSKI

Issues raised by baiting and feeding

Hunting

- fewer wounded animals/ cleaner kills
- conflicts over hunting territory
- hunting ethics and public perception
- bear baiting
- hunting season framework
- clear and enforceable hunting laws

Economic

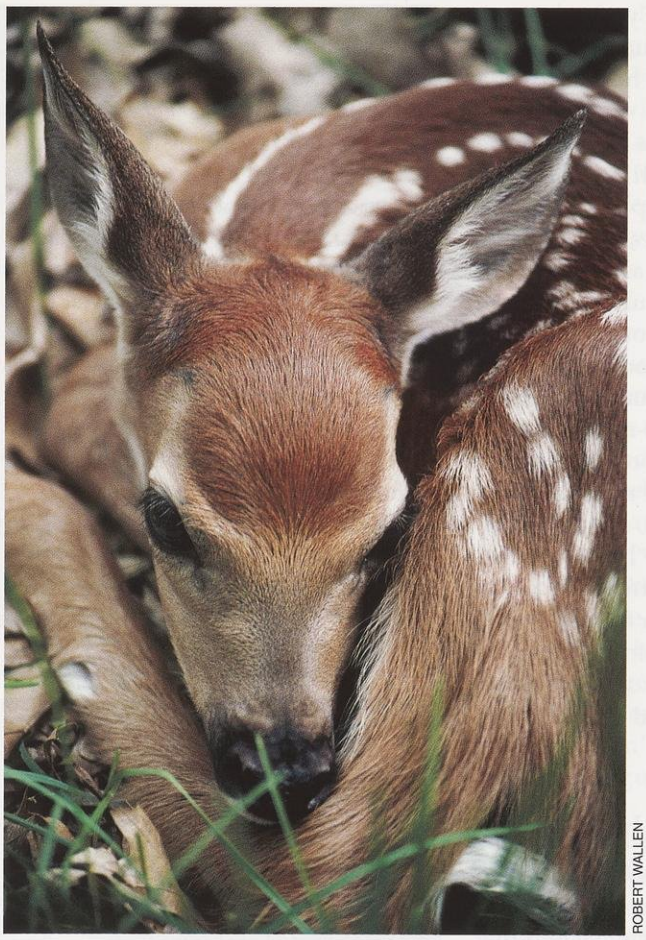
- deer/car collisions
- agricultural damage
- forestry damage
- bird feeding
- logging practices

Deer health

- disease spread
- deer mineral supplements
- food plots vs. bait/feed piles
- herd size

Public policy

- public land uses
- ATV and snowmobile use
- private landowner rights



ROBERT WALLEN

Feeding draws deer within close view, which delights many. But artificial feeding can lead well-fed young does to be bred their first year, adding to population growth.

cows and beef cattle. An outbreak threatens both animal health and the sale of agricultural products from "infected" states. Though there has never been a documented case of bovine TB in Wisconsin whitetails, two captive herds of elk tested positive without showing signs of active disease. Those animals were sacrificed and the areas they roamed remain fallow.

The disease has been found in deer herds in pockets of northeastern Michigan and efforts to isolate the disease in both wild and domestic herds have been extremely costly.

Veterinarians who addressed the study group said feeding and baiting are clearly factors in disease spread. There are large concentrations of deer in five counties of northeastern Michigan and bovine TB spread very rapidly there. The fewer deer there are, the less chance of disease spread. "We're real aware that disease control is a big issue for the Wisconsin economy and involves a lot more than just hunters," Aulik said. As a state, we are very concerned about the dairy and cattle industry. We don't want cattle transmitting disease to deer or the deer spreading disease to them because of the costs of containing diseases. We don't want to endanger a multi-billion dollar dairy industry."

Though many other contagious diseases have been isolated in white-tailed deer, the only other outbreaks in wild free-ranging populations in recent years were bovine brucellosis in Wyoming elk and chronic wasting disease in Colorado deer and elk. Neither was attributed to baited food supplies. Still the threat is very real given our economic dependence on dairy and cattle agriculture. The State Veterinarian, Dr. Siroky, and Dr. Howard Cook, who also addressed the study group, haven't found the diseases in domestic herds or in the free-ranging animals that concern conservationists, but that doesn't mean it couldn't happen given the herd size and deer habits.

"This is a bigger issue than either bait piles or dumped feed," Aulik added. "Growing food plots does the same thing creating a potential for disease spread. If you grow 15 acres of corn and let it stand for the winter, that's just supplemental feeding on a stalk. Disease spread might not be as rapid as in a winter deer yard, but the deer are licking each other constantly, and have nose-to-nose contact. They would likely transmit the disease if it were there.

"Naturally, we hear discussions from both sides describing how food plots are the same or different from 'feed-

ing,'" Aulik said. "But if you are raising a food plot so you can hunt over it, I see that as the same idea as hunting over a pile of bait corn."

Maybe food plots are grown for the same reason, but wildlife biologists don't conclude these plots pose the same potential for spreading disease. Steve Schmitt, veterinarian with the Michigan Dept. of Natural Resources compared the disease potential in food plots and bait piles. Food plots attract deer to a larger area than does a bait pile. There's less nose-to-nose contact in a food plot. Once the food is eaten, no more is grown until the next year. Bait piles, on the other hand, can be replenished daily for months. "In my opinion, the risk of transmitting disease is greater from bait piles or feed piles than from food plots. In fact, in Michigan we recommend food plots...in the bovine TB area where it is illegal to feed or bait deer," Schmitt said.

Where baiting can help

Deer 2000 is showing how baiting can help reduce the herd size. "Down here in southeastern Wisconsin we find that a lot of private lands are posted and closed to hunting," Dave Nowak said. "Those properties almost become deer refuges. The populations grow tremendously and those deer are eating neighboring crops, plants and ornamental shrubs. The baiters will place feed near the edges of these lands to see if they can draw some of those deer out. It can be an effective tool.

"It's only a little different up north. For instance we heard people say that in Marinette County 69 percent of landowners were out-of-county residents who often don't want other people hunting their land. Some of the owners have just posted the land, others may come up with their buddies for opening weekend, hunt and then leave. These deer will learn that they can find refuge in those areas and people will leave them alone. So some of the locals have resorted to baiting areas near that property fringe to try and draw those animals off the land. There is no other way of drawing them out or moving them. The days of big deer drives are over, but baiting can become a way to move some of the large herd off a growing amount of refuge-like land.

"There's also a case to be made that bowhunters can improve their chance of bringing a deer within range by baiting. Certainly anyone who has practiced with their equipment should be able to take cleaner shots from the 15 yards or so that are typical when baiting," Nowak said. "We could get quicker, safer kills and avoid crippling from people taking more questionable shots."

"In some situations, the public is telling us that baiting can produce a safer hunt," Aulik said. "We're hearing people say that interest in bowhunting would drop considerably without baiting and the kill would drop because hunters would be shooting deer from farther away. Baiting definitely makes for a safer hunt with rifle hunting where you are shooting down from an elevated stand. It also has reduced the practice of deer drives — a dangerous situation in which a group of hunters walk in a line through the woods and the deer move toward shooters. That

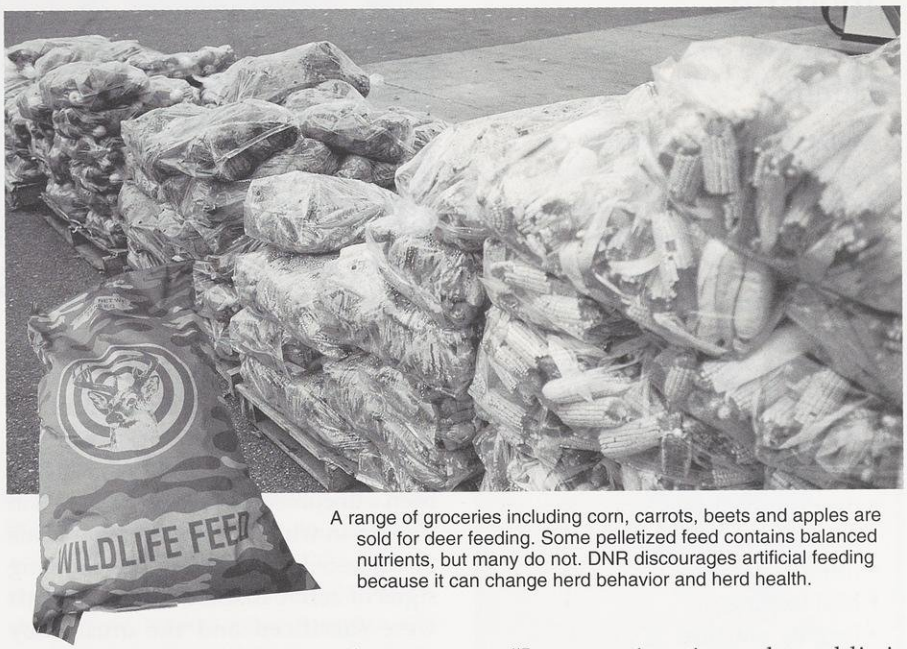
Coming to terms

The study group has recommended the following definitions:

"Baiting" is placing foodstuff, grain, vegetables and fruit, for the purpose of harvesting deer or bear in Wisconsin. It is illegal to bait for other wildlife species. Bait cannot be placed in metal, paper, plastic, glass or wood containers (except stumps). Bait can't be placed within 50 yards of trails, roads or campsites used by the public. Baiting materials and scents cannot contain honey, bone, fish, meat, solid animal fat or parts of animal carcasses. It's illegal to hunt over bait during archery season without possessing a valid bear harvest permit or archery deer tag. It is illegal to place more than ten gallons of bait or liquid scent in a baited area or to hunt over an area containing more than ten gallons of baited material.

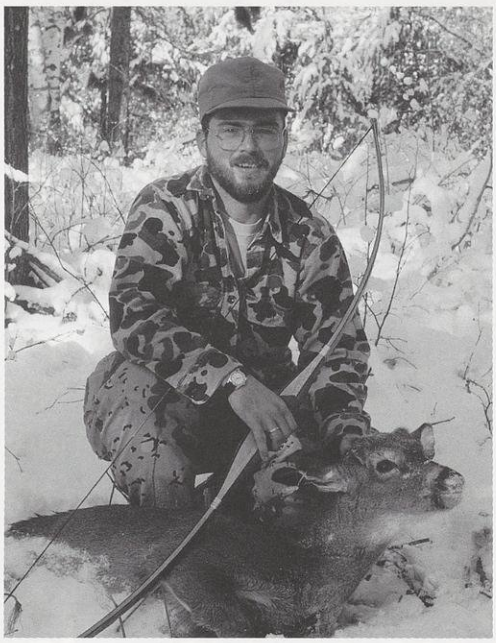
"Feeding" is placing food for the purpose of viewing wildlife or supplementing a wildlife food source. The state does not regulate or limit wildlife "feeding." People typically feed large quantities of corn, apples, potatoes, pumpkins, cabbage and other foodstuffs.

A fact sheet entitled "Winter Deer Feeding in Wisconsin" is available from the DNR Bureau of Wildlife Management, Box 7921, Madison, WI 53707.



A range of groceries including corn, carrots, beets and apples are sold for deer feeding. Some pelletized feed contains balanced nutrients, but many do not. DNR discourages artificial feeding because it can change herd behavior and herd health.

BOTH PHOTOS BY ROBERT QUEEN



KEVIN WALLENFANG

Some bowhunters bait to entice deer for closer shots and cleaner kills. Others eschew the practice.

practice puts drivers closer to the line of fire, which is very unsafe."

Would curtailing baiting cut into other sports?

Bear hunters are watching the deer debate closely. They sense if baiting practices are taken away from deer hunters, bear hunters are next. And then perhaps, fishing. "After all," Aulik says, "we call it baiting when you put a worm on a hook and you put bait on, near or under a trap. People bait almost any kind of wildlife, to draw in geese or see songbirds or even see butterflies. You are enticing that animal to come closer, whether you want to harvest it or just see it."

Baiting can build territorialism

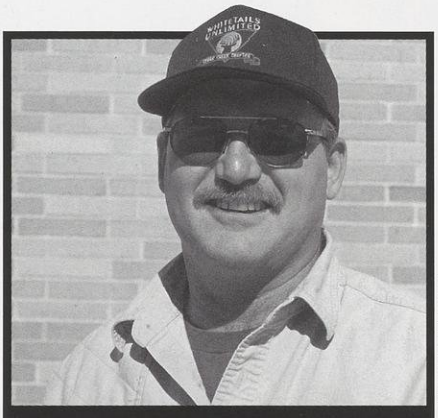
Some who like to hunt without bait complain that baiters on public lands are drawing the deer towards areas they have baited. Not only that, but the baiter then gets territorial. He thinks that because he has spent the time and money baiting a public property that it's "his" area and doesn't want anybody around him. "That's not right," Aulik said. "I feel for the guy who wants to go and hunt public land. He has an equal right to be there, whether the baiter wants him there or not. But I see the baiter's position too. He's spent time finding a good spot and setting up for the hunt. I think it's the same argument you hear from someone who has put up a tree stand on public land along a deer runway and doesn't want anyone else around. It's a similar situation, but the fact remains that everyone has a right to these public lands."

"People who bait public land tend to think they now get to hunt that area exclusively, and of course that isn't right," Nowak said. "But that's what goes on in the woods today. It gets territorial."

Even-handed enforcement

Nowak said another important issue is enforcement. Is our warden service going to have the manpower, the time to enforce baiting and feeding laws, and put forth guidelines that are more cut-and-dried? Fewer people would have bad opinions about baiting if the limits were more uniform and better understood. For instance, the quantity of bait a person can place is set at ten gallons, but it's really not clear about how wide an area that can be spread on. If a person can spread bait within 50 feet of a stand, can he spread it within 100 feet? "People don't want to inadvertently break the law and the wardens have a lot of discretion in interpreting this practice," Nowak said. And there are inconsistencies in the baiting versus feeding laws. You can feed year-round without limit. What's happening is that people are putting out 500 pounds of feed close to a season, then somebody who may not know a feed pile is nearby can come by and set up a stand or might even put a bait pile out just before the season opens. Those people who do not know that someone else has been putting out feed may be charged with hunting over an area that has much too much bait, even if they haven't baited. Clearly, more consistent guidelines would help, Nowak said.

He notes there are intentional abuses as well: A lot of people will feed near their cabin and shoot right from the building. The wardens tell us they are making more cabin hunting cases these days.



KEVIN WALLENFANG

People who bait public land tend to think they now get to hunt that area exclusively, and of course that isn't right, but that's what goes on in the woods today. It gets territorial.

Dave Nowak

How recommendations will be made

The study group is now finishing its recommendations for the Conservation Congress Executive Committee and the Natural Resources Board.

"Our project is called Deer 2000 *and Beyond*," Aulik said. "We're looking ahead. We'll probably make some changes now and some others down the line. I'm hoping that we can make some right recommendations. We'll have to make some compromises, and we will be able to fine tune in the future if necessary. We don't know the total answer. We are still listening to both sides, and we're committed to this issue. We're not backing off until it's finished." □

Editor David L. Sperling writes from DNR's Madison office.

The elusive badger has burrowed deeply into Wisconsin's landscape. Changing habitat just gives it new holes to dig out of.

Still at home in the

Heather Rigney

Badger State

Wisconsin is the "Badger State," yet the state animal remains a mystery to most Wisconsin residents. Though no one knows exactly how many badgers live here, trends data does show that badgers are faring well on the landscape today. The Wisconsin nickname misleads many: It pays homage not to the animal, but to the lead miners who mimicked badgers by holing up for the winter in underground shelters in the southwestern part of the state.

The American badger *(Taxidea taxus)* is an elusive creature — a solitary, nocturnal animal that spends much of its life underground. Badgers are natives of the tallgrass prairie and savanna in the southern and sandy central part of the state. Before European settlement, Wisconsin was on the northern and eastern fringe of the badger's range. The animal likely expanded its range here as forests were cleared and grasslands opened.

People admire badgers as feisty animals willing to go against the odds. This trait made them the victims of badger-baiting, in which people set dogs on a chained badger and watched the animal fight to the death.

In the wild, badgers sometimes go after prey close to their own size. "Badgers are pretty formidable," said Dick Bautz, a biologist at the DNR Research Center. "I don't believe they would back away from a woodchuck if they caught one."

Badgers average 12–25 pounds and big males can easily exceed 50 pounds. They can grow to about two and a half feet long, but their loose skin, unique hair and threatening attitude can make them appear much larger. When a badger tunneled underneath a rural radio station in Illinois, biologist Barbara Ver Steeg was called to explain badgers to the local D.J.

"I said, 'Well, it's a medium-sized mammal...' And the D.J. broke in and said, 'Medium-sized? It's as big as a VW!'" said Ver Steeg. "They can look bigger when they're mad and if they're growling at you." The badger has retractile hair. It can bristle out its coat to appear much larger than it truly is.

Despite their reputation as fierce fighters, badgers rarely choose to confront an enemy. Their main escape is by digging. With two-inch claws and a body built for excavation, badgers can disappear from sight in just a few minutes.

"They're very impressive diggers," says Ver Steeg, who studied badgers with the Illinois Natural History Survey. "It's just a huge plume of dirt in the air behind them — and then they're gone."

A transparent membrane covers their eyes and protects badgers from flying dirt as they dig. Webbed front feet push out dirt efficiently, and a wedge-shaped head lets badgers nose into holes to root out prey. Loose skin allows them to twist out of predators' grasp and turn in tight corners underground.

"Their tunneling habits are fascinating," says LeRoy R. Petersen, DNR farmland wildlife biologist. "Badgers dig mostly on the sides of the tunnel, which is why their excavations are typically a horizontal oval with numerous claw marks on the side. They are extremely fast, efficient diggers. Dogs dig mostly at the bottom of a hole and that's why they have vertically oval holes without claw marks on the side."

Some badger tunnels go down more than 12 feet and may be 50 feet long. Badgers have been known to tunnel through packed soil and asphalt roads. A favorite badger story comes from an early naturalist in California who watched a badger dig its way out of sight in one and a half minutes. Ver Steeg agreed that her research team, armed with shovels, was no match for the digging prowess of a badger: "We actually tried digging one out a couple times and that was a total failure."

JOSEPH BUTSICK *(FAR RIGHT)* DON BLEGEN

Badgers are built to dig — with a wedge-shaped head, loose skin and powerful claws.

Unearthing the facts about badgers

Uncovering information about badgers in Wisconsin is about as difficult as unearthing a badger from its burrow. The DNR keeps census records of game species like deer and grouse, as well as rare species like the timber wolf and ornate box turtle, but no one keeps an exacting tally of how many badgers live in the state.

"They do fall between the cracks, no question," said Petersen. "They're not a

LANCE BEENY

Mother and pup near an entrance.

nuisance concern. At the same time they are abundant enough that we are not concerned about their demise."

In 1961, H. H. T. Jackson in *The Mammals of Wisconsin,* estimated the badger population at between 5,000–20,000 based on trappers' records. Trapper data fluctuates wildly with fur prices, however, so it's hard to pinpoint an actual number. Since 1955, badgers have been a state-protected animal with no trapping allowed. That makes it difficult to accurately estimate their population today.

Concern about the badger's welfare prompted a state study in 1975. Petersen surveyed hunters, trappers and wildlife managers. The high number of badger sightings reassured him that badgers were holding their own. He found badgers living in almost every county in the state. Biologists use population indices to monitor the status of many species, Petersen explains. It's a measure of field observations that researchers take in the same way every year, then they plot them over time. It isn't a census, but it does show trends. If the slope of that line increases, as it does for badgers, it suggests the population is stable or growing slightly.

"Biologists were surprised — the badger was a whole lot more abundant than anyone gave it credit for," he says.

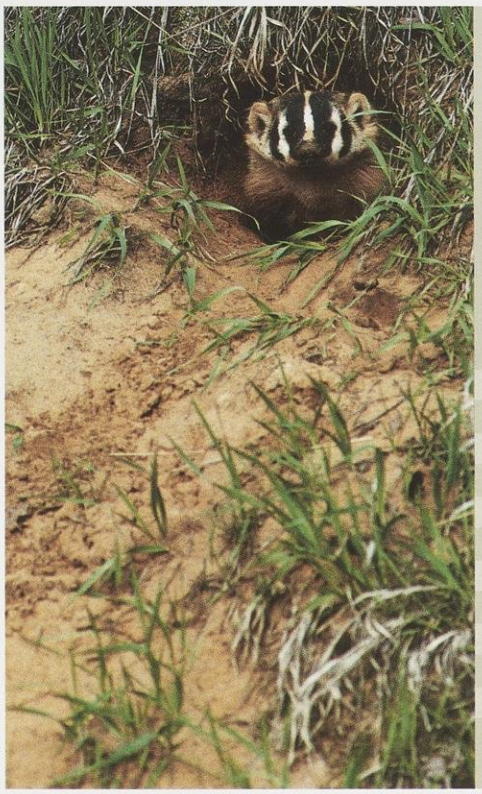
Badgers are still widespread. They are most common in sandy central and western Wisconsin, but in the past decade they have been sighted in every county except Milwaukee.

What Petersen found in Wisconsin seems to match what biologist Barbara Ver Steeg discovered in Illinois during a six-year study of badgers.

Ver Steeg attached radio transmitters to 10 badgers and tracked their movements for three years. She found that midwestern badgers have huge home

Badgers may tunnel 12 feet deep and 50 feet laterally in search of prey.

WAYNE NELSON



AL CORNELL

Badger sightings 1987–98

Badgers have been reported in all counties except Milwaukee. DNR field personnel are annually asked to report live and dead sightings of 11 different mammals by county, including badgers. The top five counties where badgers were sighted during the period were Douglas (125), Burnett (112), Bayfield (67), Langlade (61) and Dunn (47).

year	number of observers	number of badgers sighted	badgers per observer
1987	106	186	1.75
1988	88	142	1.61
1989	60	102	1.70
1990	76	109	1.43
1991	73	127	1.74
1992	84	141	1.68
1993	83	147	1.77
1994	70	107	1.53
1995	81	119	1.47
1996	68	112	1.65
1997	60	93	1.55
1998	83	136	1.64
Total	**932**	**1521**	**1.63**

ranges — 10–12 square miles per animal.

"We had animals that would move three miles in one night. And that's just a straight-line distance; who knows what their path of travel actually was," says Ver Steeg.

Unlike their western counterparts, which settle down near prairie dog towns, midwestern badgers travel long distances on a constant search for food.

"Relative to the West, the Midwest does not have as high-quality habitat for these animals," says Ver Steeg.

During the summer months, badgers are constantly on the move, digging a new den nearly every night. Midwestern badgers stay put only in the winter, when they hole-up for up to two months to escape the cold. Female badgers also stay near the natal den in the spring to raise their young.

Not only do they move a lot, but badgers spread out, expanding their range into new territory that has opened up for grassland species. The same story is true throughout the Midwest: Badgers can now be found in northern Wisconsin, southern Illinois, Michigan, Ohio and Pennsylvania.

Scratching out a living

Today's badgers may travel more than their ancestors, but no one knows how their numbers match up with badger populations two centuries ago. Petersen estimated the state badger population in 1975 was 8,000–10,000.

"People wanted us to say, 'Are there more or less badgers than when the tallgrass prairie was here?'" says Ver Steeg. "And we can't say that, because we have no idea how many there were before."

Badgers still live on prairie remnants, but Ver Steeg says they don't rely on native habitat any more.

"If they were surviving on that, they wouldn't be here," said Ver Steeg. "There's nowhere near enough [prairie and savanna] to support a population of badgers."

Like grassland birds whose populations adapted to pastures but declined when hayfields were converted to alfalfa, the badgers can adapt to some other habitats. Badgers need two things, according to Charles Long, emeritus biologist at UW-Stevens Point and author of *The Badgers of the World*: a good supply of prey and sandy soil where they can dig. If they can find what they need in pastures, hayfields, fence lines, roadsides, or prairie remnants, they'll dig right in.

When it comes to living space, badgers aren't picky. "I don't think they give a hoot what kind of vegetation it is," says Ver Steeg. "They are keying on prey. They're looking for small mammals like pocket gophers and thirteen-lined ground squirrels, but will eat almost anything they can catch."

In Wisconsin, the pocket gopher is only common in a few counties along the Mississippi River and other species have become more important prey. Guided by good hearing and a keen sense of smell, badgers hunt underground and surprise their prey by digging directly into their burrows. Badgers occasionally find a meal above ground, and will eat insects, snakes, birds and eggs. Since badgers are superior subterranean hunters, burrowing mammals like ground squirrels and woodchucks form their main diet. You'd expect to find badgers in short grass cover like pasture, mown roadsides and golf courses where their prey live.

Habitat to sustain the species

Changing trends in farming have altered small mammal habitat. Ver Steeg found prey species most often in untilled fields like pasture, hayfields, or fields enrolled in the Conservation Reserve Enhancement Program (CREP). Row crops, on the other hand, provide scant habitat for badger prey. Ver Steeg said rows of corn and soybeans only supported small animals like mice. The 750,000+ acres of marginal farmland enrolled in the CREP will continue to provide important habitat for badgers.

"There were more badgers in fields that are not disturbed annually, fields that are not plowed up every season," she says.

Besides supporting more prey for badgers, untilled grasslands are also more hospitable for safety reasons. Farm machinery can accidentally strike badgers buried beneath the ground, though Ver Steeg says that's rare because badger dens tend to be deep.

Badgers also die on state highways. With their large home ranges, badgers are crossing more roads than ever before. Road kills are particularly high at the end of summer, when young are dispersing to new homes and males are looking for breeding females.

More landscape change is on the way for Wisconsin badgers. What used to be a diverse agricultural landscape offering a mixture of fields, pastures and forest is shifting to row crops and home development. Of most concern are pastures, especially "prairie pastures" that retain the native sod.

"Some pastures in Wisconsin have never been plowed," says David Sample, a grassland community ecologist with the DNR. "They're the closest thing to prairie we have in our agricultural setting."

Conserving grassland habitat is challenging as most of it rests on private land. "It's a huge part of the badgers' available habitat," says Sample. "Public land is just a drop in the bucket. Farmland is so important to wildlife in an agricultural state."

Cost-sharing programs like the CREP can help private landowners keep grassland intact. Tom Thrall, state wildlife biologist for the Natural Resources Conservation Service, said cost-sharing programs have less appeal for farmers, who need to earn a living from the land, but they do attract a growing number of non-farming rural landowners.

Grassland habitat protection protects all kinds of species, including badgers and their prey. As predators, badgers are more resilient and appear to be holding their own in a changing landscape.

"They're very adaptable," says Ver Steeg. "And that's why they're still here." □

Heather Rigney is a freelance writer living in Traverse City, Mich.

A howl over coyotes

When wild neighbors adapt to suburban life, communities must find ways to cope.

Tami Ryan

Sometimes newcomers to a neighborhood can be a little too nosy for comfort. In Franklin, a man reported that while cutting his lawn on three different occasions, a new neighbor watched him intently from the edge of a woodlot, never coming near, but refusing to leave.

I started to piece together a possible explanation. The owner let the grass in his yard grow fairly tall between mowings. The grassy area near a woodlot likely held plenty of field mice and meadow voles. The rodents likely retreated toward the woods when they heard the mower approaching. And the "neighbor" — a coyote — learned that the sound of the mower would deliver an easy meal.

A Mequon woman called because her neighbors saw a "prowler" on her back deck. The woman feared letting her children or dog outside. This particular intruder became accustomed to finding full food and water dishes on back porches. Spilt seed from bird feeders around the deck attracted rodents, which in turn drew the attention of the culprit — a coyote.

Like deer, raccoons, and geese, coyotes are adaptable animals whose range has expanded throughout North America. Coyotes are typically wary of humans in places where they are hunted or trapped. However, in urban and suburban areas where they are not pursued as game animals, the coyotes' natural fear of humans decreases. When coyotes are seen in a neighborhood, many people express concern for the safety of children and pets. Coyotes will prey on house cats and will attack dogs. Although attacks are rare, coyotes have seriously injured small children in other states, but this has not happened in Wisconsin.

In the news and the neighborhood

Coyotes live in every Wisconsin county, with a statewide population estimated at 17,000–20,000. Surveys and sightings reported by DNR staff and the public indicate the coyote population is stable and increasing in the southern and western portions of the state.

Coyotes *(Canis latrans)* are members of the dog family Canidae, and are often described as having a "German shepherd-like" appearance. They have long, thin legs, a tapered muzzle, and large, pointed ears. Their fur ranges in color from a dull yellow to gray with the throat and belly area light gray or white. An adult male coyote will measure about four feet long, including its long, black-tipped, bushy tail, and can weigh between 25 and 42 pounds. Females are smaller in size and weight.

More frequent reports of coyote sightings in recent years can be attributed to expanding development into rural areas and to media coverage of coyote-related incidents.

For instance, in southeast Wisconsin, we've had alleged cases of coyotes killing dogs in Oak Creek, Franklin and Glendale. While the pets surely died, we couldn't substantiate if the pets were killed by coyotes, by other domestic animals, feral dogs, wolf-dog hybrids, or from other causes. In all cases the dogs were small breeds, the dogs were not leashed, they were not accompanied by their owners, and deaths occurred between dusk and dawn.

The adaptable, intelligent coyote learns to negotiate cars and find food in the suburbs.

LANCE BEENY

LANCE BEENY

HERBERT LANGE

Preventing coyote problems

If you are concerned about coyotes on your property or in your neighborhood, follow these tips:

- Do not feed coyotes! Problems occur when people begin feeding coyotes, either deliberately or inadvertently. Garbage should be stored in secure containers. Do not put meat scraps in compost piles.
- Remove bird feeders and outside pet food containers. Coyotes will prey upon small mammals attracted to birdseed and pet food.
- Don't allow pets to run free and keep a watchful eye on them. Walk dogs on a leash, especially at night.
- Provide secure shelters for poultry, rabbits, or other outside pets. Clear wood piles, brush piles and other potential cover for coyotes.
- Don't leave small children outside unattended.
- Reinforce the coyotes' natural fear of humans by turning on outside lights, making loud noises, throwing rocks and so forth. Be aggressive in your actions! Although the response may not be immediate, eventually the coyotes will flee.
- Consider fencing your yard. Use a minimum height of six feet and bury the bottom at least six inches below ground level. Slant the top of the fence away from the enclosed area to prevent them from getting over the top.
- Encourage your neighbors to follow the same advice.

STEPHEN J. LANG

(above) Coyotes find cover and prey in tall grassy fields near developed areas.
(top right) Coyotes are more often seen in town during winter searching for rodents and carrion.
(right) Coyotes travel a territory that can include fields, parkland, forested edges, brushy riverways, alleys and back yards.

Although coyotes are primarily nocturnal, it's not uncommon to observe them during the day. As a survival instinct, coyotes became nocturnal when Wisconsin settlers pursued them as game. We may be seeing more urban coyotes during daylight because they are no longer hunted and trapped, and are reverting to their pre-settlement behavior. Coyote sightings often increase in the winter because the animals travel greater distances in search of food.

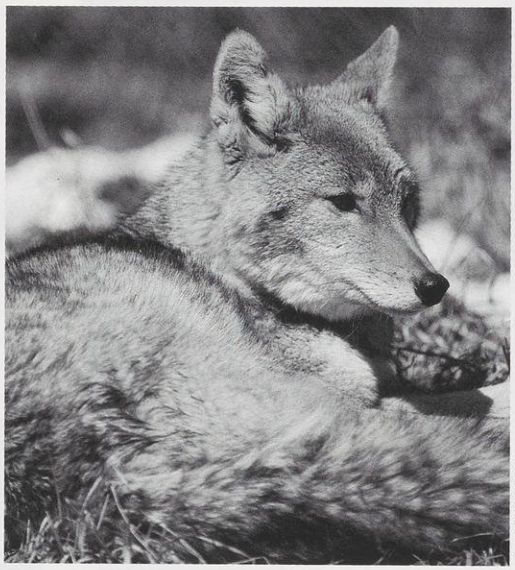
In areas of southeastern Wisconsin, where coyotes are not hunted or trapped due to local ordinances, their fear is reduced. As a result, coyotes may not flee immediately upon observing humans.

Coyotes prefer woodland edges and brushy areas that provide adequate cover, however, they readily use farm fields, parkways, riverways, parks and other areas with natural vegetation in city and residential developments. Coyotes routinely travel a territory that may include your back yard.

Coyote pups are born in the spring, and the nursing females and their young need a lot of food. By late summer, the pups have learned to hunt for themselves, but they are searching for food at the same time of year people enjoy backyard barbecues and picnics.

These versatile predators and scavengers feed primarily on rabbits, small rodents and animal carcasses, but will also eat birds, fish, amphibians, and reptiles. White-tailed deer carcasses are a principal food source for coyotes in Wisconsin. Coyotes do not commonly prey upon deer, although they are capable of taking fawns and weakened adults.

As with any predator-prey relationship, coyotes help keep their prey populations healthy and in balance with the environment. When coyotes consume animal carcasses, they help prevent the spread of disease within wildlife populations. In agricultural areas, coyotes prey on rodents that damage crops.



STEPHEN J. LANG

Many view coyotes as a welcome addition to the mix of watchable wildlife. Many strategies are available to exclude coyotes in those rare cases where they are seen as nuisances.

When the coyote's natural food is plentiful it seldom preys upon domestic animals — but pet cats and rabbits are no match for a hungry coyote. Coyotes are territorial; they may perceive domestic dogs as a threat, triggering a response to defend home turf, food sources, den sites and offspring. Pet owners should avoid leaving their pets outside unattended at night when coyotes are most active. Also, keep your pets' vaccinations up to date. Coyotes carry internal and external parasites and are susceptible to an assortment of diseases including rabies, canine parvovirus and canine distemper.

Controlling coyotes in communities

To keep coyote populations in check, Wisconsin maintains a year-round firearm season and specified trapping season. On private property, landowners, occupants and family members can hunt or trap coyotes without a license to remove nuisance animals at any time except the 24 hours preceding the gun deer opener or in areas designated as "closed to coyote hunting during the gun deer season."

In cities, controlling coyotes is another matter altogether. With trapping and hunting often prohibited within the city limits of many communities, residents must use nonlethal means of discouraging coyotes: making loud noises, throwing rocks, or spraying them with a garden hose. Although the response may not be immediate, eventually the coyotes will flee.

The DNR works with communities to manage urban coyote populations. Urban Wildlife Specialist Ricky Lien helps communities form plans to limit the spread of coyotes in town; contact him at (414) 263-8622 for assistance. If your community's primary concern is a few animals that have wandered into town, contact the USDA's Wildlife Services helpline — 1-800-433-0688. If you see a coyote that appears to be sick, contact local law enforcement or a DNR office.

The sight of coyotes roaming suburbia does perk up interest in a hurry. Several towns and villages in our southeast corner have found reason to put coyote management on the public agenda:

- In the winter of 1996–97, a coyote allegedly killed a poodle in the south Milwaukee County community of Oak Creek. Municipal administrators considered a program to shoot "problem" coyotes in response to concerns from area dog owners. DNR wildlife managers and a conservation warden met with community leaders to discuss coyote biology and management. A shooting program was authorized, then abandoned due to public opposition. No coyotes were shot.
- The Village of Wind Point in Racine County was issued permits in the winters of 1995 and 1996 to trap nuisance coyotes. A pet owner whose dog was subsequently caught in a permitted snare spearheaded public opposition, and trapping did not continue in 1997. Since then, state law has allowed coyote trapping without the need for a permit.

I have made presentations to town residents, village boards and common councils in Fox Point, Franklin, Mequon, Caledonia and River Hills. A common outcome of the meetings is a concerted community effort to use nonlethal ways to dissuade coyotes from staying on urban lots. Most communities are finding ways to live with their wild neighbors.

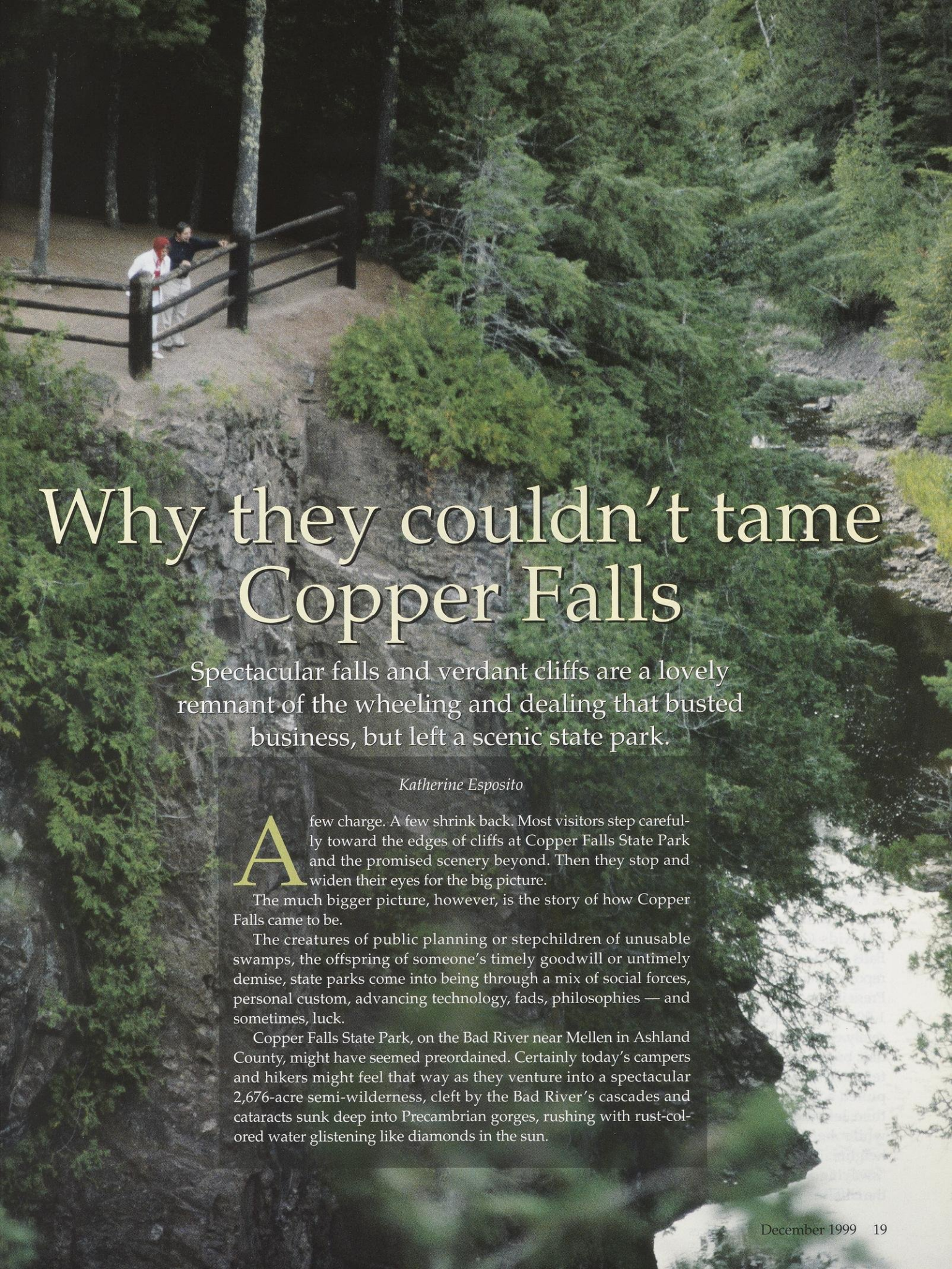
Learning more about coyotes

Educating the community about coyote habits is key to understanding their behavior and preventing problems. A four-page DNR fact sheet "The Coyote" (publication WM-148 86) can be duplicated and distributed. Order a copy from the DNR Bureau of Wildlife Management, P.O. Box 7921, Madison, WI 53707.

Other recommended books about coyote habits include *Mammals of Wisconsin* by H.H.T. Jackson; *Coyotes: Biology, Behavior, and Management* by M. Bekoff; *Wild Mammals of North America —Biology, Management, Economics* by J.S. Chapman and G.A. Feldhamer; *The Wild Canids — Their Systematics, Behavioral Ecology and Evolution* by M.W. Fox; and *Furbearing Animals of North America* by L.L. Rue.

Coyote sightings should become less frequent, though they likely won't stop altogether. Occasional sightings will continue because coyotes keep learning new ways to survive as a part of the urban wildlife community. These intelligent animals, like their human neighbors, have adapted to life in the suburbs. □

Tami Ryan is the DNR's Southeast Region wildlife biologist, stationed in Milwaukee.



Why they couldn't tame Copper Falls

Spectacular falls and verdant cliffs are a lovely remnant of the wheeling and dealing that busted business, but left a scenic state park.

Katherine Esposito

A few charge. A few shrink back. Most visitors step carefully toward the edges of cliffs at Copper Falls State Park and the promised scenery beyond. Then they stop and widen their eyes for the big picture.

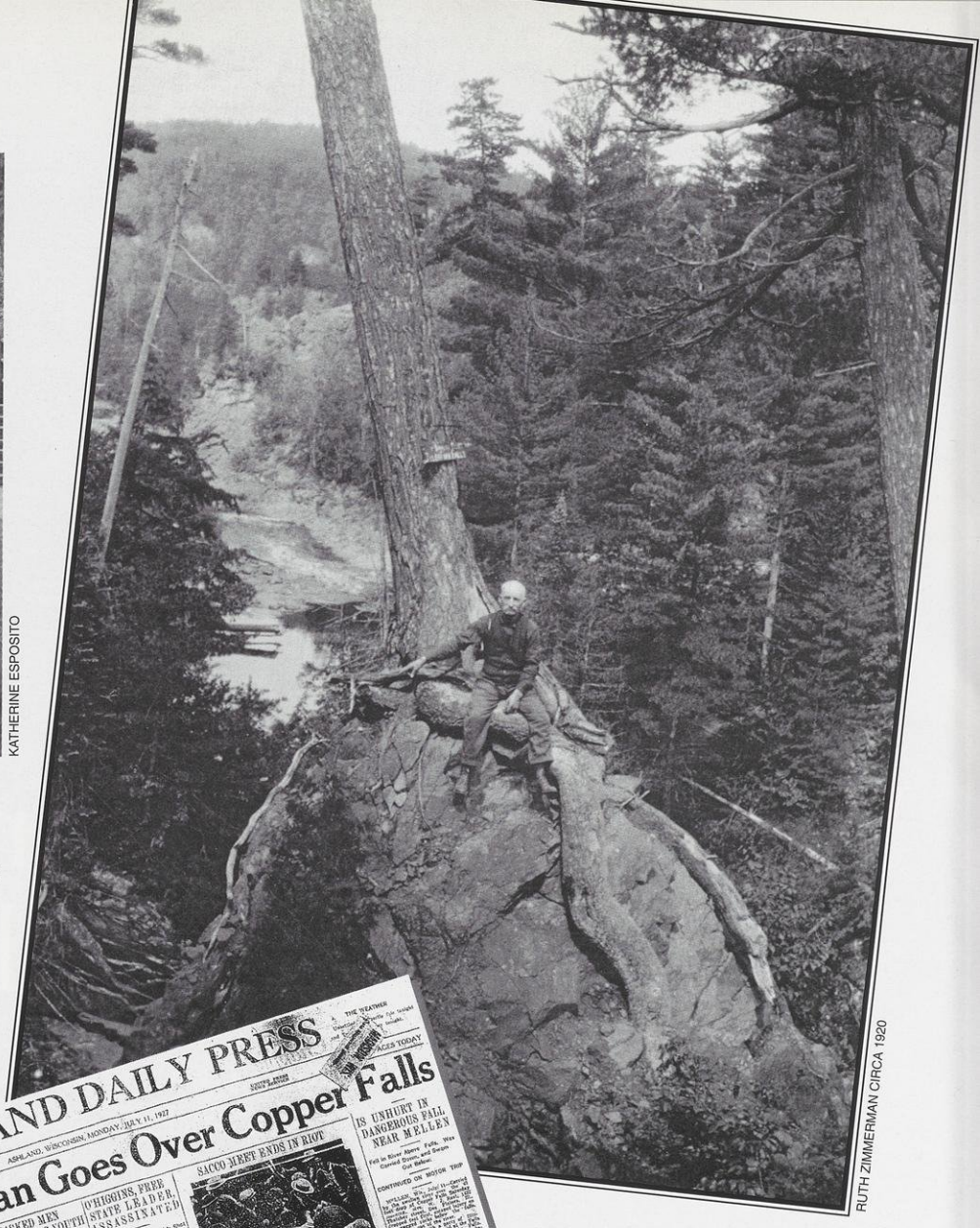
The much bigger picture, however, is the story of how Copper Falls came to be.

The creatures of public planning or stepchildren of unusable swamps, the offspring of someone's timely goodwill or untimely demise, state parks come into being through a mix of social forces, personal custom, advancing technology, fads, philosophies — and sometimes, luck.

Copper Falls State Park, on the Bad River near Mellen in Ashland County, might have seemed preordained. Certainly today's campers and hikers might feel that way as they venture into a spectacular 2,676-acre semi-wilderness, cleft by the Bad River's cascades and cataracts sunk deep into Precambrian gorges, rushing with rust-colored water glistening like diamonds in the sun.

KATHERINE ESPOSITO

Scenic overlooks at the park are breathtaking, but please heed the warning signs.



RUTH ZIMMERMAN CIRCA 1920

Visitors in the 1920s enjoyed the site's spectacular forests, river views and vistas.

Nowadays most hikers are content to abide by rules in place since 1977, which forbid climbing in the short but marvelously treacherous river segment between Copper Falls and Devil's Gate. Fatalities have occurred there, as recently as two years ago, when a young man and a can of beer fell backwards and down a hundred feet from a precipice an hour after midnight. But even early accounts recorded breaks both lucky and unlucky befalling the picnickers and curiosity-seekers who ventured dangerously close to the cliffs.

"Mammas Get Hysterics and Papas Cuss the Heat, but Kids Call the Copper Falls Picnic a Big Success," reported the Ashland Daily Press in June 1925. Almost 1,000 cars entered and safely exited the area that day, but one rash father tempted fate: The man pulled a toddler up a 200-foot cliff, then left the child near the summit while he ascended the remaining heights. The child stood unguarded, "swaying and tottering on the edge of the cliff," as gapers watched, "shivering with fear," the paper reported.

ASHLAND DAILY PRESS

ASHLAND, WISCONSIN, MONDAY, JULY 11, 1927

Woman Goes Over Copper Falls

IS UNHURT IN DANGEROUS FALL NEAR MELLEN

LEVINE'S PILOT

MASKED MEN FLOG YOUTH

O'HIGGINS, FREE STATE LEADER, ASSASSINATED

SACCO MEET ENDS IN RIOT

GENEVA MEET SAVED FROM A "BLOW-UP"

MAN HURT IN TUMBLE AT COPPER FALLS

While climbing about on the rocks on the north bank of Copper Falls, an unidentified Marine Corps veteran from Fort Wayne, Indiana had the misfortune to loose his footing and fall more than forty feet to the river bed below. He was rushed to Mellen by his friends and given medical treatment by Dr. E. L. Gilman. Fortunately no bones were broken, but he was quite badly shaken, cut and bruised

COURTESY OF THE STATE HISTORICAL SOCIETY OF WISCONSIN

Kent Goeckermann, the park's long-time manager and himself a father of two, would get hysterics as well if he saw anyone, let alone a child, teetering on a brink. Last summer Goeckermann watched as a middle-aged woman on the river's opposite side leapfrogged a heavy pine fence built to guard against a likely tumble so she could snap a better picture. "Hello? *Hello?"* he shouted across the stampeding river, to no avail. The woman hopped back without incident, and Goeckermann described his conflicting emotions: "A little irritation and a little concern, mixed," he said.

He turned to several youths watching the attempted exchange. "We've had some fall off that cliff, and that cliff," he told them, pointing to assorted rocky outcrops. "Any live?" one boy asked, incredulously.

"Some die, some live," Goeckermann responded. The exact figure, he confided, is lots of injuries but only two deaths since his tenure began in 1973.

The more profound story of survival belongs to the park itself.

How electricity sparked the park

The dream that inspired Copper Falls State Park began in 1914, as local leaders identified pressing wants for their little city of Mellen: a new train depot, a public library, paved downtown streets, the enforced prohibition of public spitting, and "a little ginger."

In the fall, a special issue of *The Mellen Weekly-Record* tallied every potentially tillable acre of cut-over forest land and pointed to a new source of prosperity: tourists. "Any publication on Ashland County would not be complete without some mention of the unexcelled fishing and hunting grounds, which the county offers to devotees of the rod and gun," it read. Lakeside resorts offering cool summer weather were already under construction and canoeing was growing as a sport.

The Wisconsin Advancement Association lobbied to mark all roads for the expected throngs, "with directions best calculated to meet the needs of tourists."

The impulse to promote tourism survived until it collided with the Great Depression and World War II, then re-emerged as the automobile conquered America. From this and other social trends — including the struggle of farmers to conquer hardscrabble fields and the general weariness of women — would Copper Falls State Park grow.

Enduring endless rounds of childbirth, cooking and clothes scrubbing, tired housewives warmed to a new ally — electricity. In November 1915, a second generator installed at the Mellen Water & Light Company's tiny hydropower plant on the Bad River brought more power to town. With the additional electricity grocers could grind coffee, butchers could make sausage, and women could relieve their housekeeping burdens with "wash machines, irons, toasters, and broilers, as well as vacum (sic) cleaning appliances."

The hunger for electricity spawned plans for dams and flowages that backed up bodies of water, which would soon find more recreational uses.

Hints of another social force swinging into motion came from a single sentence in *The Mellen Weekly-Record* from September 1914. The special edition cited 24,000 acres already under the plow and 692,180 acres of cut-over, stump-infested lands "available for farms as soon as the timber is removed." The slogan of the moment became "The Man with the Plow is soon to follow the Man with the Axe."

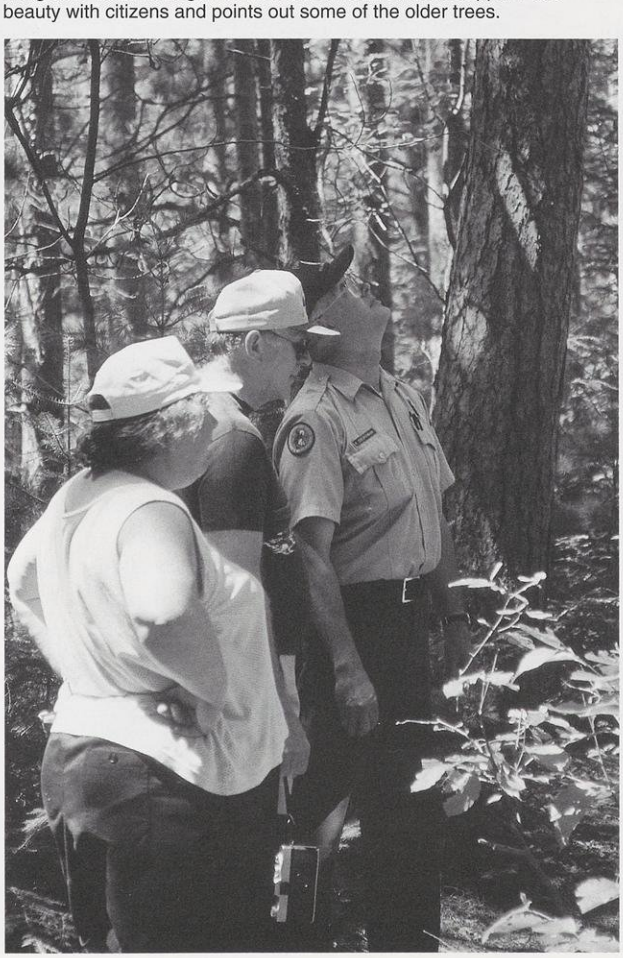
Marginal successes kept farmers' hopes alive. "One Acre of Stumps Blown Up at Once," proudly proclaimed an April 20, 1921 Ashland Daily Press headline. A few politicians and 3,000 county residents watched eagerly as explosives demolished 127 large pine stumps. Several weeks later, a campaign stated a goal of clearing 10,000 acres. "This is the battle of the 'stumps,' our worst enemy," people were solemnly informed.

While farmers waged war on stumps, the Lake Superior District Power Company, which had bought both dams on the Bad River, wanted to ensure a steady demand for its product. So it entered another arena: selling electric appliances. It opened stores in Mellen and other small towns, and success was speedy.

In response, the company needed to produce even more power.

The 1920s were a promising time for the burgeoning electric generating business. Small municipal street lighting companies and railway systems were consolidating, and dams formerly used to mill and transport logs were frequently retrofitted to produce power. Area industries, including a black granite "gabbro" quarry in Mellen, were expanding, and farmers were beginning to receive power through a new 68-mile transmission line. And a new venture — dairying — offered a "substantial future" for electrical generation.

Long-time Park Manager Kent Goeckermann shares Copper Falls beauty with citizens and points out some of the older trees.



KATHERINE ESPOSITO

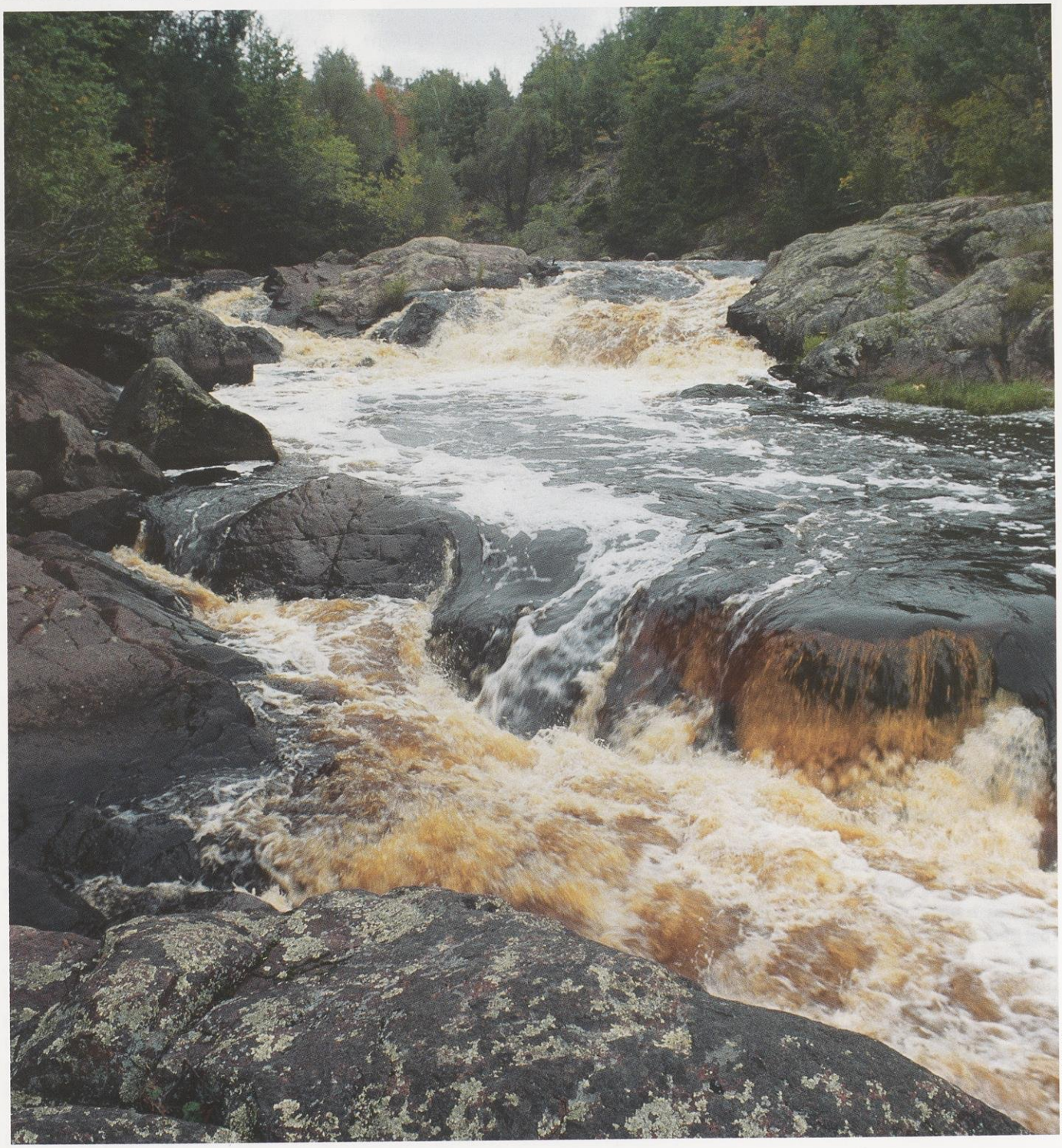
Lake Superior District Power had considered damming the Bad River at another site — the picnickers' haven at 40-foot Copper Falls. Stained brown by natural tannins and flowing north into Lake Superior, the river seemed like a prime candidate for continued electricity production. But Native Americans called the river "bad" with good reason: The waterway rose and fell by several feet in a day, and the high flows could shrink to dangerous, rocky rapids. The unpredictable Bad River couldn't be counted on for reliable power production. And so the glorious falls in Ashland County's most renowned park were saved, partly, by the swifter success of other dam sites.

As hundreds of new residential and business customers quickly raised the demand for power, utilities scrambled to buy existing dams, construct

new ones, and string new transmission lines. The Bay Front coal burning plant, Big Falls hydro dam on the Flambeau River and the White River dam produced more power, more quickly, than Mellen's few hundred kilowatts. The only photograph of the Bad River in a half-century of the Lake Superior District Power Company's annual reports shows an unshackled Copper Falls in 1925, with the caption: "This hydro site is donated by the Company for use as a county park."

Meanwhile, the stumps and poor northern soils had thwarted area farmers. Families abandoned their homesteads in droves and neglected to pay property taxes, creating a financial crisis for state and local governments. Murmuring from Madison talked of replanting cut-over lands with tree seedlings

Utilities bought the land around the present-day park to harness water for electricity, but the Bad River would not be tamed in this spot. Waters rose and fell several feet in a day, creating torrents of water or dangerous, rocky rapids.



KATHERINE ESPOSITO

RUTH ZIMMERMAN CIRCA 1920

COURTESY OF THE STATE HISTORICAL SOCIETY OF WISCONSIN

Upstream damming changed the course of the mighty river above Copper Falls in the 1920s. This woman stands on the spot where the river formerly flowed. The last dam on this stretch of the Bad River was removed in 1967.

rather than vegetables, and establishing federal forests and state parks. The best crop, it turned out, was what had grown there before: Trees.

In 1925 the Ashland County Board of Supervisors unanimously passed a resolution asking the Legislature to declare a 1,000-acre area around Copper Falls a state park.

At the same time, Wisconsin legislators began debating the merits of changing state tax policies to favor forest growth over farm harvests. Though proposals for several larger parks were placed before the Legislature in 1927, only the smallest one at Copper Falls was approved.

Saved by a local crusade

The news was good for Ashland County — or so it appeared. The only hitch was that Lake Superior District Power had to agree to the deal. Because the company still considered the falls a possible hydro site, they wanted to trade it for state-owned lands on the Flambeau River that had greater power potential.

Delays prompted John B. Chapple, the crusading managing editor of the Ashland Daily Press, to light a fire under state seats. "We Owe No Votes to the Men Who Have Blocked Copper Falls State Park," penned Chapple shortly before Election Day in November 1928.

Foot-dragging by several high-ranking members of the State Land Commission stymied actions to establish the park. Chapple blamed them freely: "...These gentlemen have proved very conclusively that they are interested in Chequamegon Bay region only so far as votes are concerned. ...They have practically told us to go jump in the lake."

Chapple's editorializing worked. Two months later, the notion of a trade abandoned, the state Conservation Commission offered Lake Superior District Power $13,000 for 520 acres around the falls. The deal was completed for $15,000 in December 1929.

A few decades passed before the Bad River was completely unharnessed by Lake Superior District Power. Mellen #2, the smaller of two dams, hadn't generated power for several years when, in 1929, the company asked the State Railroad Commission for permission to remove it because the dam "now serves no useful purpose." Mellen was receiving electricity from other sources and the dam was a hazard to downstream structures. The Bad River had proven too erratic to generate a steady supply of electricity.

"It is a bad stream for power, then?" asked Commissioner Adolph Kanneberg. "Yes, it is indeed the 'Bad' River," replied John Forss, a company engineer.

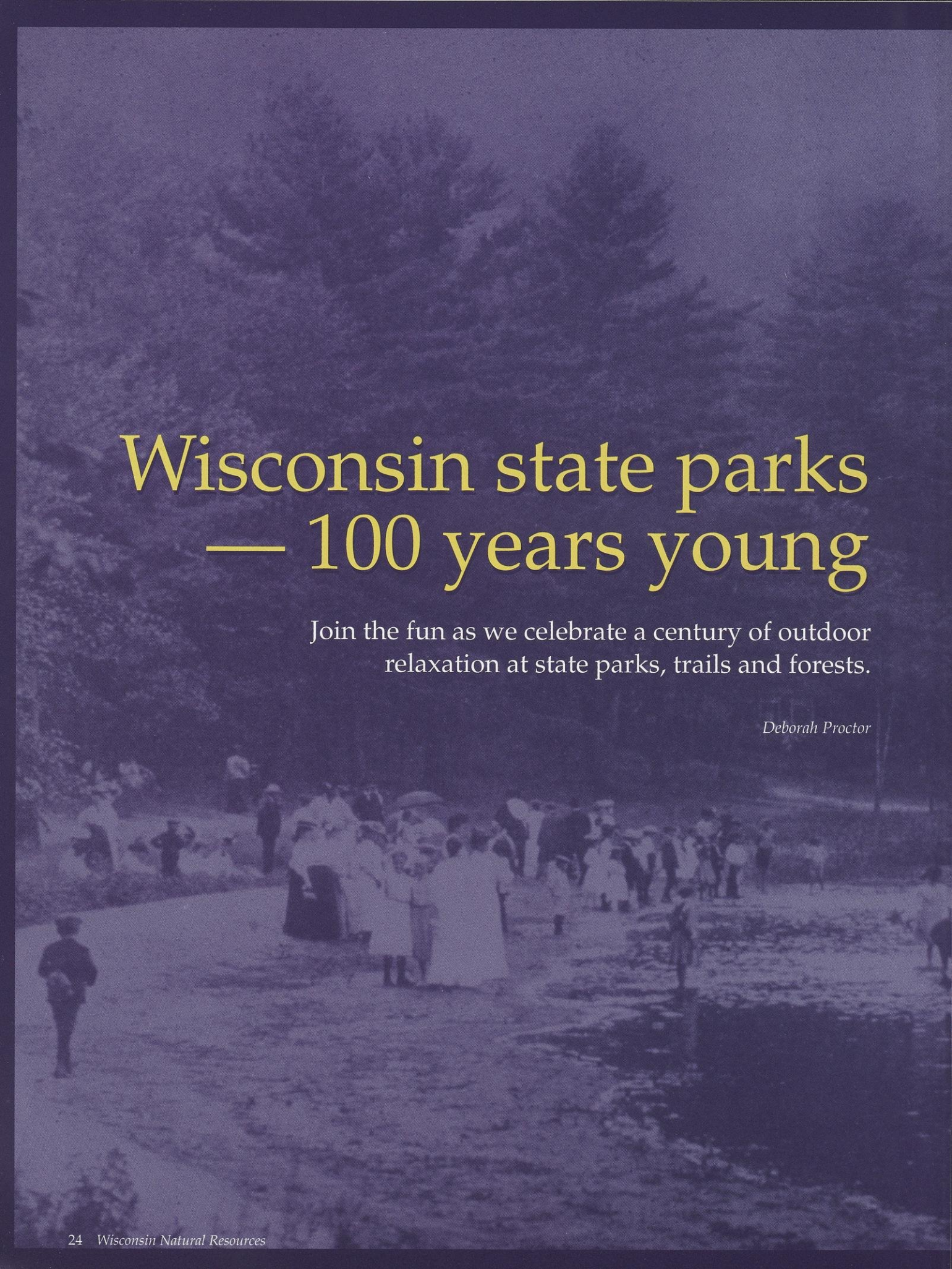
Mellen residents wanted to keep the dam and its flowage for wintertime ice harvests, and the company relented. But nature delivered the final verdict in the 1940s. Two sensational floods washed the dam away — and a few houses as well — ending the ice business.

By early 1967, Mellen #1 had also ceased providing useful power and was removed. The Bad River began to carve a path through its gorge once more.

With the forests grown back and the washing machines ensconced in every mother's house powered by electricity from other sources, only one vestige of the 1920s remains on the river: the popularity of a lovely state park. After raising a family in a house with the park as a back yard of almost 3,000 acres, park manager Kent Goeckermann finds nothing to complain about.

"You're talking to a prejudiced man," he said. □

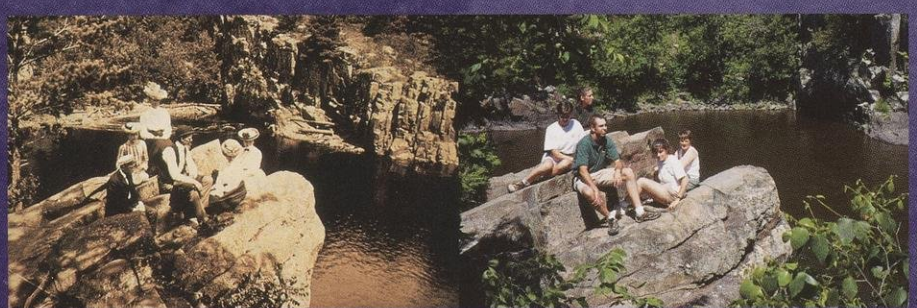
Katherine Esposito writes for Wisconsin Natural Resources *from our Madison office.*



Wisconsin state parks — 100 years young

Join the fun as we celebrate a century of outdoor relaxation at state parks, trails and forests.

Deborah Proctor



DNR PARKS

Enjoying a day at the Devil's Lake beach near the turn of the last century.
(insets) Views from the same spot on the Dalles of the St. Croix River at Interstate State Park in 1900 and today.

In the late 1800s, most of Wisconsin was still a vast forest wilderness and the prevailing attitude was that trees were an obstacle to immigration, farming and settlement. A few far-sighted citizens could sense how rapidly an unending hunger for timber was eating up our natural heritage. At the behest of these early nature lovers, the Legislature, in 1878, became one of the first governing bodies to establish parkland — The State Park — 58,000 acres in what is now Iron and Vilas counties. Unfortunately the state only owned 8–10 percent of the land inside the property boundaries, most of the taxpayers lived in southern Wisconsin and lumber barons who wanted those same lands were the greatest influence on Wisconsin government at that time. The first state park was lost by legislative action when the land was sold to the lumber companies in 1897.

A few years later, in 1899, Governor Edward Scofield appointed a commission to investigate park possibilities along the Dalles of the St. Croix River, where Polk County borders Minnesota. The Minnesotans designated their shore as parkland in 1895 and in 1900, Wisconsin did the same; the land on both sides of the St. Croix River became Interstate Park.

Since that day 100 years ago, Wisconsin's state park system has grown to include 93 state parks, forests, trails, and recreation areas, encompassing 139,000 acres. The natural scenic beauty of the state is preserved for future generations, while providing camping, pic-

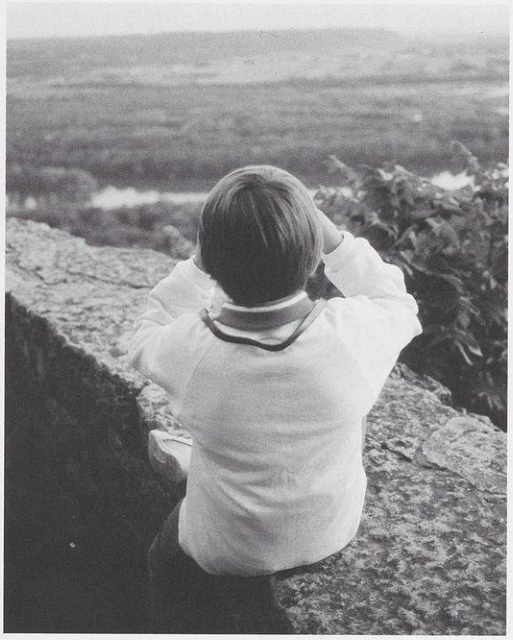
nicking, swimming, nature education, scores of trails and water recreation for more than 14 million annual visitors.

Famed landscape architect, John Nolen, was hired in 1907 by the newly created State Park Board to develop a plan for the state park system. Nolen's report, completed in 1909, recommended additional parks in four locations:

- Devil's Lake (Devil's Lake State Park was established in 1911)
- Door County (Peninsula State Park was established in 1910)
- Grant County (Nelson Dewey, now Wyalusing State Park was established in 1917), and
- the Dells of the Wisconsin River (a natural area was established here in 1994, and expanded in 1997).

Nolen felt strongly that "simple recreation in the open air amid beautiful surroundings contributes to physical and moral health, to a saner and happier life." His report noted that "state parks are the only means of preserving, protecting and appropriately improving places of uncommon and characteristic beauty...These parks would make, as no other agency can, adequate and permanent provisions for wholesome outdoor recreation and pleasure."

Those benefits are as true today as they were when our first state park was born 100 years ago. State park properties are topographical, cultural, environmental, and economical treasures for everyone. Whether we benefit individually, from recreating in the scenic beauty, or economically as businesses in the surrounding communities adjoining these properties, there is no question that Wisconsin state parks make all our lives better. They are our natural legacy — now and for future generations to come.



WYALUSING STATE PARK BY ROBERT QUEEN

DNR BUREAU OF PARKS AND RECREATION

For 100 years, state parks have set aside places of uncommon beauty where people can eternally savor open spaces and our wild nature. The search for a centennial park continues today.

Statewide celebration

Join our centennial celebration by attending any or all of the following statewide events during 2000:

■ **A capitol proclamation** — On January 13, we'll honor the anniversary of the day John Nolen submitted his parks plan to the State Parks Board. In a noon ceremony in the Rotunda of the State Capitol in Madison, Governor Thompson, DNR Secretary George Meyer, State Parks Director Sue Black and the Wisconsin State Parks Centennial Commission will be joined by scouting troops and other community organizations to proclaim 2000 as the "Year of the Wisconsin State Parks System." Warren Nelson from Big Top Chautauqua will debut a new state parks song. Flag-raising ceremonies will unfurl a specially designed centennial parks flag. All state parks will join the celebration by raising their centennial flags at 1 p.m.

■ **Help pick a new park** — State legislators and the State Parks Centennial Commission want to celebrate this special anniversary by establishing a big, new park; the first major park purchased since 422 acres were bought in 1975 for Governor Nelson State Park in Madison. Early plans call for a property within a few hours drive of city dwellers; a place near state trails that is really scenic and might offer camping and boating. The statewide search is on.

■ **Living tributes to outdoor recreation** — We commemorate great leaders with statues, great composers with concerts and great parks with great trees! On Arbor Day (Friday, April 28) each state park, and their enthusiastic volunteer Friends groups, neighbors and visitors will plant centennial trees to honor our commitment to maintaining scenic open spaces. Pick a favorite state park, gather your family, bring your camera and grab a shovel so you can show people that you were there when the centennial trees took root.

■ **Happy birthday to us!** — By tradition, the first Sunday in June (that's the 4th this year) is Open House Day when we dust off the welcome mat and admission to all state parks is free. This year, bring your fork and your appetite because we're throwing a party. You can't turn 100 without blowing out a few candles and eating some good cake. Come on out to wish your favorite property many more happy returns. Times and locations will vary at each park, so check ahead of time to find where we're carving up the calories and whether you'll be treated to marble cake with fudgy frosting, pound cake with fresh berries, or angel food cake with marshmallow topping. They'd better be serving devil's food cake at Devil's Lake! What kind of gift do we want? Well, I hear the park superintendent has been dropping hints for a pair of those silky Smokey Bear boxers. On the other hand, you might want to bring your wallet and pick up a tee shirt or some new sweatshirts sporting the new centennial logo.

It will be an especially big bash at our newest playground, the Milwaukee Lakeshore Park adjoining the Summerfest grounds in downtown Milwaukee. We're still planning the party, but you're invited to the birth of this island park. Here's a hint — if we blindfold you and your feet get real wet, you missed the target for Pin-the-Tail-on-the-Donkey.

■ **Back to our beginnings** — A special ceremony at Interstate Park on September 20 will unveil a plaque designating the property as the first jewel in a string of state gems now preserved as state parks, trails and forests.

■ **A full year of fun** — Each state park or trail will cook up its own unique mix of historic talks, nature walks, foot races, festivals, photo displays and special days to celebrate the park centennial throughout the camping season. For instance the Sugar River Trail in New Glarus will sponsor Depot Days at the old railroad trailhead on April 23 to show the railroad's importance to the local culture and economy.

Hartman Creek State Park in Waupaca will host a special Open House at the Hellestad Home, a restored Norwegian log cabin on the property.

The yarns will be spinning at Wildcat Mountain State Park on June 15 when they host evening campfire stories.

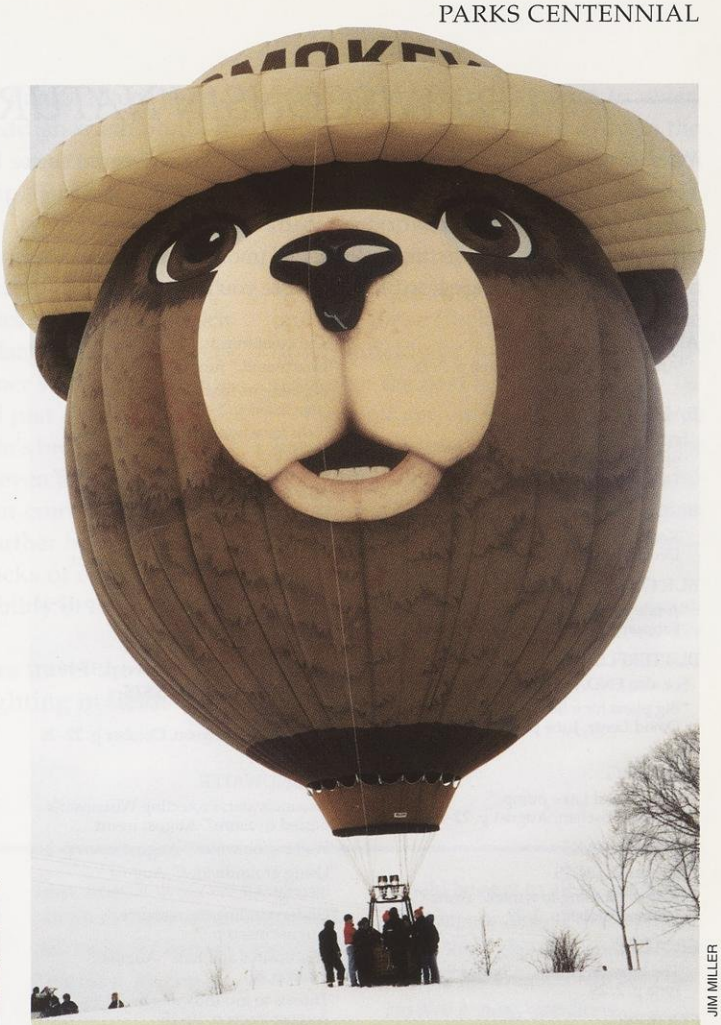
You can step back in time at Mauthe Lake in the Northern Unit of the Kettle Moraine State Forest when they host a community festival on June 16.

In July a huge Smokey Bear hot air balloon is slated to tour several of the parks. Meet the real *Ursa major* up close and personal!

State trails, like Sugar River and waterways, like those at Hartman Creek State Park, expand our thinking to preserve nature along corridors and provide outstanding recreation that links communities.

SUGAR RIVER TRAIL BY ROBERT QUEEN

HARTMAN CREEK BY ROBERT QUEEN



JIM MILLER

Big Smokey and his fire prevention safety message will visit these parks: Buckhorn on July 16, Mirror Lake on July 17, Governor Dodge on July 18, Blue Mound on July 19, Lake Kegonsa on July 20, Governor Nelson on July 21 and Bong Recreation Area on July 22.

Old-fashioned toys will be on display and you can try your hand at old time games. Woodsmen and real history buffs will enjoy the French and Indian War encampment at Heritage Hill State Park in Green Bay on September 9 and 10, and the Buckskinner's Rendezvous at Tower Hill State Park near Spring Green on September 9.

To help plan your day trip, weekend outing or a longer vacation around these special events, visit a state park or DNR Service Center to pick up a special listing of centennial programs. You'll also find them on the Wisconsin state parks website, www.wiparks.net; by writing Centennial Events, DNR Bureau of Parks and Recreation, P.O. Box 7921, Madison, WI 53707; or by contacting the Department of Tourism at 1-800-432-TRIP.

Join us in celebrating the best of Wisconsin's last 100 years and the bright adventures to come in 2000 and beyond at Wisconsin state parks, trails and forests! □

Deborah Proctor helps manage customer relations for DNR's Bureau of Parks and Recreation in Madison.

1999 *WISCONSIN NATURAL RESOURCES* INDEX

We annually publish a subject index of stories we've covered each December. A cumulative index of our stories since 1977 is also available as a file you can search or download from our website: www.wnrmag.com . Please note this is a large file (more than 350,000 bytes and in excess of 100 pages), so browse before you print.

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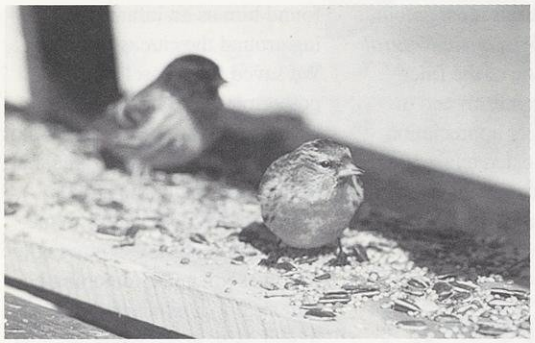


STEPHEN J. LANG

Look for the redpoll's red cap and black chin at your winter feeder.

Birders taking a superficial glance may mistake common redpolls for pine siskins and goldfinches. Look closer. The sprightly birds sport a red spot as a cap and a black chin. Their underparts are snow white with fine brown streaking on the flanks. Males have a pink to reddish wash on their breast and sometimes display a pink rump. Tails are deeply forked.

Common redpolls have a close relative, the hoary redpoll, *Carduelis hornemanni,* which looks similar, but is lighter overall with finer streaking, a white rump and just a wash of pink on the male's breast. Hoary redpolls nest even farther up in the arctic than common redpolls and tend to stay farther north in winter. Always check flocks of common redpolls for the possibility of a stray hoary redpoll.

The little finches travel the countryside in flocks alighting in fields with standing weeds. They cling to weed stems and extract seeds or drop to the ground to pick up fallen or wind-blown seeds. Individual redpolls are restless, always popping in and out of view, twittering as they go. If something spooks the group, they erupt and fly as one big, loose flock. They either settle down quickly or, just as likely, disappear over the next rise in a field.

Redpoll arrival is unpredictable at best. Wait and watch. Drive slowly past weedy fields. Look for movement and listen for quiet peeps. Check birch trees in the neighborhood. Keep thistle feeders full. This could be the year! □

Anita Carpenter loves winter walks near her Oshkosh home.

Readers Write

SMALLMOUTH TALE

I just finished reading the August story "The secret smallmouth lake in the U.P.," and I had to write and tell you how much I enjoyed the piece. Some of my co-workers undoubtedly heard me laughing out loud and I caused a ruckus several times nearly falling out of my chair. Keep it up, I want to read more like this one.

Jim Savinski
Oshkosh

FRUSTRATED CAMPER

Our family just completed a 19-day camping trip at Firefly Lake in the Northern Highland American Legion State Forest. We have camped with family friends at this same campground for 34 years. Due to the new reservation system, this was the most frustrating year we have encountered. Here are some of the problems we endured:

We found it nearly impossible to get through to the reservations operator. In getting through days after our first attempt, we were told there were no reservations available. After several attempts and a 45-minute conversation, we received a two-day reservation at one site, another two-day reservation for a second site and a five-day reservation for a week later at a third site. For those who camp, moving once, much less this number of times with tents, etc. took up a good part of our vacation. When we arrived at the campground we immediately applied for a non-reservation site to cut down on the time moving between campsites and to avoid the round-trip 440-mile drive home between the two weeks of our reservation.

While camping, we took a physical count of vacant campsites each morning at 8 a.m. There was an average of 10 vacant sites each day of our 19-day stay — 14 percent — which could mean a loss of $1,330 in revenue and 10 more sets of frustrated campers. In communicating with the other campers during our stay, not one had a favorable comment about this new system…I request returning to the previous system of obtaining campsites on a first-come, first-served basis with a few sites for those who want to reserve a site. This would reduce vacant sites, reduce costs for campers, eliminate most of the frustration and make for happier campers.

Donald F. Fictum
New Holstein

Reply from DNR Parks and Recreation: *We have been working very hard to implement legislation passed in 1995 that responded to complaints campers had voiced about the paper reservation system. The new law required the Department of Natural Resources and the Department of Tourism to develop an automated camping reservation system. Since the new system included no funding for the centralized service, the clear intent was that those making campsite reservations should fund the system. We certainly want campers and long-time customers to continue enjoying outdoor experiences and we continue to work closely with those who handle calls to meet customers needs to avoid frustrating experiences in planning vacations.*

GROUNDWATER WELL DONE

The August section on groundwater was well done. I think it should be sent to all school science departments. I'm a member of the local planning commission and the information will help me answer zoning questions.

Roberta Erdmann
Berlin

Congratulations on the fantastic articles on groundwater in the August issue. The articles were comprehensive and informative. I assume it was designed as a separate publication and as such, I think it should be sent to every household in Wisconsin. The more we are aware of how we affect the quality of water, the cleaner our water will be.

Dr. Frank L. Myers
Madison

…You also have a fine magazine and I took special note of the section on groundwater. It's very informative.

Rex Amack
Director
Nebraska Game and Parks Commission
Lincoln, Neb.

COLORED CRAWLERS

Have you ever heard of colored night crawlers? I have a friend

who was in Georgia and said he bought green and red colored crawlers — live ones!

Thomas Biggs
Kenosha

DNR ardent angler Tom Sheffy replied: *Yes indeed, there are colored crawlers. They probably get that way from dyes added to the food supply. But there's more. Bait dealers are also selling "Rosy Reds" — fathead minnows that are pinkish-orange in color. Now think about that a little in the natural scheme of things. After a trophy predator fish has consumed a jillion normal black, silver and white minnows and survived to a ripe old age, why would it all of a sudden eat a pink minnow? Or a green crawler?*

It seems to me that evolution favors the status quo. In most cases, eating a red or green crawler would greatly increase selection against such individual worms. Having said that, I should also point out that some fish may subscribe to the notion that variety is the spice of life, so keep fishing.

FRUITFUL SEARCH

Your search engine on the website works magnificently! I had to find an article that I had read back in 1996. I couldn't remember the title or author of the piece, only that it was written about a new nature park near my hometown. I used 'Manitowoc' as my key word and the article appeared! I'm not used to the Internet working so well. Good job putting together the search engine and library!

One more thing…I enjoy Anita Carpenter's articles immensely. I had the privilege of being introduced to nature by Anita during my college days at UW-Oshkosh. She is a gentle lady and a wonderful naturalist. I anticipate your magazine in my mailbox and I can't put it down once I start reading. Thank you so much!

Ron Beatty
Madison

WOODLOT HELP

I love your articles on woodlots. I am looking to purchase 40 acres and manage it for timber and wildlife. These articles were very helpful. Your website is very easy to use too. I will be visiting the Nicolet National Forest this week and am looking forward to the trip.

Kirt Manecke
Milford, Mich.

THE GREEN IN XMAS TREES

Every weekend I search the Internet for information on Christmas tree plantations. Why? Because I am planning to start such a tree farm next April. We're planning for a future market of 250,000 Christmas trees. I liked your website.

Fernando Cordero
Zona 9 Guatemala

Fernando, take a look at our December 1997 article "That perfect tree," in which author Kathy Esposito examined pest management, nonchemical alternatives for raising Christmas trees and changing strategies for selling Christmas trees raised with fewer pesticide applications.

SNAKE CREEK

I am the mother of one of your contributors, Thomas Eddy of Green Lake. I think his Snake Creek project ("On the trail of Snake Creek," October 1999) is one of his best on-going programs, and I like the fine report he submitted to you. I am, understandably, very proud of the work he does, and the way he wrote about it. My father, Rev. Ewing Holland, lived in Wisconsin for a few years after his retirement and subscribed to your magazine He was a true conservationist and, as a minister of the Gospel, really understood the need for people to be faithful stewards of our natural resources. Whether one believes the biblical principle that resources were created for people or one believes these resources evolved, everyone knows the need to protect our most precious environment. *Wisconsin Natural Resources* is one of the finer publications to inform and to bring us a deeper appreciation for our complicated environment — plus remind us of the sheer beauty found all about us!

Margaret Eddy
Swaledale, Iowa

COLD STORAGE

Your website is very informative. Tell me please, is it possible to grow earthworms in some cold part of the world as North Norway?

Willy Richardsen
Tromso, Norway

Well, Willy, Wisconsin is pretty darn cold, too, and lots of people raise worms here! To find out how, take a look at our special section on vermicomposting — "A new wiggle on waste" (December 1998). It's all about raising worms to digest household food waste.

BE WARY OF WILD PETS

I have a 3-month-old male weasel/ermine. He is dirty brown and his black-tipped tail is almost as long as his body. My dad found him as an infant, wandering around the carcass of a cat. We saved the weasel from hypothermia. I fed him bottles. Now I play with him outside and in the house. He's very tame, but likes to play fight. I just put a glove on. He only listens to me, and is very smart. I'm moving to Florida soon and I'm hoping he will shed to a white coat this winter even in the warm weather. I enjoyed your article about weasels ("You little weasel," February 1998). It's nice to hear other people are so interested in these small wonders. I love 'em.

Jennifer Sutton
New York

Jennifer, be really careful about keeping wild animals. First, they are wild and can carry diseases. Second, you may be prohibited from owning certain wild animals and your family should certainly check with Florida wildlife officials before bringing a wild pet into the state. Here in Wisconsin weasels are unprotected, but that doesn't mean we would encourage someone to own one. We firmly believe it's best to view wild animals in their natural settings without trying to domesticate them.

WISCONSIN'S GIFT TO THE NATION

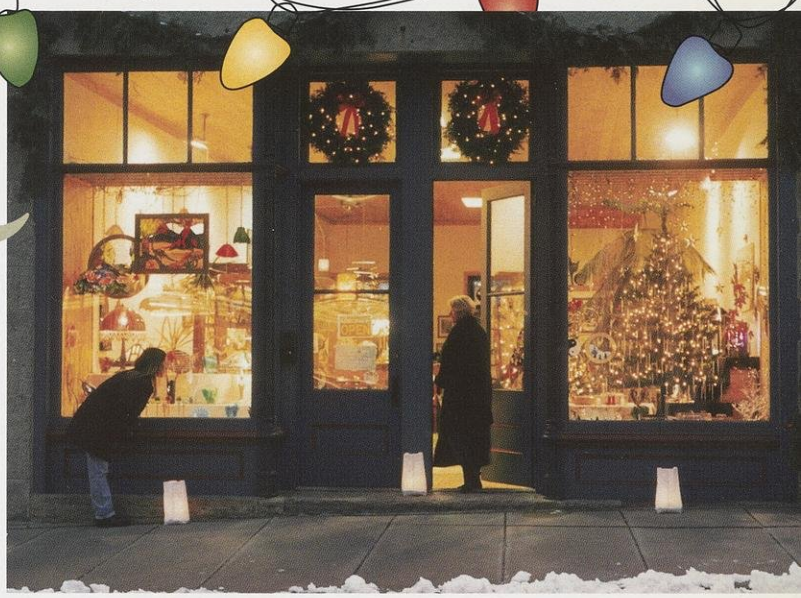
A 70-foot white spruce from the Argonne Experimental Forest near Rhinelander serves as the national holiday tree this year. The spruce toured 20 northern Wisconsin communities in November and was then trucked to Milwaukee where it was shipped by a special Amtrak train to Washington D.C. Grounds crews have erected and decorated the tree that will dazzle visitors to the U.S. Capitol lawn for five weeks.

The spruce, dubbed "Wisconsin's Millennium Tree," became the focus of two special projects here at home. A group of teachers convened last summer to write an educational packet about the tree that was distributed to fourth grade teachers earlier this fall. The Wisconsin Association for Home and Community Education also coordinated a project to craft 5,000 homemade ornaments using materials found in nature. The ornaments were collected at the DNR nursery in Hayward. The most artistic ornaments were also shipped to Washington and now decorate the national tree.

COURTESY OF MACC FUND

WISCONSIN TRAVELER

Let there be light



COURTESY OF MINERAL POINT CHAMBER OF COMMERCE

Lights brighten the season in Mineral Point's shopping district, on a candlelight ski at Lake Wissota State Park, and along Candy Cane Lane in West Allis.

Is it TRAVELER'S imagination, or are Wisconsinites getting a little *light*headed these days?

It's understandable, given our annual descent into the depths of winter's gloom. When the sun says goodbye at 4:30 p.m., who among us has not gripped the windowsill with vague unease as the heavy shadows coalesce into an enormous black hole of nothingness? *Yikes!*

Perhaps that's why December, dark as it may be, is also the brightest month in Wisconsin: It's the time of year when we take every opportunity to illuminate our homes and cities, simply for the sheer joy a beam of light can bring. Across the state, scores of communities host events to lighten the spirits of residents and visitors alike. Why not take part in one or several, and let the darkness be lifted for a time?

You might, for example, wander over to **West Allis** — specifically, the neighborhood at 92nd–96th Street, Oklahoma to Montana Avenue S., where you're invited to "Share Christmas on Candy Cane Lane" every evening from 6–10 p.m. throughout the entire month of December. The streets will be transformed into a wonderland of delight-ful holiday displays by neighbors and the Midwest Athletes Against Childhood Cancer. Reach them on the web at http://www.maccfund.org/ or call 800/248-8735.

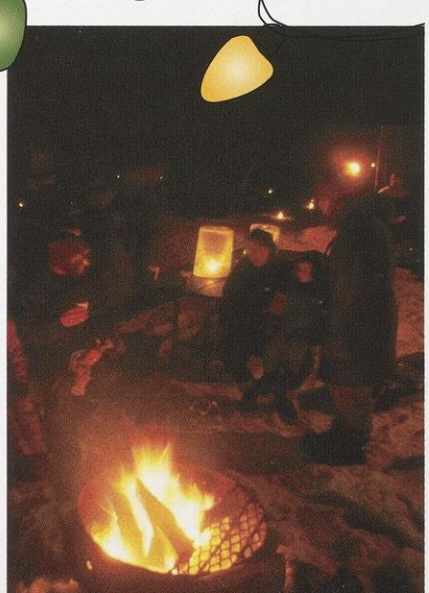
The sun may be loafing this time of year, but other stars will rise to the occasion at the Barlow Planetarium — the state's largest — located on the University of Wisconsin-Fox Valley campus in **Menasha**. The planetarium boasts a 50-foot projection dome, seats 98, and is wheelchair accessible. A rotating schedule of shows shed light on what's happening in Wisconsin's skies. Admission: $5 adults, $3 children. Check the web at http://www.fox.uwc.edu/barlow or call 920/832-2848 for the opening hours. (By the way, if you need to lighten your holiday shopping list, for a donation you can "buy a star" at the Barlow and have it named after your recipient.)

The butcher, the baker, the candlestick maker: **Mineral Point's** historic business district welcomes all to take a step back in time, when shops were illuminated only by the soft glow of candlelight. From dusk to 8 p.m. on December 4, the merchants of this Iowa County community will shun fluorescent glare and sell their wares by the flicker of wax and wick. 608/987-3201.

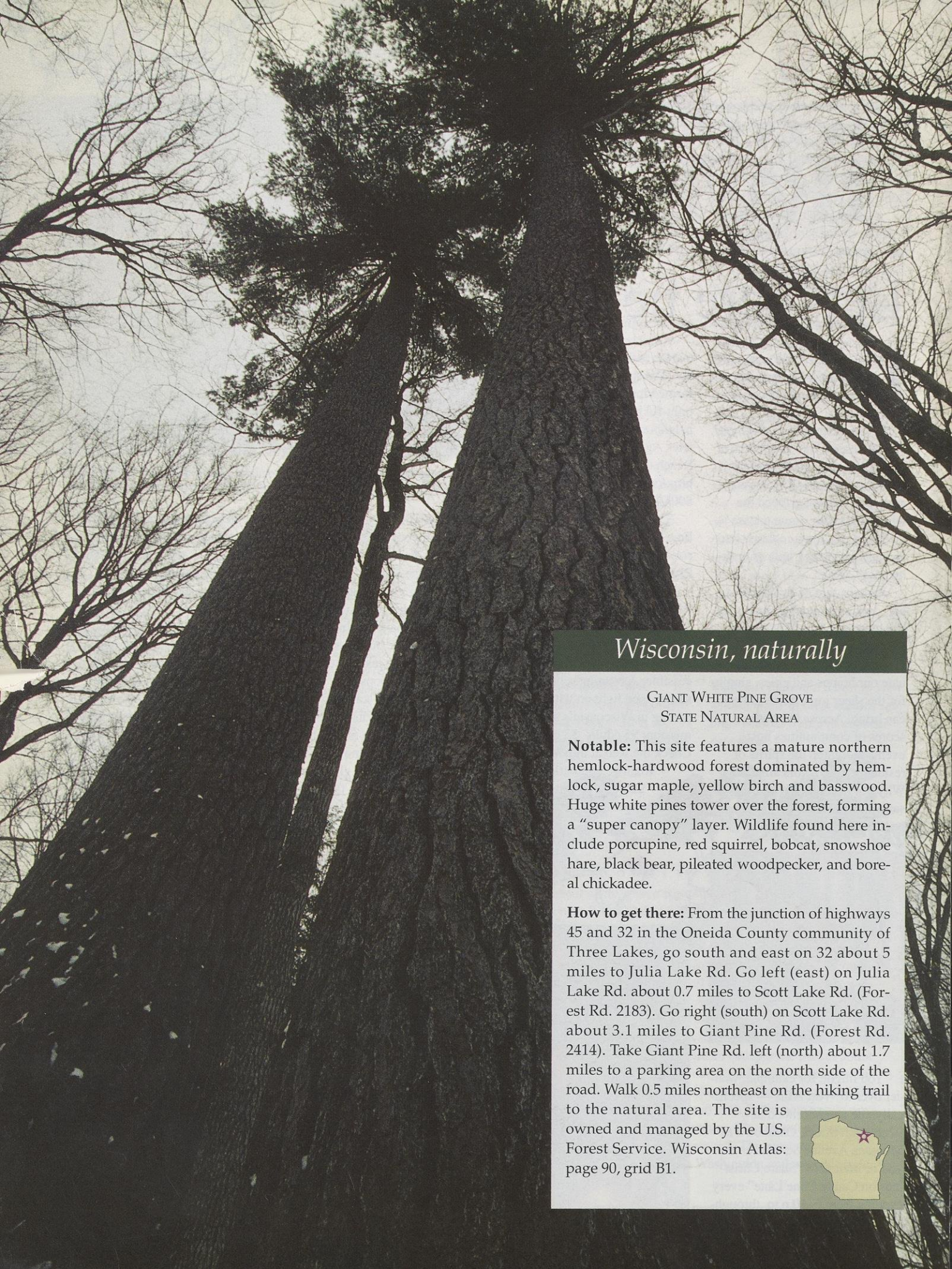
Let the **Milwaukee Public Museum** shine a light on our better selves in a celebration of "The Giving Tradition," a look at giving in cultures from around the world, from 10 a.m. to 3 p.m. on December 18–20. Enjoy dancing, music, workshops, ornament making and craft demonstrations. Admission: $5.50 adults; $4.50 seniors 60+; $3.50 students ages 4–17; children 3 and under, free. The museum is on the web at http://www.mpm.edu or call 414/278-2700.

Enjoy one of winter's brightest events at a **Wisconsin state park** near you. Many state parks offer candlelight skis and walks, a perfect way to keep darkness at bay. Here's one: On December 26 from 5:30 to 7:30 p.m., **Council Grounds State Park** in Merrill lights two routes — one of a half-mile; the other 2½ miles — with 400 candles. Stop at the park shelter house after your tour to savor warm beverages, snacks, and the heat and light of warming fires. Admission sticker required. 715/536-8773. For information on candlelight events at other Wisconsin state parks, see the Department of Natural Resources' website at http://www.dnr.state.wi.us/org/caer/ce/news/events.html

And, to banish the darkness of the 20th Century once and for all, the folks at the Bear Paw Outdoor Adventure Resort in **White Lake**, Langlade County, invite you to ring in the millenium on New Year's Eve with a "Y2K Snowshoe Torchwalk." The torches are guaranteed to light — so they say! Rent snowshoes at the resort. Visit them at http://www.bearpawinn.com or call 715/882-3502. □



ROBERT QUEEN



Wisconsin, naturally

Giant White Pine Grove State Natural Area

Notable: This site features a mature northern hemlock-hardwood forest dominated by hemlock, sugar maple, yellow birch and basswood. Huge white pines tower over the forest, forming a "super canopy" layer. Wildlife found here include porcupine, red squirrel, bobcat, snowshoe hare, black bear, pileated woodpecker, and boreal chickadee.

How to get there: From the junction of highways 45 and 32 in the Oneida County community of Three Lakes, go south and east on 32 about 5 miles to Julia Lake Rd. Go left (east) on Julia Lake Rd. about 0.7 miles to Scott Lake Rd. (Forest Rd. 2183). Go right (south) on Scott Lake Rd. about 3.1 miles to Giant Pine Rd. (Forest Rd. 2414). Take Giant Pine Rd. left (north) about 1.7 miles to a parking area on the north side of the road. Walk 0.5 miles northeast on the hiking trail to the natural area. The site is owned and managed by the U.S. Forest Service. Wisconsin Atlas: page 90, grid B1.