

January / February 2007

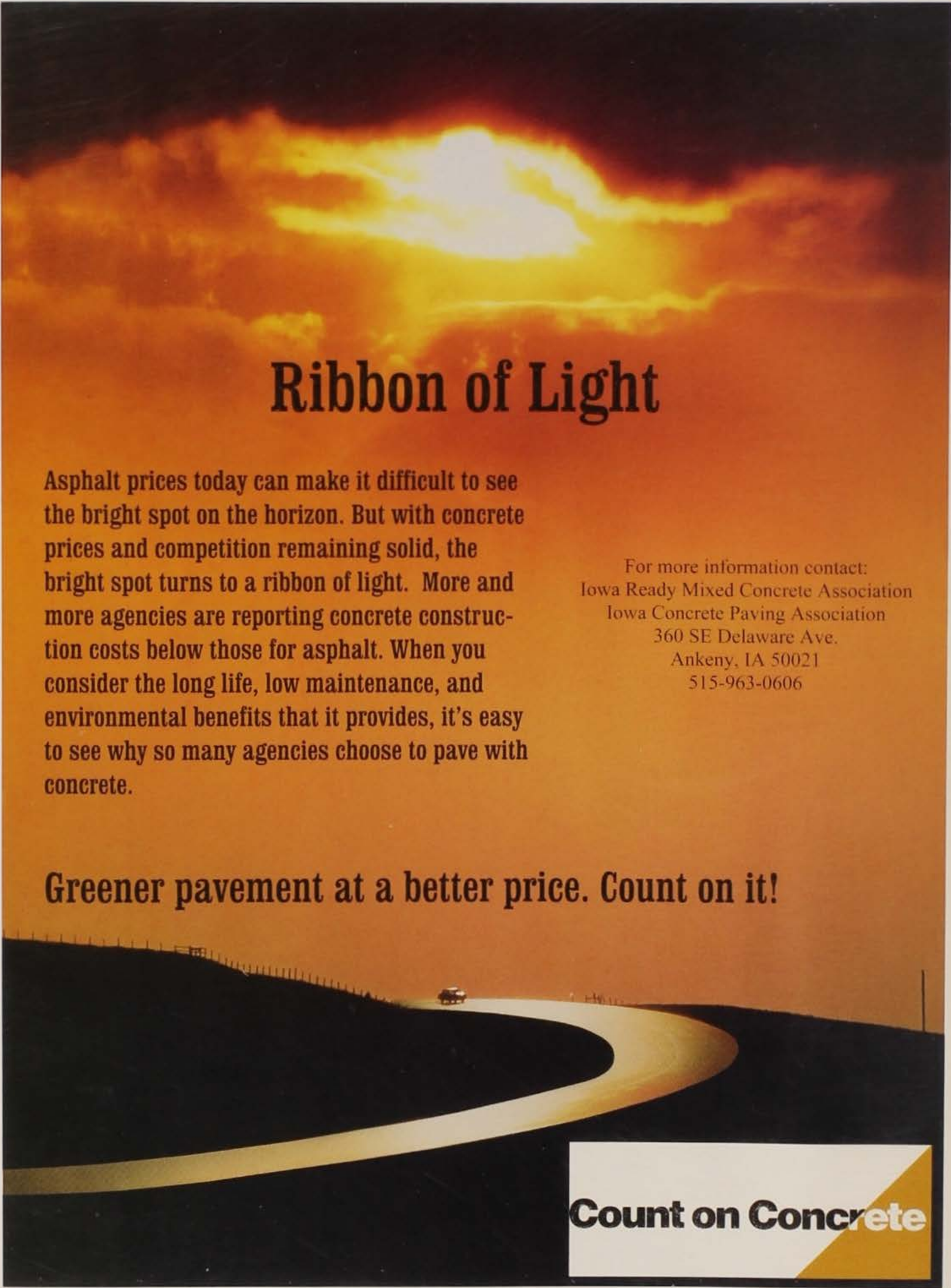
IOWA OUTDOORS

THE DNR'S MAGAZINE OF CONSERVATION AND RECREATION



IN THIS ISSUE:

EAGLE VIEWING ALONG THE DES MOINES RIVER



Ribbon of Light

Asphalt prices today can make it difficult to see the bright spot on the horizon. But with concrete prices and competition remaining solid, the bright spot turns to a ribbon of light. More and more agencies are reporting concrete construction costs below those for asphalt. When you consider the long life, low maintenance, and environmental benefits that it provides, it's easy to see why so many agencies choose to pave with concrete.

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Suspended six stories high, staff writer/photographer Lowell Washburn captured this eagle image along the Maquoketa River near Cascade during a DNR banding effort. Sitting in the bucket of an electric company service truck to reach the 5 foot thick nest nearly the same width, staff discovered three eaglets with "toys:" two ears of corn and two painted turtle shells.

ABOUT THIS PHOTO

Veteran staff photographer and writer Lowell Washburn fought single digit temperatures and five motionless hours in a makeshift blind to obtain images of eagles feeding on injured and sick snow geese at DeSoto Bend National Wildlife Refuge 25 miles north of Council Bluffs along the Missouri River. "I sat there until my lips and nose turned blue," says Washburn. "You can't stomp your feet to stay warm in the blind. You have to be still and quiet." (Wait to see what Washburn endured for the next issue.) At the refuge, nearly half a million snow geese pass through on their way from the Arctic to the gulf. As many as 145 eagles wait for an easy meal.



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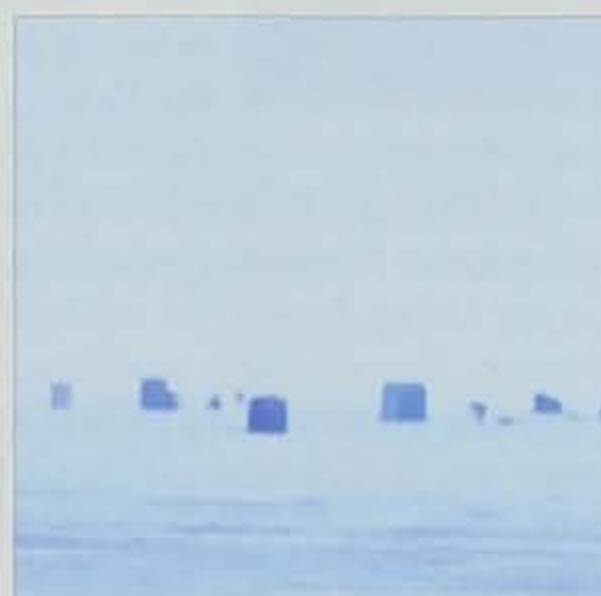
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CONTRIBUTORS



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Jennifer Wilson is a travel writer who has written for *Better Homes & Gardens*, *Midwest Living*, *Cooking Light* and *AAA Living*. She's left her tracks everywhere from the jungles of the

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TY SMEDES

A lifelong interest in natural history led Ty to purchase his first 35mm camera in 1980. Since then, Ty has been published by more than 25 magazines including *The Iowan*, *The Nature Conser-*

vancy Magazine, *Sierra*, *Ducks Unlimited*, *Iowa Natural Heritage*, *Birds & Blooms*, *Outdoor Photographer*, *Pheasants Forever*, *Brown Trout*, *Country Living*, *Family Fun* and *Des Moines Magazine*. Specializing in landscape, wildlife and prairie wildflowers, he loves to photograph Iowans too. He's contributed photos to the DNR for over 20 years. Ty regularly teaches classes in nature photography at home and abroad and sells matted prints. He grew up on a farm south of Granger and now resides in Urbandale. www.smedesphoto.com • 515.270.9086



ROGER HILL

Roger Hill has filmed and photographed wildlife and nature since 1962 when he started hunting big game animals from Iowa to Alaska. Although he has photographed a wide array of big and

small game, his passion is capturing Iowa white-tails, pheasants, prairie chickens and the very rare sharptail grouse in their natural settings. In the north country, he prefers pursuing wild sheep and grizzlies with his lens. His work has been published in countless state and national magazines. Roger lives on a farm with his wife, Marcia, near Roland. within@frontier.net

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DNR MISSION

To conserve and enhance our natural resources in cooperation with individuals and organizations to improve the quality of life for Iowans and ensure a legacy for future generations.

EDITORIAL MISSION

We strive to open the door to the beauty and uniqueness of Iowa's natural resources, inspiring people to get outside and experience Iowa. We strive to motivate outdoor-minded citizens to understand and care for Iowa's natural resource legacy.

MAKE A DIFFERENCE

The Keepers of the Land program matches volunteers with natural resource service needs statewide. Give back to Iowa's lands, waters and skies. Call 515-281-0878 to match your interests with needs or visit www.keepersoftheland.org.

HOW TO DONATE

Charitable giving of land, funds and goods and services greatly enhances Iowa's outdoor living. Contact: Diane Ford-Shivers at 515-281-6341.

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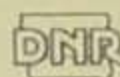
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Our webpage, www.iowadnr.com, is loaded with information for all ages and needs. Buy licenses, reserve campsites or learn more about our environment online.



DIRECTOR'S MESSAGE

Those who know me realize I focus my energies on the future rather than the past. But a new year is a good time to reflect, especially as a new governor is elected.

After an election, for those in state government, it requires us to examine recent history—at least the last eight years—to prepare for the transition of the current administration to the next.

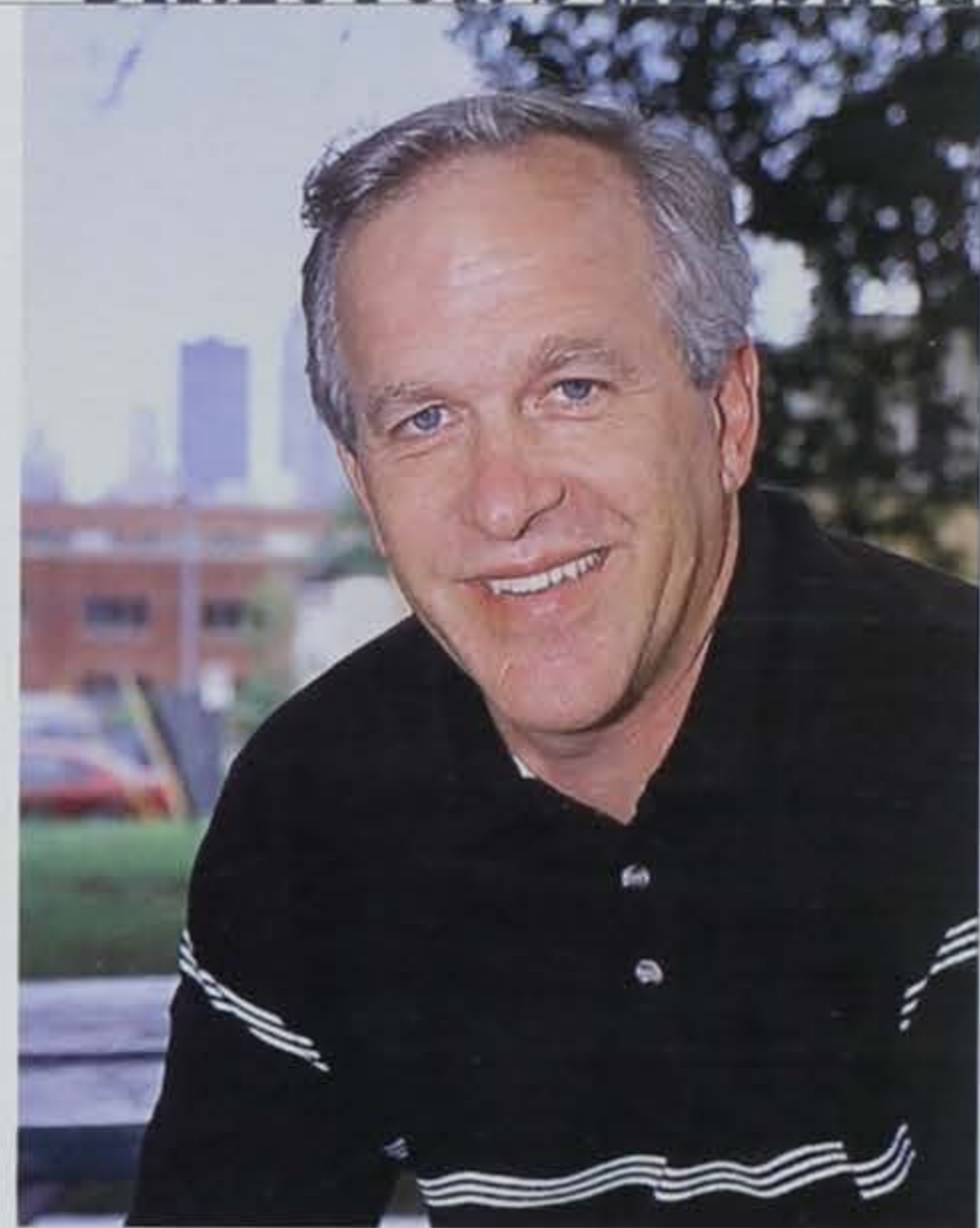
And while I may not be a huge fan of a rearview perspective, I admit it can be enlightening, surprising and more than a little satisfying. Sometimes, in the daily trials and tribulations, it's easy to lose sight of the tremendous accomplishments that we in the DNR, while working with stakeholders, other agencies and citizens have made.

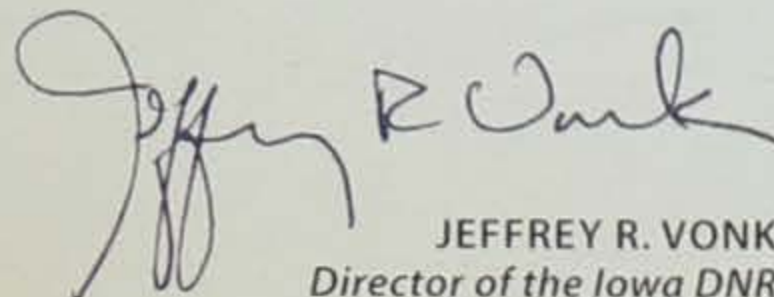
Let me touch on a few. Just a small sample of some notable achievements include:

- *Establishing water quality standards. These will launch benchmarks for improving water quality and we are proud to approach it from the right perspective in assuming most of our water should be swimmable and fishable until proven otherwise.*
- *Creating a destination park at Honey Creek State Park on Lake Rathbun. With construction beginning last fall and completion in the spring of 2008, this resort complex with a lodge, large modern cabins, waterpark, golf course and other recreational amenities will be the first in Iowa.*
- *Creating a new park, Banner Lakes at Sommerset State Park; purchasing a major addition to Waubonsie State Park and implementing a new campground reservation system.*
- *Improving how the DNR processes environmental protection permits to meet environmental and conservation goals while increasing efficiency in serving the public. Our first effort in 2003 resulted in reducing the average number of days needed to issue an air quality permit from 62 days to 10.*

But by far our greatest achievement in the last eight years is elevating the discussion of water quality and the importance of our natural resources in general. I see it everyday from our citizens taking the initiative to begin natural resource projects in their own backyards that eventually benefits all of Iowa.

It is my sincere hope that the momentum started in the last eight years will continue in earnest.




JEFFREY R. VONK
Director of the Iowa DNR

EDITOR'S NOTE



We're thrilled to present *Iowa Outdoors*, our improved and energized *Iowa Conservationist*. After talking with readers and outdoor enthusiasts across the state, we learned Iowans yearn for a magazine that reflects their passion and concern for Iowa's natural resources. Readers want to know the best destinations and ways to protect what we have. So we've added new content — and yes, even changed the title — to reflect your passion for the state's great outdoors as well as conservation issues. Readers agree, our mission to open the door to the beauty and

uniqueness of Iowa's natural resources is vital. We learned that by inspiring people to get outside, they are motivated to understand and care for Iowa's resources. That's our goal.

Each issue, you'll find content that reflects this goal; our feature about new threats to an ancient fish, "*Caviar Collapse*" on page 26, is a perfect example. You'll discover the best nature destinations and hidden gems, such as the Dubuque area, as well as outdoor skills. The *My Backyard* section provides ways to make positive contributions at home whether conserving energy, reducing emissions or creating backyard habitat.

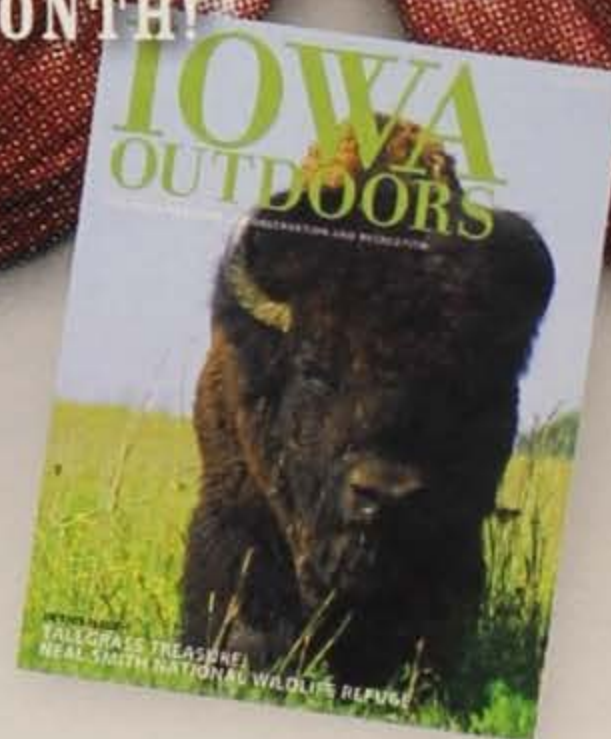
We've added maps to help you get to great places. You'll find bigger, bolder nature photography and great nature and wildlife management stories, hunting and fishing too. Take a behind-the-scenes peek into the DNR — from *Warden's Diary* to biologists in action during airborne deer surveys. And we give kudos in *Admiration and Legacy* to citizens improving our environment.

Upcoming issues pack more wildlife and nature management stories. The next issue focuses on a little known turtle, the sleepest in North America, found in a unique sand prairie in eastern Iowa and in peril.

Whether you've been a life-long outdoor enthusiast or are new to discover Iowa's beauty, consider this magazine your guide. Feel free to drop us a letter to the editor at courier@dnr.state.ia.us. Get outside!

BRIAN BUTTON; Editor-in-Chief

COMING UP
NEXT MONTH!



Neal Smith NWR

SPRING FISHING FORECAST

Prairie Islands

BIG SAND MOUND TURTLES

Beautiful Rain Gardens

ACTIVITIES, TIPS AND EVENTS FOR THE WHOLE FAMILY.

SCRAPBOOKING

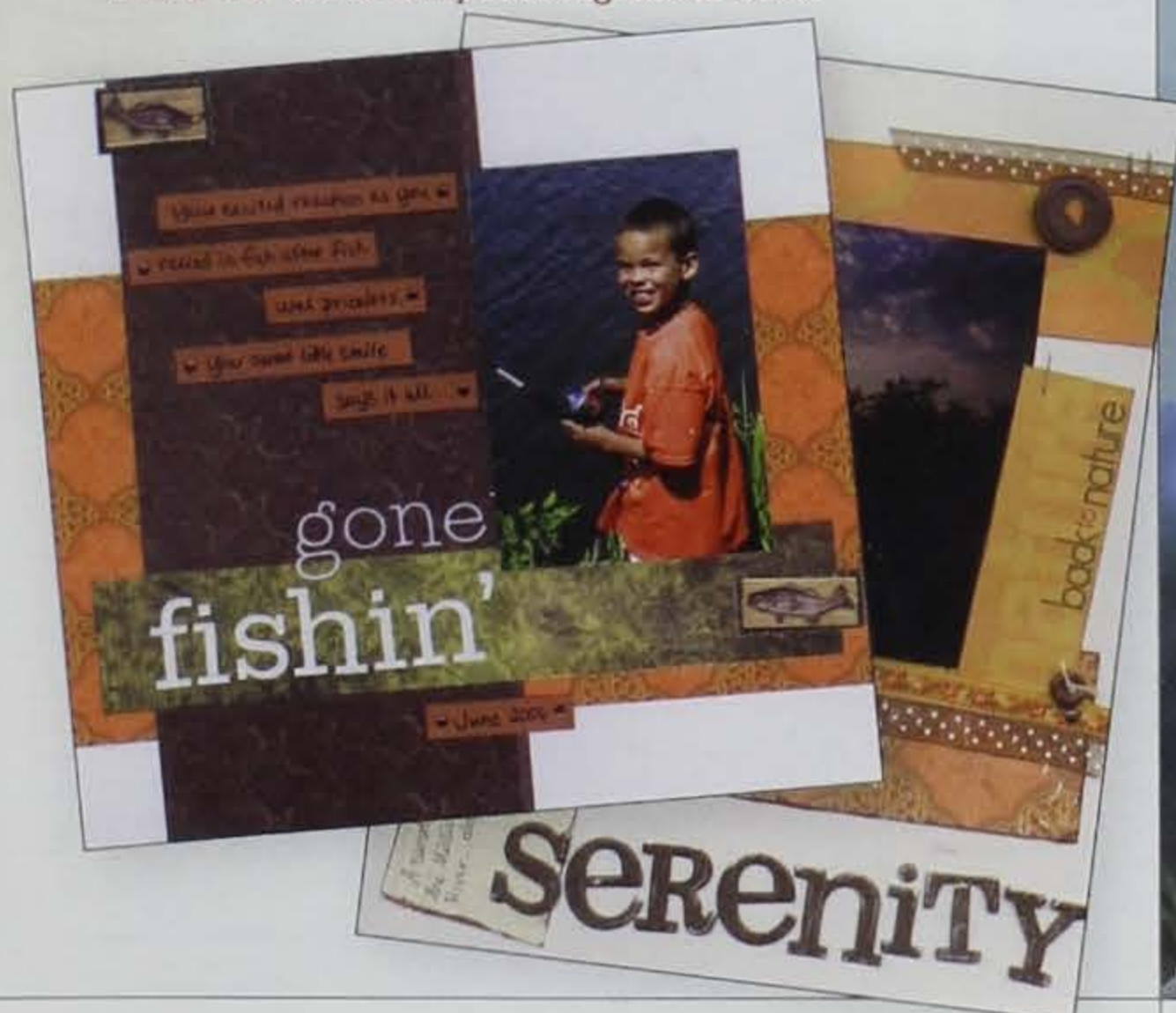
Soak up warm-weather memories
scrapbooking with your family

BY JILL CORNELL

For a great together project, grab those photos from a horse trail ride at Brushy Creek, hiking at Ledges State Park or a fishing trip and create simple scrapbooks.

Scrapbooking can connect generations and strengthen family ties. Have your children or grandkids help select photos. You might even use their handwriting as they journal about favorite outdoor experiences. A weekend camping trip at Backbone State Park would make a great mini-album complete with photos and journaled memories. Here's what you need: an album, acid and lignin free cardstock or patterned paper, adhesive, scissors or paper trimmer, simple embellishments and photos. Consider adding bits of memorabilia such as event programs and pressed flowers or dried leaves, etc, but first treat them with archival spray available at local hobby shops.

For outdoor and nature-related scrapbooking ideas, check out www.scrapbooking.about.com.



But Why?

Helping adults answer
children's nature questions

Why do animals have certain places to live?

- CARI, AGE 7

Habitat is a place in which an animal naturally lives or occurs. If that habitat satisfies the basic survival needs all animals have — *food, water, shelter and space* — the species thrives. However, not all habitats suit all species.

The **BOBCAT** is a perfect example of how important habitat is. Iowa's great bobcat habitat is across the southern, eastern and western borders. Although void of bobcats for many years, in recent years bobcats reclaimed these lands, moving in from other states to occupy suitable habitat.

Since Iowa is one of the most altered states due to the loss of prairie, wetlands and forests to agriculture and development, much of our flora and fauna have had to adapt or disappear. **WHITE-TAILED DEER** have successfully adapted, utilizing food provided by agriculture and finding cover in the remaining woodlands, fencerows and residential properties.

Conversely, the **BLANDING'S TURTLE** has not found adapting easy. Their habitat and numbers are drastically reduced. The little remaining habitat is also changed by excess silt and fragmentation (scattered habitat blocks that do not allow the species to interact with other populations).

A. Jay Winter educates up to 20,000 Iowa children each year as the DNR's training specialist at the Springbrook Conservation Education Center.



BOBCAT



SNOWMAN FEEDER

Add bird and wildlife foods to your snowman to make this seasonal rite of passage fun and functional. Keep Frosty chilled by building him on the shady north sides of buildings. Place the used holiday tree nearby to provide a warm bird refuge. "A lot of feeder birds need a perch," says the DNR's Tim Gedler who not only manages Walnut Woods State Park, but is an avid birder. He advises adding twigs to the snowman. To attract dark-eyed juncos, white-throated sparrows, mourning doves and field sparrows, spread mixed seed on the ground. "They are ground feeders," he says.



1



1. PEANUTS Peanuts provide a nutritious diet for birds, including black-capped chickadees, nuthatches, tufted titmice, woodpeckers, jays and cardinals. Unsalted brands are safe for birds. "Whole peanuts in the shell are absolutely the number one food for bluejays," says Rick Crouch, owner of Wild Birds Unlimited in Davenport. Use peanuts for buttons and eyes.

2



2. SUET "Carve out some niches to place chunks of suet," says Gedler, or from sticks hang the high energy snack in onion sacks. Place suet high, out of reach of dogs. Don't use bacon grease, which is too salty and full of preservatives, says Crouch, who adds that suet chunks make great teeth, eyes and ears for any snowman.



3. PEANUT BUTTER Smear peanut butter onto an old corn cob to use for a nose. Also add to pine cones, then dip and roll the cone in seeds. Tie ribbon or twine to the cone to hang around the neck and arms.

4. SUNFLOWER SEEDS Providing high oil and fat content is easy with black oil sunflower seed, which is less expensive and easier to crack and digest than the striped variety.

5. FOOD STRINGS Dress your snowman with strings of popcorn and cranberries to increase the food variety and attract colorful birds. Chickadees and nuthatches will feed on the popcorn, wintering robins, cedar waxwings, woodpeckers and cardinals will eat the cranberries, and blue jays will dine on both. Use unsalted, unbuttered popcorn.

HAT TRICK Load a wide brimmed hat with sunflower seeds, raisins and cracked corn. A light colored hat will absorb less heat so Frosty can keep his cool.

GET INVOLVED



"Feral cats are a big threat to songbirds," says DNR wildlife biologist Pat Schlarbaum. He advises spaying and neutering cats and keeping housecats indoors.

WORTH A VISIT

From park observation blinds, spy on nearly two dozen types of wintering birds as they devour up to 500 pounds of feeder seed monthly. **Parks include:** Walnut Woods, West Des Moines; George Wyth, Waterloo; Wildcat Den, Muscatine; and E. B. Lyons Interpretive Center, Dubuque.

IOWA'S WILD ORCHID GUIDE ADDED TO SERIES

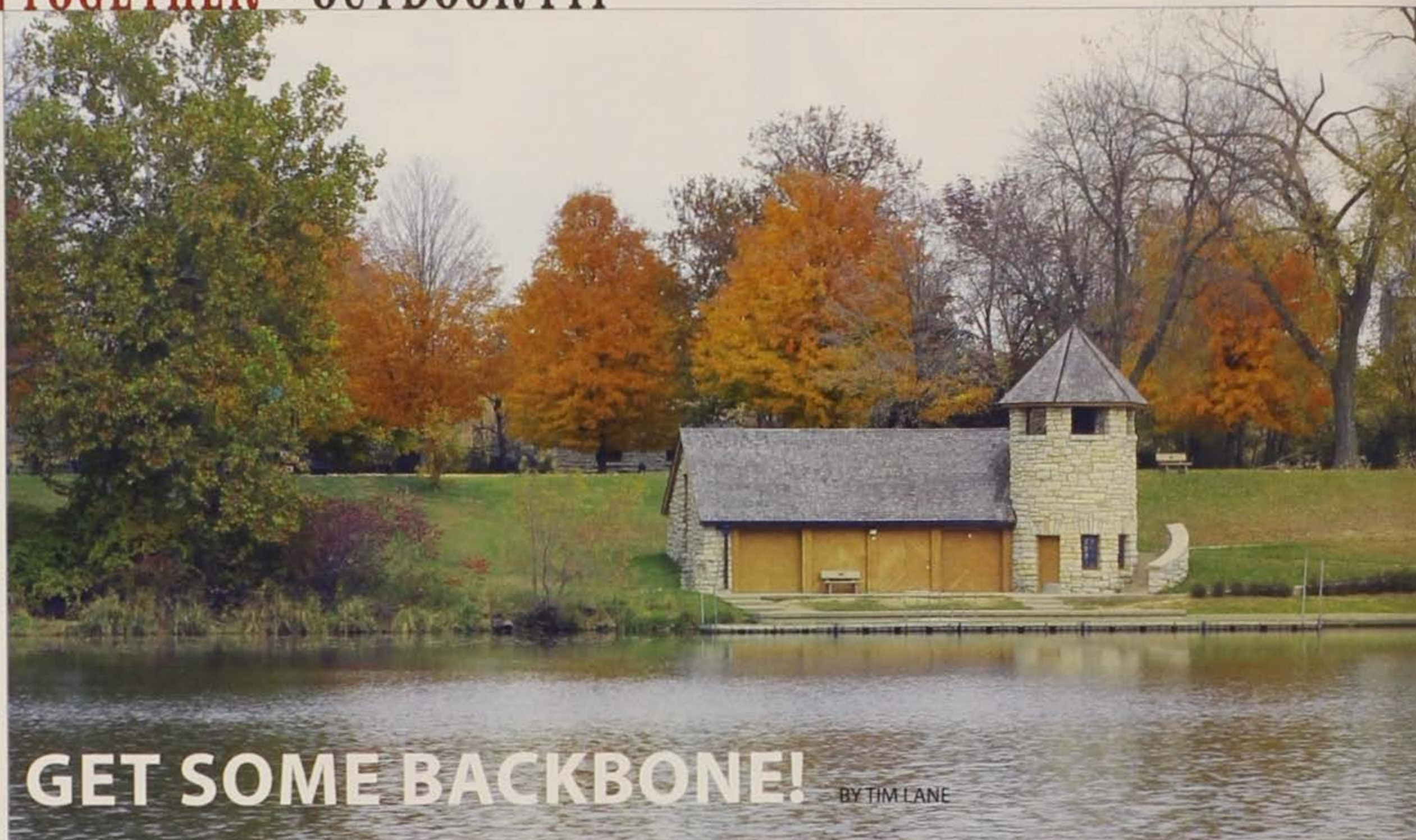
Get the family outside and boost your brain power with durable, convenient field guides. Unlike nationally published field books, this series of eight pocket guides packs Iowa and regional species into rugged, lightweight packages. We soaked them 24 hours underwater and baked them in a hot car last August; they survived, so you know they're great for the truck, camera bag, kayak, tent or pack.

ORCHIDS IN YOUR POCKET A Guide to the Native Orchids of Iowa, is the latest and eighth in the *Bur Oak Guide* series published by the University of Iowa Press. Find Iowa's nearly 30 wild species with tips on habitat, bloom times and colors. Longtime photojournalist, Bill Witt of Cedar Falls, wrote the guide after 20 years researching the plant.

Others in the series include the recent **RAPTORS IN YOUR POCKET; A GUIDE TO GREAT PLAINS BIRDS OF PREY**, along with **WINTER BIRDS AT YOUR FEEDER, BUTTERFLIES, WOODLANDS, TALLGRASS PRAIRIE PLANTS, WETLAND PLANTS AND ANIMALS**, and **MUSHROOMS OF IOWA**. Each has beautiful illustrations by skilled artists or photos. Several feature text from biology professors from Iowa's state universities.

The laminated guides are **\$9.95 each** and are available at book stores or through the University of Iowa Press. To order: **1-800-621-2736** or www.uiowapress.org.





GET SOME BACKBONE!

BY TIM LANE

In 1967, my friend Jim Koch and I skipped school. Rather than join our classmates on a fieldtrip, we slipped off to Backbone State Park. It was an October day that defines October. There was a crystal clear blue sky, vibrant colors on the hills, a crisp morning, and warm sunlight bathing the rest of the day.

We hauled a canoe from Waterloo and spent time walking in the woods and floating on the Maquoketa River. We weren't even detected as being absent. The staff on the fieldtrip thought we were at school and vice versa. Did I mention it was a perfect day?

This October will be the 40th anniversary of my truancy and I look back on it as one of the best experiences of my educational career. There are few days in my life I can recall so vividly. This is significant given my otherwise less than efficient memory. (Some have mental blocks...I have entire mental neighborhoods.) Ah, but that day is etched in my memory.

So when I read a book *Last Child in the Woods* by Richard Louv, I was struck by a profound sense of loss for the youth of today. The book documents the retreat of America's children from the natural world. One fourth-grader told the author, "I like to play indoors better, because that's where all the electrical outlets are." It is a tragic condition.

My current occupation is to promote physical activity. Physical activity can prevent cardiovascular disease, arthritis, osteoporosis, some cancers, stress, asthma, diabetes, and other tragic conditions. It is almost a cure-all. Simply being active is a great idea. But doing so outdoors is even better.

By sitting on a rowing machine or Exercycle you can add years to your life. But that is only half the benefit of activity. By paddling a canoe, walking a trail, or cycling in Iowa you can add life to your years. Author Bill Bryson has noted that "Americans spend too much time indoors. They go from air-conditioned office to air-conditioned cars to air-conditioned home, and never go outside. What makes Iowa what it is, are the elements." I couldn't agree more.

Might I suggest that in 2007 you think of Iowa as a fitness center that is 300 miles across and 200 miles tall? In the center we have 1,800 miles of waterways, hundreds of miles of trails, and my first love, Backbone State Park.

Often well-intended Iowans resolve to be more active, lose weight, and be healthier. From their track record they might as well have resolved to cure cancer. These resolutions lack specifics like times, dates, plans, and parks! In 2007 I resolve to celebrate Iowa; its rivers, trails, parks and take some children along with me. I will also add these plans to my calendar and encourage you to get specific as well.

We can even let them know where the outlets are.

Tim Lane is the Fitness Consultant with the Iowa Department of Public Health. He is also a marathoner, former Director of the National Ski Patrol, climber, volleyball coach, and cyclist. He has cycled across America once and Iowa 25 times. He's a regular participant in RAGBRAI and developed the Ride Right safety program. Tim also helped design and promotes Lighten Up Iowa.



HALF A DAY ON \$50 ~ TOGETHER

KEEP CAMPFIRES ABLAZE WITH THIS DUTCH OVEN HOLDER.

BY MICK KLEMESRUD

Build this Dutch oven holder, and there is no need to let campfires burn down to embers before cooking. Use tongs to place campfire coals on the metal disk while keeping your campfire flickering. The holder also makes Dutch oven cooking easy at campgrounds where fire rings are partially obstructed with grates. Charcoal briquettes can be ignited directly on the disk too. Place the holder on picnic tables and comfortably cook without bending down. (Put a can under the center hole to catch embers.) It is also useful for tailgating or with a tripod to brew a pot of coffee.

The Iowa can-do attitude inspired Marv Davis, 60, of Sully, to brainstorm this creation. Davis, an avid camper of more than 45 years, built his first stand from an old, heavy metal wok. This version uses a farm disc blade.

TIME

About 30 minutes to assemble. Allow 45 minutes if drilling holes. Add extra time for finding parts and spray painting.

COST

We field tested the unit and spent \$26 for hardware. Add another \$16 to buy a new disk blade. We salvaged our disks free from an implement dealer. Welding services could add labor costs.

PARTS

Old disk blade. "Ask a farmer you know to give you an old disk blade when he changes them out," Davis said.
3 threaded, 3/4-inch floor flange bases
3 3/4-inch nipples, 6 inches long
3 3/4-inch, threaded caps



HANDLES

2 horseshoes or old handles off a wood burning stove (pictured.) Handles can be welded or use square U-bolts affixing to disc by drilling and securing with four rope clamps.

ASSEMBLE

Space the floor flange bases evenly in a triangle pattern underneath the disk, keeping an inch between the edge of the threaded base to the outer disk edge. Weld or bolt bases to the disk.

Thread the caps on the nipples and place nipples into the base. Center the handles leaving about a 2-1/2 to 3-inch gap for the handle opening. Weld or drill 1/4-inch holes and use 4 U-bolts (2 per side) per handle.

For a finished look, paint the unit with heat-resistant black spray paint.

OPTIONS

1. For a weld-free version, drill 1/4-inch holes through the threaded bases and use tapered stove bolts.
2. For longer legs, use 2-foot 3/4 inch nipples instead of the 6-inch.

TIPS

- Spray the threads with Anti-Seize to prevent the legs from sticking in the base.
- To store, unscrew the legs from the base and carry in a heavy-duty cloth bag.
- Twist the legs in or out to level the unit.



You can catch a **COLD** from being in the **COLD**



Sorry, your mother was wrong. Viruses, and viruses alone, cause colds. "Temperature itself has nothing to do with it," said Daniel Fick, a professor and doctor with the University of Iowa Hospitals and Clinics. The proof: In one series of experiments, subjects doused with icy water caught no colds. However, poker players isolated in warm, windowless rooms quickly "passed" around viruses with their cards. (I'll see your adenovirus and raise you a coronavirus!) Close contact with others, not temperature, permitted infection. Still, the idea of cold-weather-induced colds makes a certain kind of sense. After all, the ailments do seem to proliferate when the mercury drops. That's mostly due

to our changed wintertime habits, however, Fick said. We stay indoors with the windows up. Kids congregate in those germ tradeshows we call elementary schools. In other words, we infect each other. The similarity among symptoms can also cause confusion. Dry, cold air irritates nasal passages, which protect themselves with mucus (a runny nose). Colds also prompt snotty-nosedness, but as a means of flushing out viruses. So, rest assured, old man winter won't directly infect you. Before you go sledding naked, however, think about how much you want hypothermia or frostbite. Also, realize that extreme cold can fatigue your body, weaken your immune system and make you more vulnerable to illness. So, maybe mom had a point after all...



THE DNR'S SPECIAL OPS, **MOUNTAIN LION** RELEASE PROGRAM



Dale Garner, DNR wildlife bureau chief, has heard them all: someone's neighbor's best friend's cousin saw one in the backyard. The DNR put it there, airlifted in by a black helicopter. For the past five years, Iowa DNR officials have waded through a thicket of rumors about "mountain lion release programs." To set the record straight: "The DNR has not, does not and will not release mountain lions," said Garner. "In an agricultural state, with livestock concerns, the public would never stand for it." Still, rumors and sightings persist. "People are still spooked by the idea of big predators," said Iowa State University wildlife ecology professor William R. Clark. "So, it's natural to hear some rumors." Almost all sightings are mistaken, however, Garner and Clark agreed. Most "cougars" turn out to be dogs, deer or even housecats. Not that everyone is imagining things. Cougars did make a modest return to the state in 2001, when sightings began. One was found dead on an Iowa highway. That animal, along with two others killed by hunters in 2003, mark the first (and, so far, only) verified wild mountain lions in Iowa since 1867. The source? In western states, resurgent cougar populations likely produced a few surplus young males, who strayed eastward in search of mates. They'll find neither love nor adequate habitat in Iowa, however, so don't expect significant numbers to remain, Clark said.

ASK THE EXPERTS *-Nancy in Newton wonders...*

Could I catch BIRD FLU from game birds?

Almost certainly not, according to Iowa State University Extension Food Safety Specialist, Dr. Sam Beattie. Technically speaking, low pathogen H5N1 avian flu (detected in the U.S.) is common and mild, and symptoms are often unnoticeable; high pathogen H5N1 is rare worldwide but highly lethal to the animal, with a mortality rate that can reach 100 percent within 48 hours. Even if "bird flu" (technically, "H5N1 avian influenza") were present in North America (it's not), you'd still have no reason to fear your pheasant dinner. Standard food preparation precautions work just as well against H5N1 as they do against salmonella: wash hands and food-preparation surfaces. Don't let raw meat or juices touch other foods, and don't touch your mouth during preparation. Cook birds to 165-degrees Fahrenheit. Hunters worried about dressing their birds should also

follow standard precautions: avoid sick or diseased birds. When dressing carcasses, wear disposable gloves and avoid eating, smoking or otherwise touching your mouth. Wash hands afterwards. High pathogen H5N1 has never been detected in any living creature in North America. Confirmed human cases have only appeared in 10. So, should "bird flu" even be a concern? Not in its present form, which transmits poorly from animal to human and from human to human. Scientist do worry, however, that H5N1 could produce the next global flu pandemic. That would only happen if the virus mutated (or underwent another genetic shuffle) making it capable of easy human-to-human transmission. In that case, you'd have a lot more to fear from your sick neighbor than from your dinner.



— — — — — **GOT A QUESTION?** Send to: ASKTHEEXPERTS@DNR.STATE.IA.US — — — — —

TIPS, TRICKS, HOW-TO AND MUST-KNOWS TO ENHANCE YOUR OUTDOOR FUN

QUICK START FIRES!

For quick start fires, fill a paper egg carton with dryer lint or wood chips and pour melted candle wax on top (purchase old candles and pans at secondhand shops.) Next, close the carton lid and pour wax over the carton. To use, break off a section of egg carton, place in the fire ring under kindling and light.

TIP: Melt the wax outside on a camp stove to keep the house clean. Wipe out excess wax while the pan is still warm.



EXPERT ICE FISHING

For warmth, comfort and safety, place seat cushion type life preservers on your bait bucket while ice or cold water fishing. Tie one end of a 50-foot rope onto the bucket bail and the other end to the preserver and store the rope in the bucket. If someone falls through the ice or into cold open water, throw the cushion to the victim while holding the rope.

When ice fishing during bitter cold, avoid leaving the fish exposed on the ice too long or they will not only stick to the ice, but freeze solid and be difficult to clean. A bucket of shaved ice from drilling holes keeps the fish fresh and clean until you get home. A good mess of fish will stay chilled, but retain enough heat to keep from freezing solid.

WINTER PHOTO TIPS

Extend camera use by taping a hand warmer around the camera body to keep batteries toasty. **While focusing and composing shots, hold your breath to prevent frosting the viewfinder.** Camera light meters tend to average out light conditions resulting in gray snow photos. To get realistic shots, overexpose by one to two f-stops. **Keep moisture from harming sensitive digital cameras by placing them inside sealed plastic bags before entering a warm house. The bag will allow the cold optical gear to warm up while condensation forms outside the bag.**



— — — — — GOT A SKILL TO SHARE? — — — — —

If we use it we will give you a gift from the nature store. Send to: OUTDOORSKILLS@DNR.STATE.IA.US

CAPITAL CITY HIGH FLYERS

TRACK HUNDREDS OF VORACIOUS RAPTORS AS THEY HUNT AND ROOST
ALONG THE DES MOINES RIVER — WITHOUT EVER LEAVING YOUR CAR.





Several hundred bald eagles can typically be seen around the tailwaters of Red Rock Reservoir every winter. Here four young bald eagles take a break from feeding on plentiful gizzard shad stunned by cold waters and the turbulent spillway ride. The eagles were captured on film from the county highway T-17 bridge, a relatively new bridge spanning the river approximately two miles downstream from the spillway. The bridge is an excellent place to view eagles. *SEE RED ROCK MAP, FACING PAGE.*

A winter weekend spying on our national bird is among our state's seasonal treats — right up there with sun-warmed tomatoes and butter-fried morels. From late November through February, white feathers against a backdrop of dark, dormant trees warm our chilled spirits.

Bald eagles fly south from northern climates until they find open water where they feast on fish stunned or killed by cold temperatures. Along the Des Moines River in the capital city's metro area, eagles also congregate around dams that knock their prey senseless from the whirlpool ride.

"Eagles are extremely opportunistic. They want the easiest meal they can get," says Polk County Conservation Board naturalist Joe Boyles.

Raptors prowl riverbanks, particularly in areas where trees overhang the water. Eagle-watchers thrill at the stunning display of colossal raptors with 7-foot wingspans and massive talons that can carry small mammals of their own weight (10 to 12 pounds.)

Bald eagles were endangered 50 years ago, due to large-scale timber removal and pesticide use. But conservation efforts returned these wondrous creatures to the Upper Midwest. By the mid-80s, the state recorded its first nest. There were 200 nesting pairs in 2005 — that population jumps a few thousand in winter.

The rules of eagle-watching are few. Bring binoculars. Stay mobile — if there aren't any eagles in one spot, move to the next. Stay at least a quarter-mile away to avoid disturbing them. Even better, use your car as a warm and toasty blind.

"A lot of people think you have to get out in the cold and walk around, but you really don't," says Boyles. "This activity is for everyone, and eagle-watching rejuvenates the soul."

The Mississippi River is home to 60 percent of the visiting birds. Twenty percent end up on the Des Moines. Weekenders will happily discover the capital city as a newly sparkling destination, where there's plenty of fun when you're ready for a warm-up.

EAGLE-WATCH HOTSPOTS ON THE DES MOINES RIVER (moving from north to southeast)

1) Bob Shetler Recreation Area, Saylorville Lake.

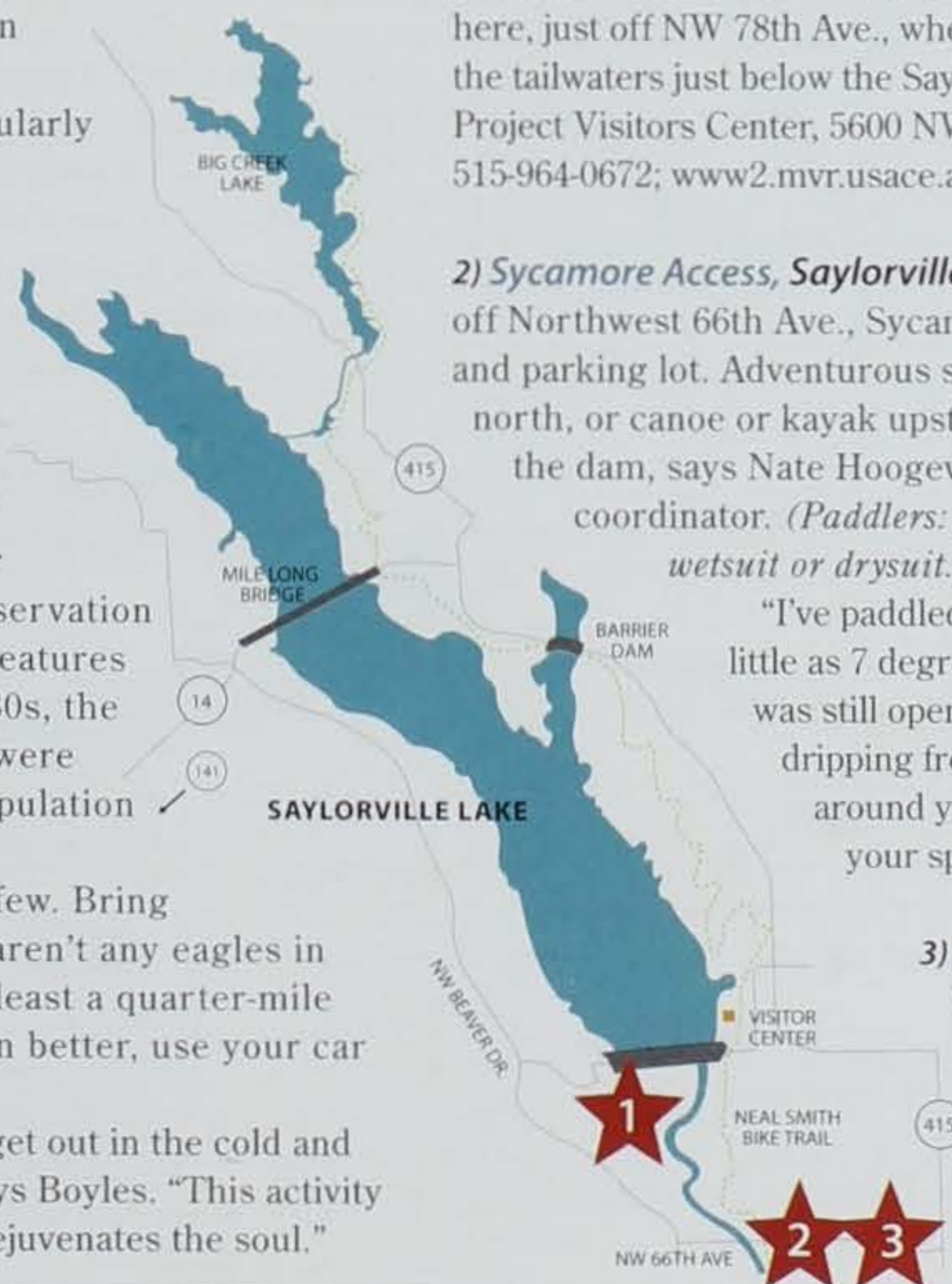
The 26,000-acre lake project just northwest of Des Moines in Johnston affords several ideal places to eagle-watch. Begin here, just off NW 78th Ave., where a parking lot offers views of the tailwaters just below the Saylorville Dam. Saylorville Lake Project Visitors Center, 5600 NW 78th Ave., Johnston, 50131; 515-964-0672; www2.mvr.usace.army.mil/Saylorville.

2) *Sycamore Access, Saylorville Lake.* Two miles south, off Northwest 66th Ave., Sycamore provides a boat ramp and parking lot. Adventurous spirits can cross-country ski north, or canoe or kayak upstream to a safe distance below the dam, says Nate Hoogeveen, the DNR's water trails coordinator. (*Paddlers: partner up, and bring your wetsuit or drysuit.*)

"I've paddled that stretch with friends at as little as 7 degrees in January when the water was still open," says Hoogeveen. "Water dripping from the paddle forms a sheet around your kayak, your paddle and your sprayskirt. It's a lot of fun."

3) Neal Smith Bike Trail.

Winter bikers should start at Sycamore Access and ride south. Weather permitting, the trail hugs the river for miles, with good tree cover that allows river views.



LOST IN IOWA



4) Scott Avenue Dam, downtown Des Moines. The Des Moines and Raccoon rivers merge into one at this dam. Follow 1st St. south along the west riverbank. You'll see Principal Park baseball stadium on your right, then turn toward the river on Scott at the traffic light.

5) SE 6th St. Bridge, Des Moines. Cottonwood trees overhang water that only freezes in the coldest winter. Dozens of eagles congregate here — park on either side of the bridge.

6) E. 14th St. Bridge, Des Moines. Take E. 14th St. from downtown south to the river. This boat ramp often has close-up viewing, so stay in the car. A new boat ramp further south off Vandalia Road in Pleasant Hill, just east of Highway 65, is another potential viewing spot.



7) Yellow Banks Park, Pleasant Hill. These 517 acres hold bluffs overlooking the river with spectacular panoramic views of soaring eagles, plus winter camping and cross-country skiing and snowshoeing. Southeast of Pleasant Hill on SE Vandalia Road; 6801 SE 32nd Ave., Pleasant Hill, 50317; 515-266-1563.

8) Runnells Wildlife Area, Pinchey Bottoms, Runnells. This state wildlife management area just a few miles south of Runnells is a favorite with local birders. (For directions, www.iowabirds.org/places/gazetteer.asp)

9) Lake Red Rock, Knoxville. Eagles love Iowa's largest reservoir, 35 miles southeast of Des Moines off Highway 163. One spot below the dam, named for renowned Iowa birder Gladys Black, is one of the state's premier eagle-watching spots. One roost can host up to 200 eagles. Lake Red Rock, 1105 Hwy T15, Knoxville, 50138; 641-828-7522 or 641-628-8690; www.mvr.usace.army.mil/RedRock.



Whether watching eagles hunt along the river during the day or relaxing afterwards downtown at night, the Des Moines skyline makes a dramatic river backdrop.



HELP THE EAGLES SOAR

Last winter, the DNR's annual mid-winter bald-eagle survey counted nearly 2,600 bald eagles in Iowa, down from previous years. The dip is likely due to warmer temperatures, but here's what you can do to assure a happy resting spot for our winter visitors, according to Polk County Conservation Board naturalist Joe Boyles:

- **Support local conservation groups:** The Iowa Natural Heritage Foundation, Audubon Society, Sierra Club, Nature Conservancy, Pheasants Forever, Ducks Unlimited and National Wild Turkey Federation are just a few of the groups that restore and conserve habitat.
- **Support your local county conservation board.** "There's so much work to do on public lands today, and there's only so much tax dollars can accomplish," says Boyles.
- **Mark the "Chickadee Checkoff" on your tax return,** where your money directly supports non-game wildlife.
- **Purchase a natural resource license plate or gift certificate at www.iowareap.com**
- **Even if you don't hunt or fish, buy a license anyway,** and the habitat stamps that go with it. All your money goes into habitat conservation. Buy at www.wildlifelicenses.com/ia/
- **If you're a property owner, consider a conservation easement** so it can be protected for future generations.
- **Read up on efforts to make Iowa's rapid growth more responsible to the land.** One site to check out: www.growinggreencommunities.com.

MAKE IT A WEEKEND

A few stops along the way to stay warm and happy on a winter weekend.

SCIENCE CENTER OF IOWA: Downtown's wonderful new museum features exhibits on Iowa's current nighttime sky—sans light pollution—in the planetarium. Check out the Iowa animal species displays, plus a cave with geodes and a fossil dig. Admission charged. 401 West Martin Luther King Jr. Pkwy., Des Moines; 515-274-6868; www.sciowa.org.

HESSEN HAUS: Directly north of the Science Center, try this authentic German bierhaus, with great dishes like Hunter's Pizza (topped with pheasant, duck and wild boar sausage), weinerschnitzel and sauerbraten. And really huge steins of beer. Further north on 4th Street, The Royal Mile is as close as you'll get to dining in a British pub without buying a plane ticket. 101 4th St., Des Moines; 515-288-2520; www.hessenhaus.com.

STATE HISTORICAL BUILDING: From the gigantic mammoth unearthed downtown to a cramped coal mine, explore Iowa's resources from prehistoric times to Ding Darling and present. Rocks from Geode State Park and sand art from Pikes Peak State Park are worth a look. (Don't miss the great coffee on the third floor, or wonderful teas at Gong Fu across the street to the west). Free. 600 E. Locust, Des Moines; 515-281-5111; www.iowahistory.org.

EAST VILLAGE: Explore the area around the State Historical Building, now hopping with trendy shops and eateries. Kitchen Collage peddles groovy culinary trinkets, and you'll get all your Valentine's Day gifts off the list among the lotions and potions of Eden. Fine Italian cuisine in Lucca is a real treat. www.seedesmoines.com.

LAKE RED ROCK VISITOR CENTER: Check out the exhibits on lake history, area wildlife and a nice gift shop. Park rangers answer questions about surrounding wildlife. Free. 1105 Hwy T15, Knoxville; 641-828-7522 or 641-628-8690; www.mvr.usace.army.mil/RedRock/recreation/visitorscenter.htm.

THE CITY THE GLACIERS MISSED

DUBUQUE'S STEEP CANYONS. GARGANTUAN FISH. SOARING RAPTORS. ANCIENT SUPPER CLUBS, AND QUITE POSSIBLY THE WORLD'S BEST BED. YOU MIGHT VISIT DUBUQUE FOR THE SMITHSONIAN-AFFILIATED NATIONAL MISSISSIPPI RIVER MUSEUM AND THE LOCAL ROCK-STAR PARK, MINES OF SPAIN, BUT YOU'LL BE SURPRISED WHEN THE CITY AND ITS RIVER REVEALS MUCH, MUCH MORE.



TOP LEFT: One of three Dubuque marinas glows in the early morning light. **LOWER RIGHT:** The Fenelon Place Elevator offers a night view of snow-clad downtown, and beyond, the Mississippi River. Although the famed elevator, billed as the world's shortest, steepest scenic railway doesn't operate at night or during the winter, visitors can drive to the top of 512 Fenelon Place, just off west Third Street for panoramic views.

Trees and scrub rise and fall above knobs of Maquoketa shale as the Mississippi River flows icy in the distance. Iowa's oldest city was founded on the nation's largest river, taking its abundance from a few of its 2,350 miles. As the city updates its look and feel, it looks to the river once again for inspiration.

The river museum pays tribute to its wildlife and ecology. River cuisine guest-stars on local menus. Local wines borrow its name. Miles of trails lead travelers through its tremendous earthly pleasures. Even budget lodgings afford views of its muddy majesty — and this time of year, that probably means views of nesting bald eagles, too.

We give you Dubuque, a destination that's as much a surprise of abundance as the natural wonder it's built upon.

REFUGE FOR WILDLIFE AND TRAVELER

The heart of Dubuque is a grand sight, its fine old houses spilling down steep bluffs. The well-preserved brick rowhouse-style downtown seems to be dusted off and newly vital. Shops sell antiques and clothes, and neighborhood bars and unique eateries line the main streets. Bricktown, a recently renovated warehouse, offers local brews and pub food. You can stay in one of the bluffside painted ladies and have a fantastic view within walking distance of shops.

But one magical place north of town serves up the quieter side of this river city's charms.

Four Mounds Inn B&B sits on 60 acres of rolling woods, a sprawling Mission-style bungalow on the banks of the Mississippi. One local family's former country estate now serves as a refuge for man, bird and beast.

Guests settle into riverside Adirondack chairs — with warm temperatures of recent winters, the water has remained unfrozen, affording a daily show of bald eagles. Groomed paths pass sacred burial mounds of woodland American Indians.

Jay Potter cares for the quiet woods. The Iowa Natural Heritage Foundation is in this picture, too. Together, they're restoring prairie on-site, and clearing exotic species such as buckthorn or honeysuckle that choke out the oak savannah this once was.

"We try to restore the balance of the land," Potter says. "That also restores the history here."

A stay at Four Mounds also restores the soul. Lodging guests devour hearty Iowa breakfasts — think cream-cheese-and-peach French toast — prepared by innkeeper Marie Fitzgerald. Guest rooms are beautiful in their simplicity. But the best room, if you can get it, is the Majestic River Suite.

A brick fireplace warms the main sleeping area, but the stunner is the sleeping porch, where sun floods through expansive windows on three sides. With the Mississippi flowing just steps away, it's like camping — without bugs, and with down pillows. Bundled in an

electric blanket, you'll wake with that curious pleasure of a cold face kissed by fresh air.

"Early spring, you might see 15 goldfinches — our state bird — at the thistleseed feeder." That's Bill Primasing, also known at Four Mounds as The Bird Guy, a neighbor who keeps the many feeders full for orioles, bluebirds, rose-breasted grosbeaks, purple martins, indigo buntings, falcons, nuthatches and red-headed woodpeckers.

"People always wish they had another night with us, they're so relaxed here," she says. "In the winter, it's pristine. It's just a blanket of white spotted with a few animal tracks. The spring wildflowers are just incredible. That huge maple tree outside the window there? People always ask if they can climb it. Sure they can! It's just that kind of place."

TRAILS, MINES AND FUN

Four Mounds is a fine introduction to Dubuque's hospitality and natural wonders. Locals cross-country ski in places like the Heritage Trail, covering 26 miles of former railroad into a 450-foot deep valley past old mining and mill towns — the piece of land around the town of Graf is particularly scenic and flat.

Swiss Valley Nature Preserve, though its interpretive center is closed in winter, offers 10 miles of trails through stunning forest, prairie and wetland. A tension bridge is one highlight — another is the cathedral-like grace of bowing trees overhead.



Julien Dubuque Monument

LOST IN IOWA



1) Five massive aquariums house a variety of life at the National Mississippi River Museum, which is accredited by the American Association of Museums. Only 9 percent of U.S. museums are granted that honor. 2 & 4) IceFest, held by the museum the last three weekends in January, offers snow and ice carving, traditional ice harvest and fishing and ice safety information. 3) Visitors gander at live animals, learn at wet labs, operate towboat simulators and take the helm in a barge pilot house. 5) Northeast Iowans embrace the season with winter hikes and skiing at the Mines of Spain State Recreation Area. 6) The river, frozen here, offers great eagle watching below Lock and Dam 11. The Bald Eagle watch on January 13 offers a day of eagle watching with \$1 roundtrip trolley rides, complete with hot chocolate from the Grand River Center, to viewing locations. Live eagles, hawks, owls and falcons are on display indoors. Children's events are scheduled at the river center and state and local nature centers, including the DNR's E.B. Lyons Nature Center at Mines of Spain Recreation Area. For Bald Eagle Watch details contact the *Dubuque Chamber of Commerce* at 1-800-798-8844. 7) IceFest mini-golfing on the Ice Harbor. For IceFest details, contact the museum at 1-800-226-3369.



But the name most common on the lips of locals when you ask for a trail recommendation is the rugged Mines of Spain State Recreation Area — 1,387 acres of national historic landmark. This National Wildlife Federation golden child has limestone canyons so deep you can't hike out of some, and enough critters to designate it a Watchable Wildlife Area.

While much of the original timber was logged during the steamboat era, portions were left untouched, including some 250-year-old burr oaks. It's joined with E.B. Lyons Prairie Woodland Preserve, where a nature center tells of the local history of lead mining entrepreneur Julien Dubuque. The city's namesake leased these lands from Spain, which claimed ownership of these parts in the late

1700s. One former mine remains on the property for tours, and the old lead prospector's gravesite is marked with the city's famed Julien Dubuque Monument within the park.

DNR superintendent Wayne Buchholtz, watches over the wetlands, creeks, forests, prairies, meadows and river, as well as its inhabitants that include bobcat, red-shouldered hawk, and bald eagle.

Buchholtz speaks with visitors in front of a window that reveals yet more birds, feasting on black sunflower and thistleseed. He points the thick finger of an outdoorsman and says, "The formations you see here are the remains of an ancient ocean. Particularly in winter, that limestone peeks through the forest floor. There's a corner of Iowa that the glaciers missed — and Dubuque is at the very point of it."

The north section of the park follows Catfish Creek, a thick forest with ancient oaks, white birch, aspen, hickory, hackberry and chokecherry trees. A man-made wetland and canyon-like abandoned limestone quarry where owls roost add to the abundant wildlife and adventurous hiking or skiing on 12 miles of trails.

BIG RIVER INSPIRES

Wisely, Dubuque draws from its biggest asset for its best attraction.

The Smithsonian-affiliated National Mississippi River Museum and Aquarium is an open, airy space in the harbor-side Port of Dubuque. The museum pays homage to the world's fourth-largest river that drains approximately 40 percent of the continental U.S. with five

different tribal names, generally meaning "Big River."

"This museum was the culmination of a great dream," says executive director Jerry Enzler, the museum's original employee in 1975 when the city first began plotting to build it. After five years of planning, the museum opened with just the steamboat William M. Black showcasing river history exhibits.

"Back then, we wanted to preserve the history of the Upper Mississippi," says Enzler. "A boatyard had gone out of business, which got us thinking. Dubuque had this remarkable river heritage we wanted to preserve."

But in the 1990s, as a museum group studied the river's significance, they broadened their mission from a local angle to a more universal view of river ecology. The current site opened in 2003. Outside the facilities,



huge freshwater aquariums, live-animal exhibits, wet labs, towboat simulators and tons of activities and exhibits.

Toddlers crouch to watch turtles bump and bumble along a massive tank. Nearby, miniature landscapes flood at the flip of a switch. Two women study a water moccasin for the first time without the queasy panic it would cause at the actual river. A gigantic catfish weighing more than 100 pounds ogles at a little girl, who ogles him back. Perhaps she's thinking of the noodling display she saw upstairs, and scurries off with a guide to touch crawdads.

One family struggles to pronounce the many names of this wondrous water. The Ojibwe called it Meche Sebe. To French explorers, this was the St. Louis. To Oscar Hammerstein, Ol' Man River. What we call it now is a derivation of a few

the museum offers summer eco-tours for on-site river education, and community programs such as a storm-drain stenciling campaign stamping each gutter with the words "Drains to Stream, Drains to River, Drains to Gulf."

The museum recently hosted a national teleconference on river and ocean literacy, and hopes to expand with a Rivers to the Sea Museum, complete with a theater, children's splash zone and research center.

"We realized that you can't separate the past from the future, and you can't separate history from the environment," Enzler says. "That's still the key to our success. We're presenting the river the way it is now, and how it got that way, and the forces influencing its future. We want people to experience the river with as many senses as possible."

LOST IN IOWA

The look of awe on visitors' faces shows the museum's success at revealing the Mississippi's treasure, while pointing out its challenges. In the adjoining Woodward Museum exhibit, the river takes on a first-person voice to speak for itself, extending a hand holding a drinking glass at different points in the display to ask visitors if they'd feel comfortable taking a drink during American Indian times, or the Industrial Age, or now.

The message is clear: unintentional consequences of progress take a toll on the very marvels that inspire us.

A video game called "River of Choices" presents challenges the river faces — without favoring the point of view of any of its many users. That kind of fair-handedness is one of the reasons roughly a quarter-million yearly visitors leave with renewed passion.

"I don't know how many people have said to me that they planned to spend an hour here, but ended up spending five, then coming back the next day for more," says Enzler.

RIVER LOVE

Just a mile away, on Dubuque Island, Charlie Gretzinger of Catfish Charlie's restaurant, circulates among his Saturday-night guests. "This river, it's why I moved here," he says. "It's mystical to me. And this place, Dubuque, it's one of the best-kept secrets of the world."

Though most every city booster will say that sort of thing about their town, if you visit Dubuque, you'll feel the vibe of what the enthusiastic Coon Rapids transplant is saying. He moved here for love. A different kind of love struck him when he arrived.

"In summer, if it's a nice day, you've got 300 boats out there," he motions past his 3,500 square-foot deck where you can just imagine a local band revving up a crowd. Plates of gigantic onion rings, walleye cheeks and a bucket of oyster steamers are passed around.

This is the river in entertainment mode, and the crowds love it.

"We fly to Phoenix. We fly to Vegas. And we've got all this here and most people don't even know it."

Nearby, the new Grand Harbor Resort and Waterpark echoes with squeals and laughter. The rooms above the waterpark overlook the reason everyone is here.

"People come because of the river, and the way the city has built on it," says Gretzinger.

He's right. As it always has, the river lures us to come, and take some of its riches home with us. 🐟

WORTH A SIDETRIP

Bankston is a church, a feed store, a handful of houses and one park with a fine trout stream for year-round fishing 20 miles west of Dubuque. If there were a suburb in Bankston, the soaring grace of Park Farm Winery would be in it.

Dave Cushman returned to these tree-blanketed hills after working as a civil engineer out west. The affable young guy with a short, full ponytail built the soaring terra cotta-colored chateau with his family in 2001 using energy-efficient insulated concrete forms and a geothermal energy system.

It's a scenic roadside stop. Looking toward Bankston Park from the back porch of the massive winery, Cushman says, "I'm actually closer to fly-fishing here than I was in Colorado."



Mines of Spain Recreation Area; Old Quarry

E.B. Lyons Interpretive Center

FOR YOUR INFORMATION:

- **Park Farm Winery:** 15159 Thielen Road, Bankston, 52039. 563-584-0062; www.parkfarmwinery.com.
- **The Inn at Four Mounds:** Doubles from \$75, Majestic River Suite \$135. 4900 Peru Road, Dubuque, 52001-8304. 563-557-7292; www.fourmounds.org.
- **Mines of Spain State Recreation Area and E.B. Lyons Prairie Woodland Preserve and Nature Interpretive Center:** When driving, follow signs for E.B. Lyons Nature Center. Center is open weekdays, closed weekends, except for Sunday programs on subjects such as photography, papermaking, XC ski basics, or wildlife lectures. 8991 Bellevue Heights, Dubuque, 52003-9214. 563-556-0620; www.minesofspain.org.
- **National Mississippi River Museum & Aquarium:** Adult admission \$9.95, seniors \$8.95, kids 7-17 \$7.50, children 3-5 \$4. 350 East 3rd Street, Port of Dubuque, Dubuque, 52001. 563-557-9545; www.mississippirivermuseum.com.
- **Swiss Valley Nature Preserve:** 13606 Swiss Valley Road, Peosta, 52068. 563-556-6745; www.dubuquecounty.com/Nature.cfm.
- **The Heritage Trail:** www.dubuquecounty.com/HeritageTrail
- **Catfish Charlie's River Club:** Kid-friendly. Entrees from \$8.95-\$31.95. 1630 East 16th Street. 563-582-8600; www.catfishcharliesonline.com.
- **Grand Harbor Resort and Waterpark:** 350 Bell Street, Dubuque, IA 52001. Doubles from \$99. 563-690-4000; www.grandharborresort.com.
- **Sweeney's Supper Club:** An old-school joint that's so straight out of the 1940s that it feels kind of eerie. Relish plates piled with veggies, cheddar cheese spread and home-made liverwurst. Short drive from Four Mounds B&B along U.S. 52 in the north end of Dubuque. 11777 Highway 52 North, Dubuque, 563-552-1101.

ON THE MAP


- 1) National Mississippi River Museum & Aquarium
- 2) Mines of Spain State Recreation Area and E.B. Lyons Prairie Woodland Preserve and Nature Interpretive Center
- 3) The Heritage Trail
- 4) Swiss Valley Nature Preserve
- 5) Grand Harbor Resort and Waterpark
- 6) The Inn at Four Mounds

KEEP THE RIVER CLEAN

Wayne Buchholtz, Mines of Spain superintendent, says he's found tires, railroad ties, enormous mounds of grass clippings and an LP tank in Catfish Creek, where the Mississippi backs up if its waters rise. And that's just the short list. Since every river in Iowa eventually dumps into the Mississippi, keeping our streams and waterways clean should be a priority as good tenants on the nation's greatest river, he says. Here's what you can do:

- **Get involved in city and county government.** This is where the decisions are made regarding land use — speak up for clean water and wild places.
- **Never dump anything down storm drains or roadside ditches.** The water goes directly into our lakes and streams. Nothing but rain in the drain!
- **Use a broom to sweep extra fertilizer and grass from sidewalks or driveways, back onto the lawn.** Test soils before fertilizing. Get the right balance, and don't overfertilize.
- **Recycle.** Everything from expired medication to batteries to paint has a recycling program. Call around and find out how to properly dispose of all your waste. (Dubuque even has a program for recycling table waste.)
- **Volunteer.** Visit a local nature area, and offer your services. "There's always something to do, from prairie planting to litter pickup along the river to water testing through the DNR's Iowa Water Program," says Buchholtz. (www.iowater.net/)
- **Pick up after your dog,** and throw the waste in the garbage.
- **Talk to kids about conservation practices.** "I've found that works best. They're the ones who pass it on," says Buchholtz.





STURGEON KILL ON DES MOINES RIVER REMAINS A MYSTERY

Hundreds, perhaps thousands, of shovelnose sturgeon died along a 50-mile stretch of the Des Moines River between Ottumwa and Bonaparte last July. Tissue samples sent to the U.S. Fish & Wildlife Service laboratory in LaCrosse, WI yielded inconclusive results.

"We strongly suspected a health issue with the fish; perhaps a viral pathogen," offers DNR fisheries biologist Mark Flammang. "However, the fish we provided (for testing) were too degraded to study further." Whether the cause is water quality related or due to the health of sturgeon populations is unknown.

Several midsummer sturgeon die offs occurred locally and in the Rock River in Illinois in the last decade, but researchers can't pin down a cause such as low water flow, high water temperatures, introduction of some agent into the water or a combination. "Even if a viral agent had been at work, we would still hope to find a water quality issue that might explain the large-scale stress that would allow a virus to affect so many fish. It's kind of baffling," says Flammang, who notes other species don't appear affected during sturgeon die offs. The magnitude of the 2006 kill, their continuing frequency, and the growing interest of sturgeon in commercial markets make finding a cause critical.

last two years, about 2,000 fish have been tagged in this stretch of the river.

At first glance, this is no different than other DNR fish sampling surveys. This project, though, seeks to snuff a ticking time bomb. The world caviar market has disintegrated and Iowa sturgeon and paddlefish are next up on the worldwide auction block. "We are trying to learn everything about sturgeon," emphasizes Hansen. "There just aren't that many big, mature ones out there."

Slow to grow and to reproduce, the 25 species of sturgeon — and their distant cousins, the paddlefish — rate worldwide concern. Much of their range; The Caspian, Black and Aral Seas in southern Europe and west Asia and in North America, the coastal rivers of the Northwest and the large Midwest river systems have undergone radical changes in the last century. For a fish that has changed little in the last 300 million years, the damming of migration routes, loss of spawning grounds and rising pollution over the last few decades have walloped them in a relative blink of an eye. Now, there's new threats: over-fishing and poaching.

Through the 1800s, North American Atlantic sturgeon supplied fine caviar for most of European and American high society. Over-fishing caused those populations to plummet. Not to worry, though. For the next century, the "caviar crowd" embraced the Caspian Sea, as it provided nearly 90 percent of the world's Beluga, Osetra and Sevruga sturgeon roe; the eggs processed into the finest caviar. Life was good.

However, with the Soviet Union collapse in the 1990s, enforcement of sturgeon harvest quotas virtually disappeared. The Russian Mafia took over the lucrative business. Sturgeon poaching was rampant as profiteers eyed \$100 an ounce retail prices for top caviar. Compounding the crisis, the inland seas have shrunk as rivers are diverted for irrigation and other purposes. Water that trickles in is polluted. As a result, sturgeon have less area to live, cannot reach much of their historical spawning grounds and ingest increased levels of toxins. Populations have plummeted by about 80 percent. Some species are threatened with extinction.

It also has the caviar pendulum swinging back to North America, where biologists worry that sturgeon populations are too low to support the caviar industry in the long run. Commercial sturgeon 'farms' fill part of the demand. The concern, though, is that it unintentionally masks the illegal take of wild sturgeon and that regulations are not strong enough or are being flaunted to the point that wild populations might not recover from yet another heavy blow.



Biologists insert quarter-inch microchips under the leathery skin of netted shovelnose. If recaptured, a magnetic wand (below) activates the chip to transmit an identification code to track the condition, growth and movement of fish. Passive integrated transponders (PIT) are similar to tags used to identify household pets.



BIG FISH MUST DIE

To harvest roe, the big fish must die. This is no delicate hatchery operation, where 'ripe' brood fish are massaged to release the eggs from their bellies before being returned to their well-fed existence in raceways or ponds. Though there is some experimentation with surgical roe removal and rehabilitation in commercial aquaculture situations, the standard practice is to kill females, cut them open and remove the eggs. Some fish hold thousands of dollars of future caviar in their bellies.

In Iowa, commercial shovelnose fishing is allowed on the Mississippi River. For decades, fishermen netted sturgeon; selling meat locally, fresh or smoked, or supplying regional markets. That market is now international and it is caviar, not smoked sturgeon, driving it. New Iowa regulations, which took effect this past summer, are designed to rein in the growing demand for a shrinking resource.

"We knew what was happening to the Russian caviar industry and we began seeing much more interest in sturgeon around here. We were getting a lot of out-of-state commercial fishermen, and they all were interested in sturgeon," recalls Jones, a fisheries technician for

PRICES OF CAVIAR PER OUNCE, OCTOBER 2006

(sources for prices: Fine Food International and Markys.com)



the last 10 years at the DNR's Bellevue management station on the Mississippi River. By the end of 2002, Iowa commercial anglers were required to report their harvest of sturgeon meat and eggs. They showed 235 pounds of roe taken that first year. One year later, the harvest leapt to 2,019 pounds. And it's gone up each year since.

Several years ago, one commercial operator reported taking sturgeon roe in Iowa. Now, there are at least 13. And with a wide open river, officers worry about what they can't see. "Some of our commercial harvesters are very honest. Some may not be," offers DNR conservation officer Burt Walters, who patrols the Mississippi River. "We have had commercial guys who come up from Tennessee. They tell us specifically they were here for sturgeon and getting \$80 to \$90 a pound for first cut sturgeon roe." Walters feels only a fraction of what is caught is reported.

Iowa's new regulations allow no commercial shovelnose sturgeon fishing from May 16 to Oct. 14. In season, a fish must be at least 27 inches long, with a maximum of 34 inches between Iowa and Wisconsin. Also, fish must remain intact until reaching the final processing facility. The length limit should allow more Mississippi River shovelnose to reach maturity and spawn. "We realize it had become big business for commercial fishermen. We don't want to take that away," explains Hansen. "At the same time, we have to ensure the fishery is sustainable. This is the last strong population of sturgeon on a large scale. It's about time we learned our lesson."

Or could it open the door for violators? "It's going to increase poaching," voices commercial fisherman Ralph Moen of Harper's Ferry. Substantial busts of sturgeon and paddlefish poachers have been reported in states that boast sturgeon populations, from the Midwest to the Deep South to the West Coast. "It's such big money down South that it is going to happen." Moen says he made only about \$500 from the sale of sturgeon roe last year — and that the restrictions only make it tougher for the few remaining in-state commercial anglers.

States from Wisconsin to the Deep South have clamped down on commercial sturgeon harvest, too. "They're targeting the shovelnose sturgeon because that's just

about the only one left in the country you can fish. All the others are threatened or endangered or protected," warned Bobby Reed in an Associated Press story. Reed is chair of the national paddlefish and sturgeon committee for the 23-state Mississippi Interstate Cooperative Resource Association (MICRA.)

Recreational fishing for sturgeon is still allowed throughout Iowa, with no daily or length limit. Recreational anglers, however, cannot sell any part of any fish they catch.

BOOM AND BUST

A decade or so ago in Iowa, high prices led to a big increase in the harvest of mussels on the Mississippi River. That pressure and, most likely, water quality factors pushed mussel populations to dangerous lows. Walters worries that the pressure on sturgeon mirrors the clamming industry's "boom and bust" past. That becomes quite obvious, with a key point in the annual harvest report. The roe harvest has skyrocketed but the meat harvest is dropping. "We've seen them out on the water sorting fish. They're tossing back the males and keeping the ripe females," says Walters. "Female sturgeon don't spawn every year anyway. They're removing years of spawning potential with each female kept."

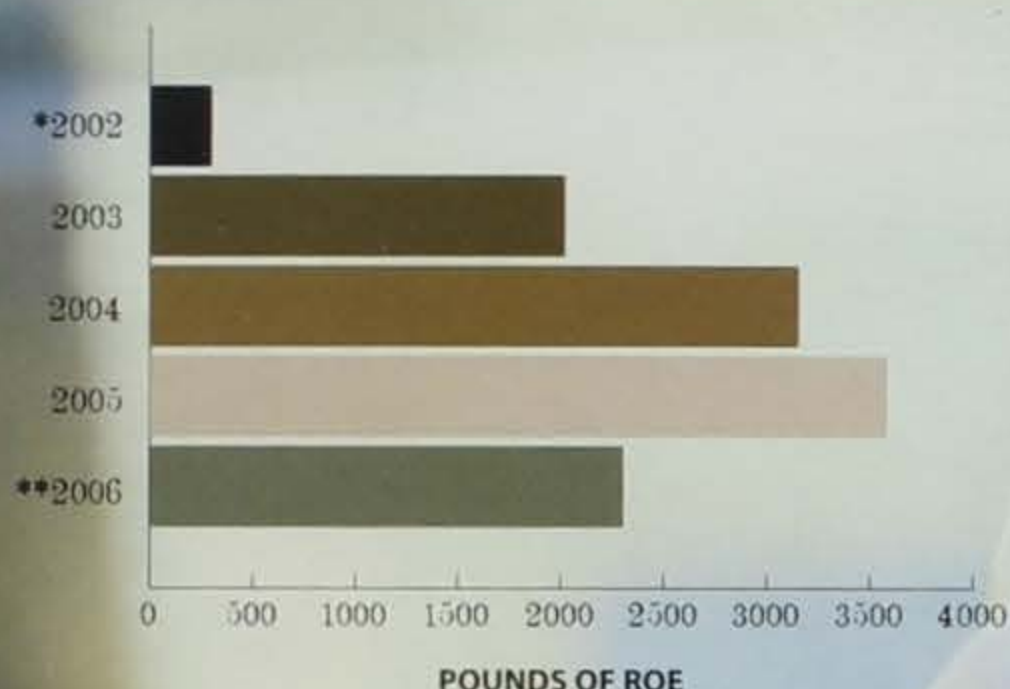
Caspian Sea Beluga caviar is the "crème de la crème" of elite eats, gracing tables at the most elegant social affairs. Culinary experts urge use of gold spoons to deliver the shiny "black gold" from the crystal serving dish to discriminating palates. That is, when you can get roe. Lately, that hasn't been easy. Soon, it may be impossible. As the \$100 million global caviar industry turns upside down, the ripples are being felt all the way up the Mississippi River.

Will Iowa's new sturgeon regulations keep this relic of the dinosaur era from disappearing? Or will they block a small, very lucrative industry just getting off the ground? "We are definitely concerned because it takes so many years for them (fish) to mature. There is going to be a lull in the harvest," admits Hansen of the clampdown. "We have to protect this resource for Iowa anglers. Hopefully, this will help avoid a huge influx of people coming into Iowa to make a quick buck."

More sturgeon should reach maturity now; able to spawn at least once before reaching that 27-inch minimum length in Iowa's new regulations. Hansen's computer models indicate that should lead to a seven-fold increase in sturgeon eggs and a substantial increase in sturgeon numbers in the years ahead. "Every other species of sturgeon that has been exploited has crashed. We want to avoid that here." 🐟

- Minimum size limit **27 inches** (on border waters with Illinois)
- Minimum size limit **34 inches** (on border waters with Wisconsin)
- Season closed from **May 16 to Oct. 14**
- **Fish must remain intact** until reaching final processing facility (from DNR notice of intended action, 2006)

SPIKE IN LEGAL ROE AND MEAT REPORTED



* reporting mandatory only for last several months
 ** through October

(from Gene Jones, Iowa DNR fisheries bureau, June 2006)



Shovelnose sturgeon produce roe upon maturity at 5 to 7 years of age. Females do not spawn every year.

THE INCREASED APPEAL OF PADDLEFISH ROE

They might not be as popular as sturgeon, but paddlefish make the gourmet wish list, too. The collapse of the Euro-Asian caviar industry is creating a big demand for paddlefish roe, as well as salmon, whitefish and bowfin eggs.

Paddlefish caviar sells for about \$14 an ounce. While not in the league with Beluga and other top-end products, the price creates a strong market. And with mature paddlefish tipping the scales at 15 to 20 pounds and up, (by comparison, mature shovelnose sturgeon weigh half that), they would seem to be a profit center. Unlike sturgeon, though, paddlefish are off limits to Iowa's commercial anglers.

But that doesn't necessarily let these

"ancient mariners" off the hook. Worried about lower paddlefish numbers, biologists in 23 states covered by the MICRA (Mississippi Interstate Cooperative Resource Association) have snagged the leathery-skinned paddlefish to weigh, measure and tag them for future identification. After a decade of study, it's a case of 'good news, bad news.'

In seven of the last 10 years, Iowa paddlefish showed good reproduction. That bodes well for the future, with more young fish appearing. However, few big paddlefish show up in research snagging. "We had a 38-pounder last spring and a few over 30 pounds. There were still a couple 50-pounders in 2004," recalls DNR fisheries technician Denny Weiss.

"But eight or 10 years ago, we would regularly snag fish over 30 pounds, and others over 40; even several over 50 pounds. We just aren't getting the number of big ones anymore." Mortality rates are running about 60 percent in recent years, twice the rate from the 1970s. Their data doesn't provide a firm reason for the increase.

Migratory and environmental factors could impact the populations, but one leads back to the worst concerns of the caviar collapse: poaching. "Do we believe it is going on? Absolutely," declares DNR conservation officer Burt Walters. "Under the cover of darkness, a lot of things go on. We just are not seeing that 60 pound paddlefish that should be out there."

Aaron Dockum, a railroad employee, has permission to hunt tracks, private property normally off-limits to the public.



RABBIT LEGENDS



A TALE OF TWO HUNTERS

STORY AND PHOTOS BY LOWELL WASHBURN

COTTONTAIL RABBITS ARE IOWA'S MOST ABUNDANT GAME, BUT RABBIT HUNTERS ARE RARE. THESE IOWANS THRILL TO THE CHALLENGES OF HUNTING RABBITS...

TALE #1: The Ancient Falconer Returns

As if calling the meeting to order, Aaron Dockum raises his hiking staff and vigorously strikes the top of a large brush pile. When nothing happens, Dockum whacks it again. He then rattles the staff among the loosely piled branches as if stirring a kettle.

The tactic works. The brush pile's hidden occupant loses its nerve and erupts in a blurry explosion of snow and fur. The dislodged cottontail escapes with two foot bounds toward the next thick cover.

The drama is interrupted by the sharp sound of bells. Dockum's gaze quickly shifts skyward. "There she goes," he cries. "It looks good. She's on it."

Dockum live-trapped this aerial member of the hunting party — an immature, female red-tailed hawk — earlier that fall. Now mid-winter, the bond was forged. The

magnificent wild raptor was the loyal hunting companion of a man, Dockum, a licensed falconer. Their relationship strengthened with daily forays in search of rabbits.

As winter continued, the cottontails had become tougher and faster while the raptor gained strength and cunning. By New Year's, the first season red-tail proved herself a reliable game hawk.

But even for a powerful bird, bagging a healthy rabbit is challenging. In Iowa's outdoors, predator and prey are evenly matched. There are no guarantees for either contestant, and the pendulum of life and death swings both ways.

Today's victory belongs to the rabbit. With the hawk just inches from seizing its prey, the cottontail makes it to the safety of an underground burrow. The red-tail pulls



pursuing cottontails across northern Iowa habitats. Living in the frozen north, weather is often a limiting factor. Winter storms and high winds can put hunting on hold — sometimes for days on end. But when storms pass, winter hawking heats up.

"Our best hunts are two or three days after a big snowfall," says Dockum. "By then, rabbits are pretty tired of being holed up underground and are out and active. We look in raspberry patches, brushpiles and prairie grass — anything with canopy. Our usual tactic is (for me) to beat the brush while the red-tail moves from treetop to treetop watching for any rabbits that I flush. Once something moves, the chase is on.

"This is our first season together, and it's been exciting to watch the hawk get better and better. She's a smart bird. Once we've hunted the same place a couple of times, she seems to know exactly where the rabbits are going to pop out and where she should be to get the best shots," he adds.

"Her intelligence and memory are amazing. One day, she caught a big cottontail in some brambles. It was early,

"SHE'S GOT IT," Dockum hollers.

up, flying to the branches of a nearby cottonwood. Bells sound again as the hawk shakes to realign her plumage.

"That's OK. It was a good effort," says Dockum.

"With all these tracks, we'll find more," he predicts.

Trudging through knee-deep snow drifts, Dockum explains his love of the ancient sport. "I'm a hunter, and have always enjoyed being outdoors. With guns, we used to shoot all the rabbits we wanted. Sometimes our group would get as many as 20 in an outing. After awhile that sort of lost its appeal and I was looking for something better; a way to move on. I'd been interested in falconry for a long time but it seemed so out of reach. Last year, I decided to try for my license."

Falconry is challenging. "There's a lot involved in keeping a wild hawk in good flying condition. Unlike a shotgun, you don't just wipe it down and put it away when you're done. Falconry takes a lot of commitment to your bird."

But falconry benefits easily outweigh the work. The opportunity to have a wild hawk as your hunting partner is its own reward. The chance for close observation as a raptor chases and catches game is something few people are privileged to enjoy.

"Before it was all about numbers, but now things are different," says Dockum. "Today, catching one or two rabbits is a great hunt. The hawk feeds herself, and there's more than enough left over for me."

Dockum works for the Iowa Chicago & Eastern Railroad and spends late afternoons and most days-off

and I decided to keep hunting and try for a double. I fed her a small tidbit (as a reward), slipped the rabbit behind my back and into the bag, and then moved on."

Returning days later, the hawk flew to the same spot in the brambles, searching in the snow. Dockum, confused at first, then remembered the cottontail. "She thought we'd left that rabbit there and this time she wasn't going to leave without it," he says, laughing.

Again, bells ring. Looking up, Dockum spots the red-tail in hot pursuit, pumping hard for its target. Although thick vegetation prevents seeing the intended target, the chase concludes with the hawk executing a "wing over," crashing into the cover. From 50 yards, Dockum hears a "thud" as the hawk pins its quarry to the ground.

"She's got it," Dockum hollers.

Scrambling to the scene, there was no rabbit, but something better — a proud young hawk enthusiastically plucking a very plump, dead rooster pheasant. The rooster had been sprinting, undetected, far in advance.

Dockum is speechless. Successfully bagging a pheasant with a trained red-tail is the ultimate hawking trophy. "All year, I've had this goal of catching one wild pheasant with my red-tail," says Dockum. "We've had some near misses, but this is the first one she's bagged. It's now been a perfect season."

Watching this awe inspiring picture of predator and prey, giant snowflakes began to gently drift from the darkening sky. The season was perfect.



FALCONRY

Falconry is among the oldest hunting forms, around for at least 4,000 years, first on the Mongolian steppes and later across the middle-east, falconry came to Europe as crusaders returned home in the 1500s. European falconry, once an obsession, abruptly ended with the invention of gunpowder and firearms. Only 50 Iowans, including Aaron Dockum, above, are licensed falconers.

BELOW: Bob Benedict, and his beagle, Penny, rest during a winter rabbit hunt. A dedicated cottontail aficionado, Benedict conducts many outings during January and February when more popular hunting seasons are closed. "It's a great time of year," he says. "Even on big public hunting areas, I usually have the place to myself."

TALE #2: Fenceline Symphony; The Sound of the Hound Cannot Be Denied



Even before he could carry a shotgun, Bob Benedict followed an unlikely duo consisting of a golden retriever and one loud-mouthed beagle.

Whenever the beagle flushed a rabbit, the retriever would try to run it down. "The Golden had longer legs, and if the snow was deep, it might get lucky and catch something. Even then, I knew there was something that made me want to follow those dogs — especially the beagle."

That early beagle attraction is what cottontail enthusiasts call the "sound of the hound."

Once heard, the sweet baying of beagles warms the heart. Regardless of whether you refer to the winter

symphony as a bawl, bark, howl or chop, one fact is undeniable. No sweeter sound ever reaches the frozen ear of a rabbit hunter.

By age 11, Benedict had his first shotgun — an H&R single shot .410. He promptly bagged a plump cottontail. Four decades later, Benedict still follows beagles. He has but one dog at the moment — a six season veteran named Penny.

Compared to other working dogs, such as high-octane pointers, laid-back beagles are easy on the nerves. Their pleasant dispositions are contagious. You'll rarely, if ever, see a beagle owner melt down as his dog runs amuck in the middle of the next section.

"It's not complicated, and the way I hunt is pretty standard," says Benedict, who first finds good habitat then lets the dog run. "A good beagle already knows that it needs to head toward the brush and it doesn't take long before it finds the rabbit."

Once flushed, it takes but seconds to put a sizeable distance between hound and rabbit. That's when the excitement, fun and music begin. Like most good beagle men, Benedict relies on sound to determine how and where the hunt is going.

"If I stand in one spot and listen, Penny will let me know what's going on," he says, calling one of her sounds a 'frustration bawl.' "It's a two-toned howl that almost ends in a growl. That tells me she's getting scent, but hasn't



exactly figured out what the rabbit is doing or which way it went. She's still trying to sort things out. A steady, excited bawl is good. It means she's getting plenty of scent and the rabbit is moving down the trail. Sometimes a rabbit will stop and wait to see what the hound is doing. When the dog gets close and jumps it she'll change to an excited, choppy bark. That tells me she's sighted the rabbit. If a trail gets cold, you'll just hear short bawls that are farther and farther apart." The fresher the scent, the louder and more frequent the baying.

Radio telemetry studies recently confirmed what rabbit hunters have known for generations. Cottontails conduct their daily activities confined to a well-defined home range and are reluctant to leave. Pursued by experienced hounds, cottontails travel in a circle or loop which bring them back to where they were first jumped. The shape of that loop is determined by the shape of the habitat.

Some rabbit-loaded locales are not good for dogs, says Benedict. "The brush may be too thick or the cover may be too close to standing corn or cattails. Once rabbits get into this kind of cover they're usually home free. There's lots of barking for the dogs, but no good shots for the hunter."

He likes hunting brushy fence rows or lines of habitat. "I try to find an obvious gap in the cover — a place where circling rabbits are likely to cross. On a good area, eight or 10 rabbits may end up using the same crossing. Once I decide where to be, I take a stand and get quiet. After

7 THINGS YOU DIDN'T KNOW ABOUT RABBITS

Dung Dining: Recycling the Pellet du Jour

Enriched with vitamins released by beneficial bacteria in the intestine, rabbits eat the soft, moist greenish waste pellets of partially digested food. Called coprophagy, this animal behavior allows maximum nutrient intake. The second passing provides the familiar dry, brown pellets.

Lucky Rabbits Have a Birthday

Survive 12 months against predation, disease and traffic, and a young rabbit has beaten the odds as annual mortality rates are 85 percent. Less than 1 percent of rabbits reach age two. Prolific breeding helps the species survive against owls, foxes, bobcats, skunks, badgers, weasels, snakes, hawks, coyotes and others.

Lagomorphs, not Rodents

Similar to incisors found in squirrels, beavers and other rodents, rabbit teeth constantly grow. But rabbits have two sets of upper incisors, one behind the other, placing them in a different order from rodents, called lagomorpha.

Breed to Succeed

Producing up to 30 young a year, a rabbit born in the spring is sexually mature by summer, giving birth a month after mating. These offspring could yield 5 million rabbits in five years if mortality wasn't a factor.

Elmer Fudd Has Buck Fever

Once a popular pastime, Iowa hunters harvested 2 million rabbits annually throughout the 1960s. A tenth of that amount are taken today despite surging cottontail populations. Today's deer and turkey populations, uncommon in the 1960s, compete for hunter attention.

Differing by a Hare

Iowa jackrabbits are actually hares, differing from rabbits by having furry young born with eyes open, versus naked and blind baby cottontails.

Jack Rabbits

Replaced by corn and soybean crops, loss of pasture, hay and grasses have hurt jackrabbits, which are native to short and mid-grass plains. Weighing up to 10 pounds, jackrabbits can hit 35 miles per hour. Capable of bounding 20 feet, these high-jumping hares can hop 5 feet above ground. Like its northern cousin, the snowshoe hare, jackrabbits wear white winter coats.

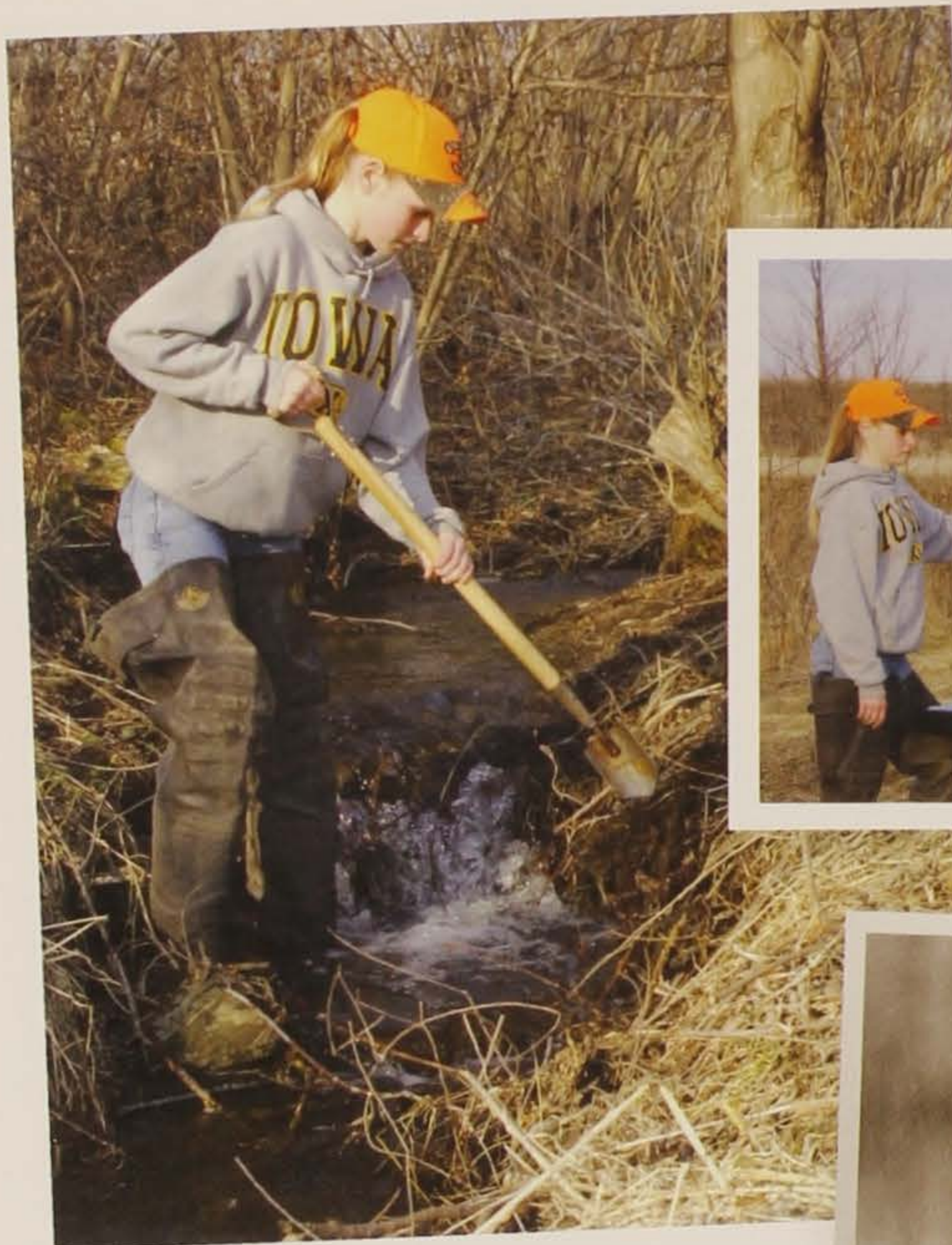
that, I just wait for Penny to bring the rabbits to me."

It's an effective tactic. Utilizing a good stand, a hunter can bag three or four rabbits — sometimes up to a half dozen — without moving.

Like most hounds, beagles have a pack mentality and hunt well with others. During one outing, Benedict and his brother used three beagles. Providing nonstop music, the hounds helped the brothers bag 15 cottontails before they even lost sight of their parked pickup truck.

Benedict eats more than his share of fresh cottontail, most often treating the tender, white meat like a chicken breast. Regular menu items include fried rabbit, crock pot rabbit and rabbit Alfredo along with 25 pounds of breakfast sausage ground last month.

"Rabbits are extremely mild," notes Benedict. "The taste is so good that most people will eat them whether they like wild game or not." 🐰



"By the time I was going with my Dad



Above: Renee digs a pocket set, designed to catch raccoon and mink. Renee's grandfather, Mike, started trapping by removing pocket gophers, a nuisance species for his neighbors before moving to larger species. Mike learned trapping basics from his dad, passing along generational experience from Renee's great, great grandfather who lived near Hayward, Wis. "He was married to a Chippewa and was a logger during the summer and a trapper during the winter. That's as far back as I can go with my family," says Mike.



favorite," says Renee. "I like to get out right after a fresh snow and find their little paw prints. I think mink are smarter than all the rest." Wary, experienced mink eat the bait and don't get caught. "I just love the feeling of coming over the bank and finding a huge mink in the set. I think — Oh yes — this time I got him instead of him getting me!"

The unusual sights also add to the adventure, such as seeing a muskrat swimming under glass-clear ice. "It was carrying a whole bunch of grass and stuff in its mouth and was headed back to its den. I'd never seen anything like that before, and it was definitely a sight to see," she laughs.

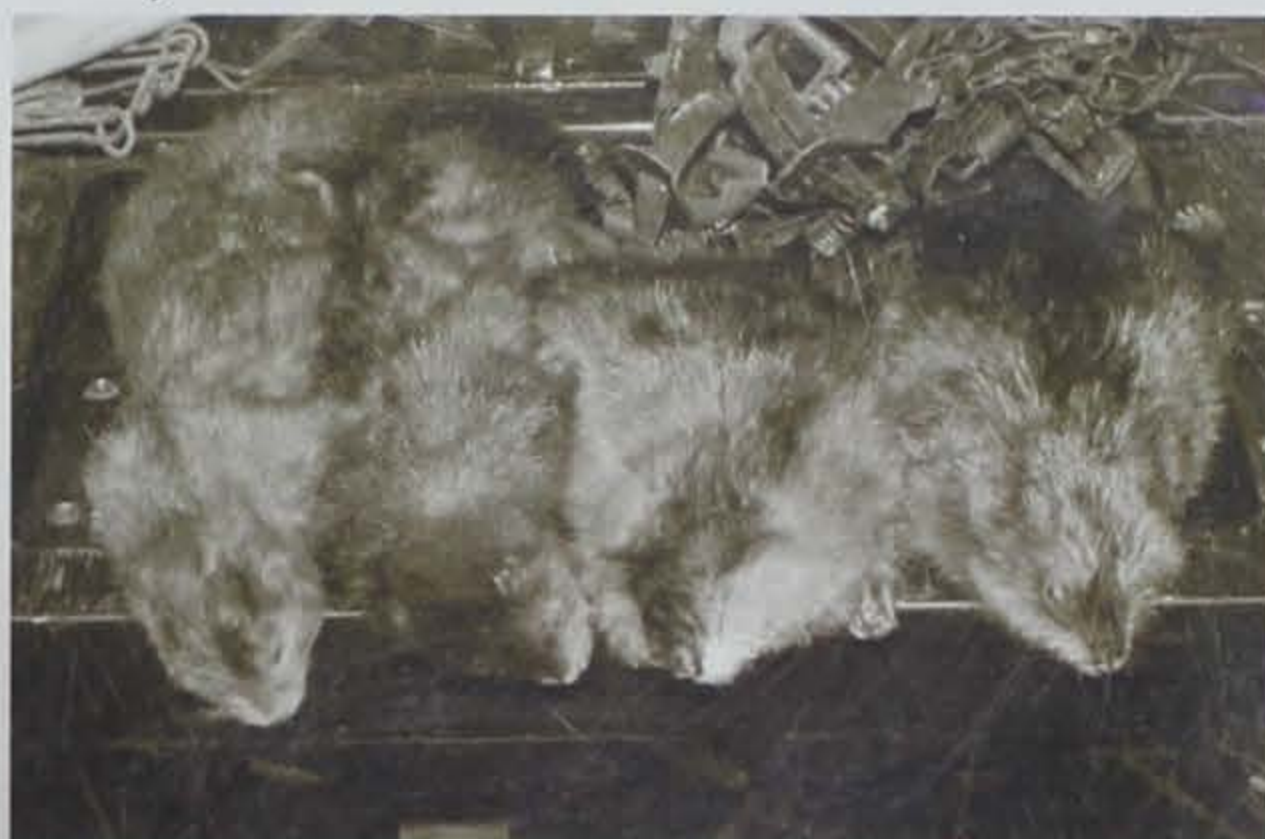
Catching a gray fox was a rarity too, but the coolest was trapping a jet-black raccoon, says Renee. "He was so dark that you could barely make out his face mask or the rings on his tail. That 'coon looked like someone had dipped him

in a bowl of dye and colored him. He was beautiful and was the highest priced raccoon we had that year."

Like most, the Knowltons are quick to acknowledge successful fur harvesting doesn't just happen. It requires patience, dedication, and long hours on the trapline — often in pitch darkness or extreme weather. The hard work doesn't end after harvesting a raccoon, mink, or muskrat. Raw furs need skinning, freezing and stretching to prepare for market. The work may continue deep into the night. Renee helps with pelt processing, even developing her own tricks.

"I like to help with the skinning too," says Renee. "I start them, but if it's too tough, Dad finishes. If the pelts are still wet, I take a hair dryer and comb to the furs. I dry them out and then comb out every bit of mud and remove every

as three years old, I was already
as he worked his trapline,”



Above: Renee sets a Victor one and a half coil spring. Patience and long hours on the trap line in rough weather haven't stopped Renee, but "I don't get out [trapping] anymore," says Renee's grandfather, Mike. "But I'm very pleased to see my son and granddaughter trap together and enjoy the same things that I did. You don't see enough of that anymore. I think it's important, especially in this day and age," he says.

single burr or seed from the hair. When it's all done, the fur is absolutely perfect — It's just beautiful," she adds.

The pelts are sold locally. "We have a group of friends that have trapped around here since at least the mid-80s. We like going to a local fur buyer where we can lay everything out on the floor, let them see what we have, and then start haggling over price," says Steve.

"I think the price I get for my furs runs better than average," says Renee. "I really like the haggling and they [fur buyers] treat me pretty good. I tell them stories about some of the exciting things that have happened or the great catches. I remind them about how much work and expense we've gone to, and how good a condition our pelts are in. I think it all helps," she laughs. "When I get done talking to them, the prices usually go up." 🐾

Behind the Trapping Decline

Recruiting is the most important need of Iowa trappers, assesses the DNR's Ron Andrews. As a furbearer resource specialist for the past four decades, he's seen plenty of change in the way Iowans use this natural resource.

Twenty years ago, trapping represented a flourishing Iowa industry. With pelt prices and interest running high, Iowa exceeded twenty thousand trappers most years. During the late 1980s, however, fur prices for raccoon, mink, and muskrats plummeted and trapper numbers declined. Iowa trappers today number a mere 7,000.

"I think the decline of trapping is a much more complex issue than just pelt prices," says Andrews. "Most furbearer populations are high and for some species, such as raccoons, the numbers have been extremely high during the past two decades. Lack of opportunity is certainly not a factor in the current decline of trapping."

Family heritage is one of the most important links to maintain fur harvesting, Andrews says. Modern demographics are taking people away from the resource. "Unless a parent is directly involved in trapping, then it's highly unlikely that their children will become involved."

Like waterfowl hunting, trapping involves family tradition and requires specialized equipment. Resource managers are currently seeing some future for trappers, as pelt values enjoy recent surges on the world market. An especially heavy demand for American pelts, such as raccoon and fox, comes from Far Eastern markets such as China.

1987 IOWA FUR HARVEST:

Raccoon	400,000 pelts
Muskrat	600,000 pelts
Mink	33,000 pelts
Red Fox	24,000 pelts
Coyote	13,000 pelts
Beaver	18,000 pelts

CURRENT IOWA FUR HARVEST:

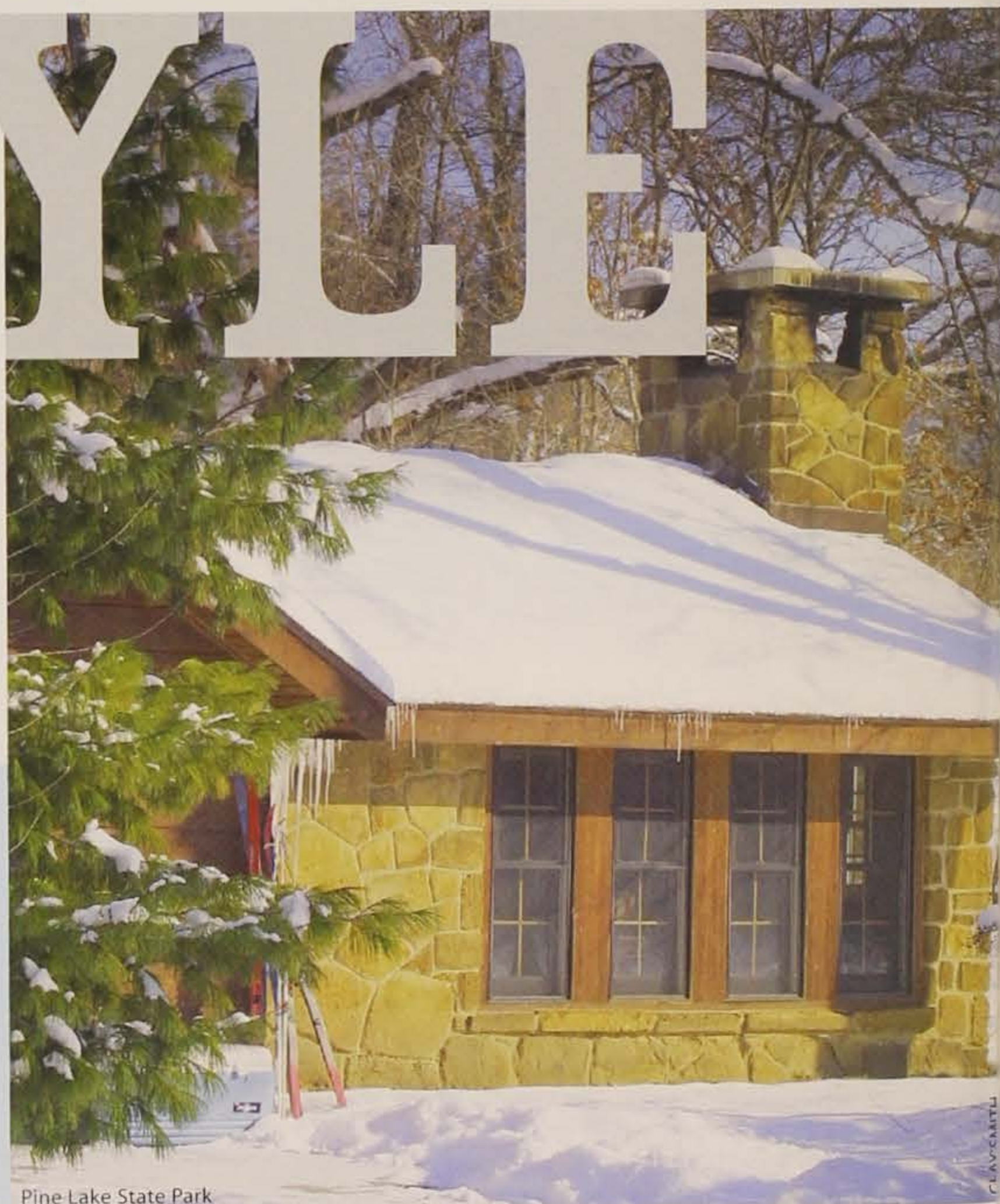
Raccoon	125,000 - 150,000
Muskrat	60,000 - 70,000
Mink	15,000 - 20,000
Red Fox	12,000
Coyote	7,000
Beaver	3,000

WINTER WONDERLAND...

IOWA

BY JULIETACK AND SHANNON MEISTER

STYLE



Pine Lake State Park



Frosty temperatures, biting wind chills, six inches of snow. It's a great day to stay indoors, right? No way! When winter hits its peak in Iowa, that's when outdoor fun heats up. Whether your favorite pastime is a peaceful walk in crisp-cold silence, or a thrill-seeking snow adventure, we have some of Iowa's top picks for enjoying the season.

SNOW BOUND AT **"THE BONE"**

Not only was Backbone Iowa's first state park (circa 1920), it is a fantastic winter destination. For a peaceful, secluded trek through the woods, Backbone is the place to go. It offers more than five miles of forest trails in the park's northern quadrant, ideal for cross-country skiing or hiking. Snowmobiles are only allowed on main roads and designated snowmobile trails so quiet enjoyment of nature is easily found.

Warm up with a weekend stay in one of eight heated, modern cabins to get the true "backwoods" experience. Cabins are easily rentable this time of year by going to www.reserveiaparks.com or calling 1-877-IAPARKS. With full kitchens, comfortable furniture and gorgeous scenery, a winter stay at a Backbone cabin could become an annual tradition for any family.

BACKBONE STATE PARK IS LOCATED IN DELAWARE COUNTY, THREE MILES SOUTHWEST OF STRAWBERRY POINT.

OTHER YEAR-ROUND MODERN FAMILY CABIN RENTALS:
Pine Lake State Park near Eldora in north-central Iowa;
Black Hawk State Park, near Lake View in northwest Iowa

SKATE TO THE GREAT NORTH

Nothing beats ice skating on a beautiful winter afternoon. For the perfect venue, go to Pilot Knob State Park in northern Iowa. A scenic 15-acre lake is a popular ice skating spot for locals. On brisk winter days, relax in the nearby warming house with a cup of hot chocolate. The warming house is a fully enclosed, with heat and electricity to plug in a crock pot of chili.

As the second-highest point in Iowa, Pilot Knob is one of the oldest state parks featuring a 1930s stone observation tower built by the Civilian Conservation Corp. The park offers 13 miles of trails for hiking, snowmobiling and cross-country skiing. Ice anglers find nice bluegill in the small lake; just be careful of the aerator near the warming house.

PILOT KNOB IS IN HANCOCK COUNTY, FOUR MILES EAST OF FOREST CITY.

OTHER SKATING DESTINATIONS: *Ellis Park in downtown Cedar Rapids in east-central Iowa, Red Haw State Park near Chariton in southeast Iowa.*



Big Creek State Park

JAN WILTON

DIG THE **SKIING** AT BIG CREEK AND MINES OF SPAIN

Dozens of Iowa state parks offer cross-country skiing trails, and some of the finest are at Big Creek, Polk City, and Mines of Spain, Dubuque.

BIG CREEK skiing opportunities are plentiful. Blaze a trail through woods and fields, or follow the recreational path along the lake's eastern shore. According to Tom Wilton, a Des Moines skiing enthusiast, "the groomed cross-country course is one of the most invigorating skiing experiences in central Iowa." When snow depth is sufficient, the 3.5 mile trail system is prepared for both freestyle (skating) and classic (striding) skiing. The flat to slightly rolling course offers nice lake views as it traverses prairie, open woodlands, and picnic areas. For trail conditions, visit <http://lakesidenordic.home.mchsi.com>.

MINES OF SPAIN is a cross-country destination for beginners and enthusiasts alike. Two groomed trails follow the ridge top along the Mississippi River for gorgeous views. The local ski club helped design the trails and teaches annual clinics on skills and equipment to get started in the sport. Call (563) 556-0620 for more information on classes. (See the article on page 20 for more winter activities in the Dubuque area).

BIG CREEK STATE PARK IS TWO MILES SOUTH OF POLK CITY IN POLK COUNTY. MINES OF SPAIN STATE PARK IS JUST SOUTH OF DUBUQUE IN EASTERN IOWA.

OTHER CROSS-COUNTRY DESTINATIONS: *George Wyth State Park in Waterloo; Stone State Park near Sioux City in western Iowa; Yellow River State Forest near Harpers Ferry in northeast Iowa.*

WINTER JOY RIDING

Snowmobiling offers thrills for adventure-seekers at Volga River State Recreation Area in northeast Iowa. Twenty miles of groomed trails are maintained specifically for snowmobiles at this park, and trail conditions can be found by contacting park staff at (563) 425-4161. The park's trails connect with a countywide snowmobile trail system, providing opportunity to traverse dozens of miles of wintertime scenery throughout Fayette County. When snowmobiling, be sure to respect others enjoying the park and stay on designated paths.

Volga River features a heavily wooded, rugged landscape for a variety of outdoor pursuits. Trails are perfect for cross-country skiing and hiking. Ice fishing is popular at picturesque Frog Hollow Lake and nature lovers will appreciate the plentiful winter habitat ideal for bird and wildlife viewing. Remember, Volga River is a public hunting area so wear bright colors.

VOLGA RIVER STATE RECREATION AREA IS JUST NORTH OF FAYETTE, ONE MILE EAST OF HIGHWAY 150 IN FAYETTE COUNTY.

OTHER SNOWMOBILING DESTINATIONS: *Big Creek State Park near Polk City, Stone State Park near Sioux City in western Iowa.*



4

LURE OF THE FROZEN FILLETS

Whether novice or expert, dedicated anglers travel to Lake Manawa for ice fishing all winter long. From early December to late January, anglers can be found across the lake fishing for bluegill, catfish, crappie, walleye and wipers.

To make ice fishing even more tempting, Lake Manawa hosts the annual Winterfest Derby the last Saturday in January. Participants can catch tagged fish to win prizes and participate in ice house decorating and chili cook-off contests. To learn more, visit www.winterfestderby.com.

LAKE MANAWA STATE PARK IS LOCATED IN COUNCIL BLUFFS IN POTTAWATTAMIE COUNTY.

OTHER ICE FISHING DESTINATIONS: *McIntosh Woods/Clear Lake in north-central Iowa; Lake Macbride State Park near Solon in east-central Iowa.*

Hundreds of anglers flock to the Lake Manawa ice fishing tournament each year. Prizes for kids and sure-fire chances for even the youngest anglers to hook one on warm little hearts.

6

DOWNHILL FAMILY ADVENTURE

Is family fun more your style? Then take a trip to Red Haw State Park where many local families bring their children for the sledding.

The southern Iowa terrain is perfect for a sledding adventure with steep, but not too long hills. One of the most popular hills slides onto the frozen lake for extra fun (be sure the ice is safe!), and is next to an original 1930s Civilian Conservation Corps building with a huge fireplace ideal for warming up and roasting marshmallows. The shelter can be reserved (call (641)774-5632), or is usually available first-come, first-serve in the winter. Bring your own firewood for a toasty winter campout.

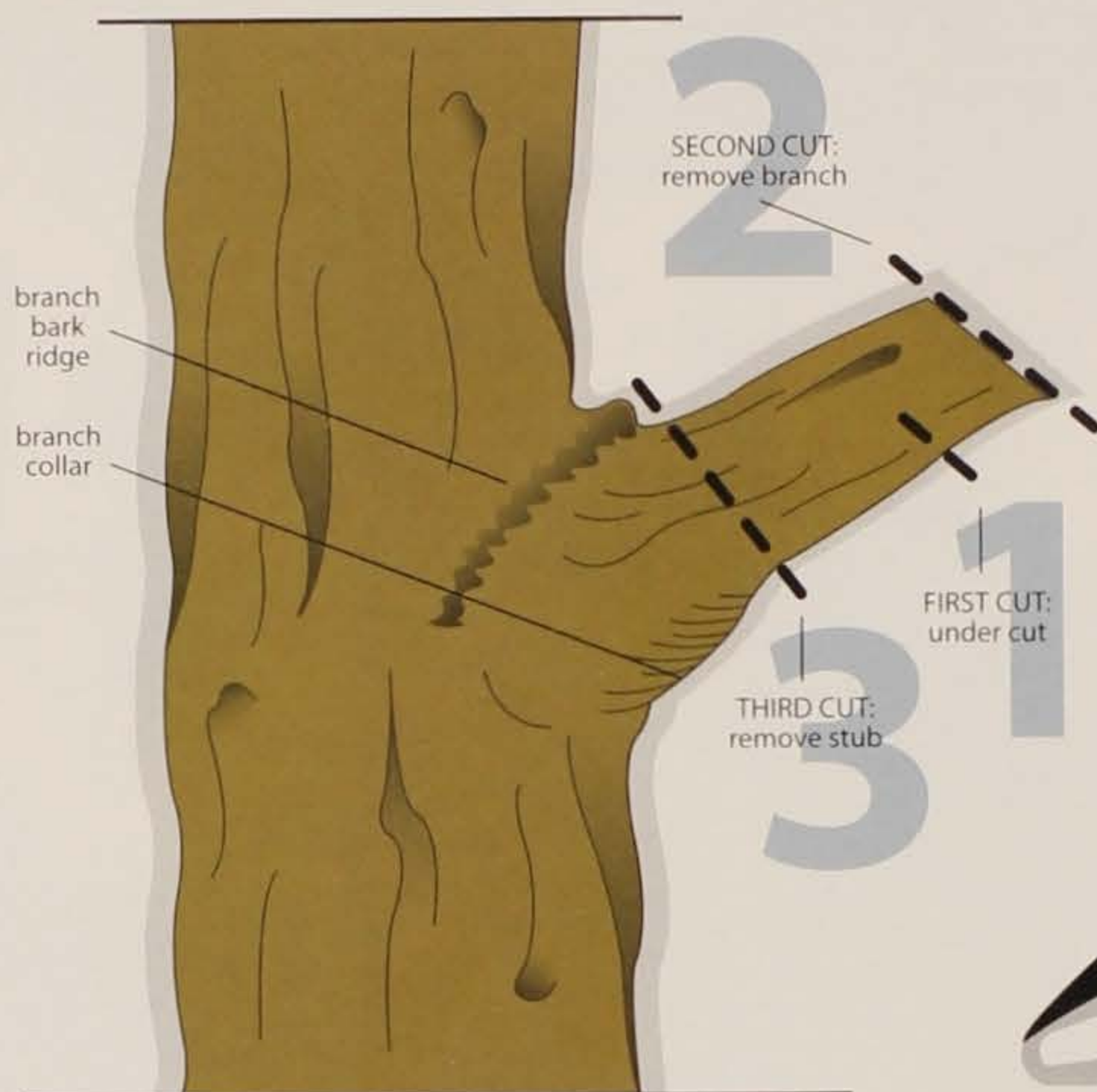
The small, 72-acre lake offers nice ice skating and fishing. Red Haw also features a 3 ½ mile non-groomed cross-country trail around the lake.

RED HAW STATE PARK IS LOCATED ONE MILE EAST OF CHARITON IN LUCAS COUNTY IN SOUTH-CENTRAL IOWA.

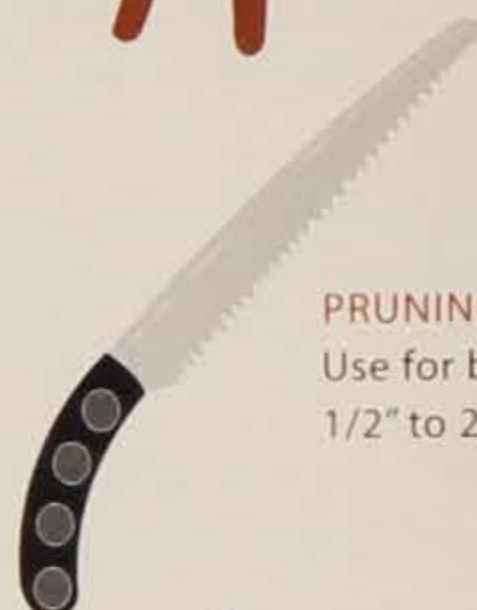
OTHER SLEDDING DESTINATIONS: *Big Creek State Park (near the dam) in central Iowa; Volga River Recreation Area in Fayette County*

Learn More:

A complete list of Iowa state parks along with maps, descriptions of amenities and recreational opportunities can be found at www.iowadnr.com/parks/



PRUNING SHEARS:
Use for branches
1/2" thick or smaller.



PRUNING SAW:
Use for branches
1/2" to 2" thick.



CHAIN SAW:
Use for branches
over 2" thick.

WINTER PRUNING

Late fall thru winter is best for tree pruning. Dormancy minimizes bark damage and insects and diseases are less risk during the winter. Pruning requires good tools and techniques. Here's how.

Use three steps for best pruning.

1) First find the "branch bark ridge" that place where the branch meets another branch or the main trunk - usually there is a slight raised area. About 6 inches from the branch bark area, undercut a third of the branch to release tension. **2)** Then cut from the top to remove the branch. **3)** Make a final cut next to the branch bark ridge, but do not cut flush or leave a stub. **Protecting the branch bark ridge enables the tree's natural sealing ability to callus over the cut.** Except for oaks, pruning paint is unnecessary.

FOR MORE ON PRUNING: www.extension.iastate.edu/Publications/PM1304.pdf



LOOKING TO SAVE MORE ON YOUR UTILITY BILLS?

Consider a home energy audit by your utility company. They're free and most provide rebates if additional insulation or other energy efficient upgrades are needed.

An energy auditor will conduct an assessment on your home, inspecting your heating and cooling systems, hot water heater, shower heads, insulation, light fixtures and more. Most utilities offer free energy efficient light bulbs, low-flow shower heads and hot water heater insulation wraps and will install these energy savers during the visit. If extra insulation or weatherizing materials are needed, check with your utility company about rebates.

To schedule a home energy audit, contact MidAmerican Energy at (800) 545-0762 or Alliant Energy at (800) 723-7635. Contact the Iowa Association of Electric Cooperatives at (515) 276-5350 if your electric and gas services are provided by a Rural Electric Cooperative.

Play Santa for Wildlife:

3 Ways to Regift Your Holiday Tree

1) After the holidays, stand trees upright in snow or lay sideways to create instant backyard habitat for birds and small mammals. Adorn the tree with bird feeders, suet or strands of popcorn. **2)** Split the trunk and use branches for kindling after curing one year. (Evergreen pitch is an excellent fire starter.) **3)** Use leftover needles and boughs to mulch acid loving plants like azaleas, blueberries, oaks and evergreens to ward off chlorosis, a condition caused when high pH soils bind up available iron.



Whitetail Sorties

How Airborne Biologists Watch From Above

BY JOE WILKINSON PHOTOS BY CLAY SMITH

Looking down from 200 feet, the picture takes shape. On the wooded hillside, three deer stand on a cold rug of snow. As we hover above, another two come into focus. They become hash marks on Department of Natural Resources wildlife biologist Tim Thompson's chart, as we fly to the next Cedar Rapids transect.

Up here in a helicopter; every hour we look for deer provides another piece of the puzzle. Those 350 aerial routes help visually confirm deer populations; a topic that can run red hot among hunters, landowners, drivers and others with a stake in Iowa's whitetail population. "We cover quite a bit of ground up there. We can determine deer numbers and how they are distributed," explains DNR deer biologist Willy Suchy. "It is actual science; quantitative measures, rather than just coffee shop talk of too many deer, or hunters in the field saying there aren't enough. It gives us an idea of what is really out there."

CONTINUED ON NEXT PAGE.



Danger in the Skies

Air crashes are the number one cause of death for wildlife workers, reports the American Wildlife Society. While no survey deaths have occurred in Iowa, and dozens of annual winter survey flights go as planned, harrowing exceptions are mentally imprinted on several wildlife workers, officers and pilots.

"There are times when the engine stalls while you're up there. It has always started up again," recalls DNR biologist Tim Thompson. "Another time, we tried to set a helicopter down in a heavy wind. As we hovered, the wind gauge read 47 knots (about 55 miles an hour) when a gust of wind hit us. A moment later, we were looking down at grass, not the landing pad. The pilot just set it down on the runway. We walked the rest of the way."

Wildlife biologist Bill Ohde and technician Chris Larsen survived a Hollywood thriller during a mid-1990s flight near Mediapolis. Turning to remind their pilot the plane was off course, Ohde realized the private pilot blacked out. "His face was ashen gray. His eyes were glazed. He offered no response. The plane was picking up speed and dropping altitude," he recalls. Grabbing the yoke, Ohde pulled the plane's nose back up as Larsen, from the back seat, shook the pilot. Then the engine faltered. "I leveled it out and tried to call on the radio. I couldn't raise anybody. I just kept the plane level," said Ohde.

The pilot recovered and set the plane down. "He remembered everything going 'fuzzy' but thought it was just a momentary lapse," says Ohde. "He actually got kind of irate when we told him it was close to five minutes that I was flying the plane." Both wildlife workers went up the next day — with a different pilot. Today, Ohde gets queasy when the first snows signal more flights.

When the unexpected happens, pilots rely on their training. "We fly 400 to 600 hours a year. We're trained in emergency procedures," emphasizes Iowa State Patrol trooper-pilot Scott Pigsley. Troopers are utilized frequently for patrol flights, such as hunting season enforcement. "We were looking for (illegal) spotlighters two years ago, when there was a large, 'bang!' We saw bird feathers on the windshield near my head. It had been a bird strike."

And the worst can happen. As shooting wrapped up on the film, "A Final Season" near Cedar Rapids last summer, a low flying helicopter caught a power line and crashed into a cornfield. Photographer Roland Schlotzhauer died on impact. Film producer Tony Wilson of Dallas Center and veteran pilot Richard Green of Hudson were hospitalized with serious injuries. Green regularly pilots surveys for DNR officials who need the closer look helicopters provide in urban and park areas.



Richard Green

Combined with three other elements, the 'eye in the sky' helps biologists establish hunting seasons and quotas. Counts in late winter '06 showed an 18 percent drop in deer statewide, prompting antlerless license restrictions in many north central and northwest counties this season. The counts lead to quotas in muzzleloader seasons, set up urban hunting zones and help expand or shrink special seasons.

The key is consistency. Since 1983, crews go back over the same routes, at about the same time each year. Most are in rural areas, aboard small planes plowing along at 80 miles an hour, at 400 feet. Not everybody relishes the

assignment. More than a few volunteer for ground duty. I rode out the steep, sharp banks of the plane — and each time I lost sight of the horizon — was glad I skipped lunch. With each route, too, winter cold seeps through the thin skin of aircraft, numbing ill-protected hands and feet.

Helicopters are far less punishing. They're more expensive, too, but in urban areas, a copter can make or break the count. "You have to get lower to see the deer. They are in tighter spots; backyards, small ravines; even under decks next to the house," recalls Thompson. "With a helicopter, you can hover...You can make tight turns to

Harvest Reporting

The cumbersome, sometimes ineffective method of estimating deer harvest via postcard hunter surveys is on its way out. In its place is a sleek, new-age electronic reporting system that could — and should — help wildlife biologists better manage the resource.

Deer and fall turkey hunters got their first taste of Iowa's new mandatory reporting system last fall and winter. Spring turkey hunters get theirs this season.

Under the new rule, any hunter who tags a deer or turkey must report the harvest by midnight the day after the kill, before processing the animal for consumption, before taking it to a locker or before transporting the animal out of state, whichever comes first. Harvest reports can be done online (www.iowadnr.com) or over the phone (800-771-4692).

Failure to report the harvest could result in a citation.

ABOVE: During a low-flying helicopter survey, biologists count deer as they scatter. This winter marks the silver anniversary of Iowa survey flights. **ABOVE, TOP RIGHT:** Three to four inches of new snow and steady eyes help biologists Tim Thompson (with sunglasses) and Willy Suchy pick out deer below. Snow helps cover deer beds, stumps and other dark, deer-sized obstructions. **ABOVE, BOTTOM RIGHT:** Helicopter surveys over metro areas better penetrate tight spaces where deer congregate. Taking advantage of minimal snowfall can mean going airborne in rough conditions. During this survey near Ankeny, both deer and cockpit occupants pilot Richard Green, biologists and photographer Clay Smith braved -25 degree windchills on a single degree day with 27 mph sustained winds.

confirm it was a deer, or three or six."

Thompson flies surveys each year in Iowa City-Coralville and in Cedar Rapids where deer populations are flashpoints of controversy. Up Interstate-380, Cedar Rapids officials relied on aerial survey data for their bow hunt last year. Hunters removed 298 antlerless deer, helping reduce a growing urban herd. In Iowa, about a dozen cities use controlled hunts to reduce whitetails.

Still, it takes more than aerial surveys to assemble a deer forecast. Suchy also reviews 40,000 hunter surveys, input from 200 spring spotlight surveys and deer road kill

data. "We do extensive deer surveys, compared to most states," says Suchy. "It is important for what we do. It helps confirm what we are seeing."

From that data, he recommends adjustments in quotas and special seasons. The state's Natural Resources Commission reviews the DNR recommendation. A legislative committee has final say. Those suit and tie decisions lead to blaze orange hunting opportunities each season.

And they all started the winter before, in cramped cockpits. 🐻



HAWK WATCHERS

BETH AND MARK PROESCHOLDT, LISCOMB

Mother and son team of "volunteer experts" spent 15 years watching the hawks in central Iowa.

Hawks are known for watching. They watch their prey like... well, hawks. In Marshall County, however, these majestic birds have felt two pairs of eyes watching them. Beth and Mark Proescholdt completed 15 years of volunteer hawk research before Beth's passing last winter. Their selfless service, love for the birds they studied and hard-earned expertise provided countless benefits to Iowa wildlife and conservation enthusiasts. Every September and October, they staffed a hawk-watching site for roughly 70 hours a week. They worked to document numbers and species of birds migrating through Iowa. "Experts in this field, which the Proescholdts are, would easily be valued at \$12,000 annually," said DNR wildlife diversity technician Pat Schlarbaum. The Proescholdts always shared their passion for hawks, too, announcing their findings at the annual Iowa Ornithologist's meeting and providing insightful hawk education during watching activities. "The environmental conscience they cultured in outdoor enthusiasts is priceless," Schlarbaum said.

OLD FRIENDS: VOLUNTEERS SUPPORT PARK

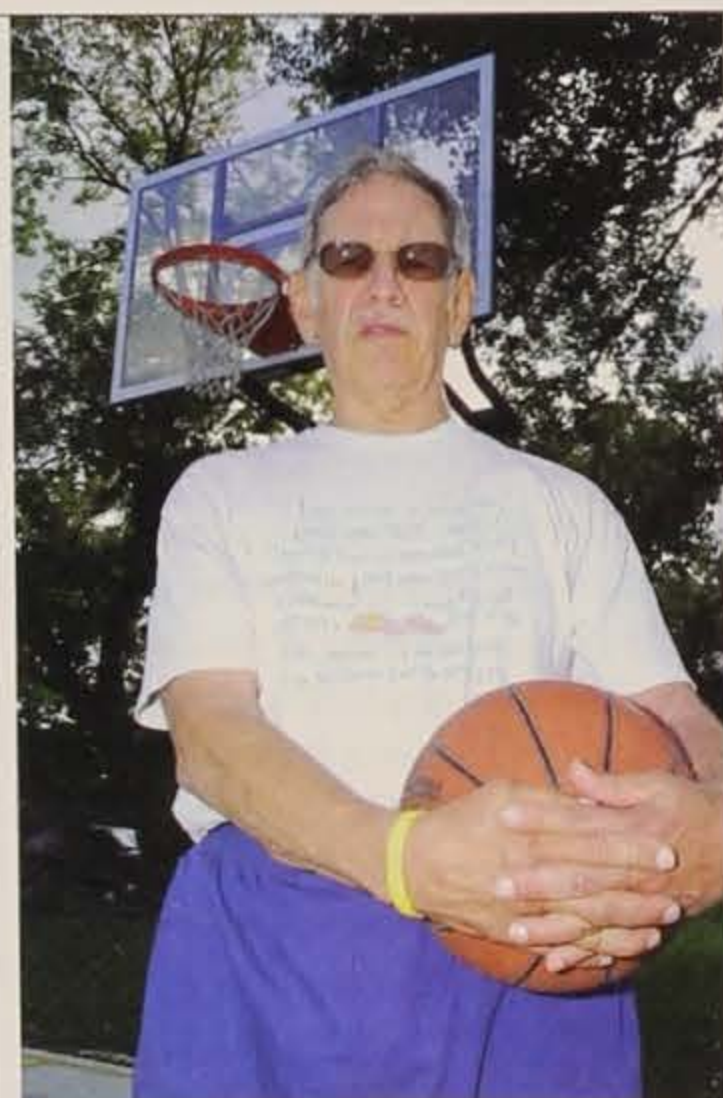
LAKE PARK & HOLDING CORP., GARWIN

Like a proud parent, the Lake Park & Holding Corporation continues to offer volunteer support to the park it created more than 60 years ago.

No Iowa volunteer friends group has a longer-lasting relationship with its park than the Lake Park & Holding Corp. The nonprofit group formed in 1935 with the sole purpose of creating a park for the Gladbrook area. The result was Union Grove State Park, which Lake Park & Holding operated until 1940, when they sold it to the state. Since then, members of the nonprofit have become a friends group and provided tremendous support to their park. In the past, they have financially supported a huge dredging project, lobbied the state for funds and helped clean up after the 1993 floods, donating 240 service hours. More recently, they gave more than \$8600 for park improvements (in the years since 1999). Group members also volunteer with litter pickup, mowing and the annual Cornman Triathlon. "Every time I hear people talk about their park's friends groups, I think, 'My friends group actually founded a park,'" said Park Manager Frank Rickerl.



BILL FRY, President, Lake Park & Holding Corp.



A RECREATION LEGACY

RODGER BURCH, DES MOINES

In donating \$4,000 towards a new basketball court at Springbrook State Park, Rodger and Marilyn Burch left a legacy with immediate benefits.

For the past two camping seasons, new sounds have filled the late-night summer air at Springbrook State Park: the squeaking of sneakers, the thump of basketballs and the joyous shouts of young athletes. The park has two people to thank for that: campground hosts Rodger and Marilyn Burch. Last year, the couple donated \$4,000 toward the construction of a half-length basketball court. The Burches' donation, officially given to the park's volunteer friends group and matched by the Iowa DNR, is easily the most successful fundraising effort at Springbrook. The couple donated more than money, however. The Burches spent eight months researching products and vendors for the project, lined up a concrete provider, selected a hoop and volunteered during the hoop's installation. "I don't see much reason for giving money to something after you die," Rodger Burch said. "I would rather see the results while I'm alive."



Wintry Warmer Meatball Sandwich

EASY HOME PREP MAKES A HOT, SAVORY MEATBALL SANDWICH EASY ON THE ICE.

Anglers can use an ice shack propane heater to toast this tangy sandwich while enjoying a long day fishing Iowa's lakes and rivers. Prepare either venison or hamburger meatballs a day or two before hitting the ice.

MEATBALL SANDWICH ON THE ICE

Hard rolls or French bread

MEATBALLS

- 1½ pounds ground venison, pork or hamburger
- 1 sleeve saltine crackers, crushed
- 1 egg
- ¼ cup minced onion
- Provolone or mozzarella cheese (optional)

Mrs. Dash or Lowry's seasoning to taste
Crushed red pepper (optional)

PEP IT UP

Big outdoor fun deserves bold flavors. Add 3 chopped garlic cloves, oregano and basil to meatball mix. Add a splash of Worcestershire or other favorite seasonings.

SAUCE

Use any marinara pasta sauce or mix together; 2 cups ketchup, ½ cup brown sugar and ¼ cup mustard.

1) Preheat oven to 350°. Combine and mix meatball ingredients and form into ball shapes slightly smaller than golf balls. Place into a glass baking dish and

bake uncovered for 30 minutes. Remove and put a dollop of sauce on each meatball and return to oven for 5 minutes.

2) Remove a top section of roll or loaf by slicing at an angle on both sides lengthwise to create a V-shape. Remove and save cut bread. Layer opening with provolone or mozzarella cheese, then fill with meatballs, adding extra sauce if desired. Place the bread slice onto sandwich and double-wrap in aluminum foil. Use a marker to identify the top side of sandwich.

HEATING

While ice fishing, turn the propane heater on lowest setting and lay sandwich on protection grate. Turn frequently to avoid burning until the sandwich is hot.



Rabbit Legs with Artichoke Hearts and Onions

These rabbit recipes are the perfect winter warm-up, both a nostalgic throwback to an era when rabbit hunting was wildly popular and a culinary celebration of Iowa's German immigrant heritage. "Hasenpfeffer (shown next page) is a very hearty meal, a German farmer dish, dating back to when the land provided and people ate what the land provided," says Chef Martin Vollmer. This recipe is a wedding rehearsal dinner favorite in his native Black Forest, Germany. (For those in need of rabbit, this winter's season is open until February 28th!)



Rabbit Loin with Mushrooms

Rediscover Rabbit

REDISCOVER THE JOYS OF RABBIT HUNTING OR GET ON THE GOOD SIDE OF A RABBIT HUNTER, BECAUSE WE'VE GOT EASY, PALATE PLEASING RECIPES THAT ARE 100 PERCENT HEARTY.

Created by Chef Martin Vollmer, a German-born and trained chef and owner of Martin's Brandenburg restaurant in Waverly, these tantalizing dishes cheer the soul.

RABBIT LEGS WITH ARTICHOKE HEARTS AND ONIONS

Serves 2

- 3 tablespoons butter
- 2 rabbit hind legs
- 1 clove garlic, minced
- ¼ cup white wine
- 1 cup prepared brown gravy sauce mix or demi-glace sauce
- 4 canned artichoke hearts, quartered, or other vegetables such as brussel sprouts

1) Preheat oven to 300°. Dust rabbit

legs with flour then sauté in butter in a skillet until browned; season with salt and pepper. Place in ovenproof casserole dish. Sauté garlic and onions until caramelized, add white wine and brown sauce. Cover and bake 1½ hours, or until tender.

2) To serve, place rabbit legs on serving dish and spoon sautéed onions and brown sauce over the top. Serve with hot artichoke hearts and potatoes.

★ Demi-glace sauce mix is available in some grocery stores or use brown gravy.

RABBIT LOIN WITH MUSHROOMS

Serves 2

- 1 saddle of rabbit (Unseparated back loin from ribs to leg of both sides.)

Salt and pepper to taste

- 1 tablespoon vegetable oil
- ½ cup white wine
- 1 cup heavy cream
- 1 teaspoon fresh thyme
- 1 lb. sliced mushrooms
- 1 cup prepared brown sauce (Either demi-glace or brown gravy sauce mix.)

1) Heat oven to 350°. Remove meat from bones and season with salt and pepper. In a large sauté pan, heat the oil, add rabbit and sauté over medium heat for 10 minutes. Remove pan from heat and let cool. Remove bones and keep meat warm.

2) To make sauce, roast bones in a pan in oven until golden brown. Remove and add thyme and white



No passport needed: Journey into Waverly's favorite German gem, where chef Vollmer is known as much for ambling his wooden floors visiting guests as he is for his signature Black Forest cake. Soaring tin ceilings, lace curtains and cuckoo clocks adorn this eatery.



Martin's Brandenburg Restaurant
215 East Bremer in Waverly, Iowa

HOURS: Tuesday through Saturday 10:30 a.m.–2:30 p.m., 4:30–9:30 p.m.; brunch buffet Sunday, 10a.m.–2 p.m.; closed Sunday night and Monday.

319-352-9170

www.martinsbrandenburg.com



Hasenpfeffer

HAVE A GOOD RECIPE OF WILD FOODS TO SHARE? Send to: WILDCUISINE@DNR.STATE.IA.US

wine. Strain into a small sauce pan and bring to a boil. Reduce heat, add cream and reduce liquid by one-third. Add brown sauce. Keep warm.

3) In a medium sauté pan, heat butter and mushrooms, and season to taste. Cook until liquid has evaporated. To serve, slice rabbit loin into one-eighth inch thick slices and place on serving plate with mushrooms and sauce.

HASENPFEFFER

This recipe's wonder is due to the simple marinade. "The vinegar breaks down the tissue to make a flavorful, sauerbraten type feel with tangy and slightly sour, delicate meat," adds Vollmer. "Marinate wild rabbit for up to two days to remove any gamey flavor."

Serves approx. 4

- 1 rabbit, 2 - 3 pounds**
- 8 strips bacon**
- 3 tablespoons oil or shortening**
- 1 cup diced onion**
- 1 package fresh mushrooms, sliced**
- 1 package egg noodles or spaetzle**

MARINADE:

- 1 cup burgundy or red wine**
- ¼ red wine vinegar**
- 5 juniper berries or black pepper corns**
- 2 bay leaves**
- 2 crushed cloves of garlic**

1) Marinate rabbit pieces 12 to 24 hours. Drain and reserve the marinade. Preheat oven to 300°. Dredge pieces of rabbit in flour.

Brown in 3 tablespoons shortening or oil with diced bacon and onion until rabbit is golden brown. Place browned rabbit, bacon and onion in an ovenproof casserole dish.

2) Strain marinade into the casserole dish with the rabbit. Discard bay leaves and juniper berries. Cover and bake for 2 hours or until tender. Cook noodles according to directions and sauté mushrooms in oil or butter.

3) Place rabbit on serving dish, pour sauce on top. Serve with noodles. Garnish with mushrooms and cranberry sauce.

★ If thick sauce is preferred, use a demi-glace sauce or brown gravy mix.

★ Juniper berries are in the spice aisles of some groceries, or order online.

WHAT'S HAPPENING IN IOWA

Rockwell Collins joins Climate Leaders

Cedar Rapids based-Rockwell Collins joined 100 other companies in a pledge to reduce its corporate-wide greenhouse gas emissions. Under a U.S. EPA's Climate Leaders program, the company is evaluating current energy usage and emission levels and will announce its five-year goal in March 2007.

Efforts by the Climate Leaders are estimated to prevent greenhouse gas emissions equivalent to that of 7 million cars.

"Through EPA's Climate Leaders program, America's leading companies are proving that reducing greenhouse gas emissions can help boost the bottom line," says EPA Deputy Administrator Marcus Peacock.

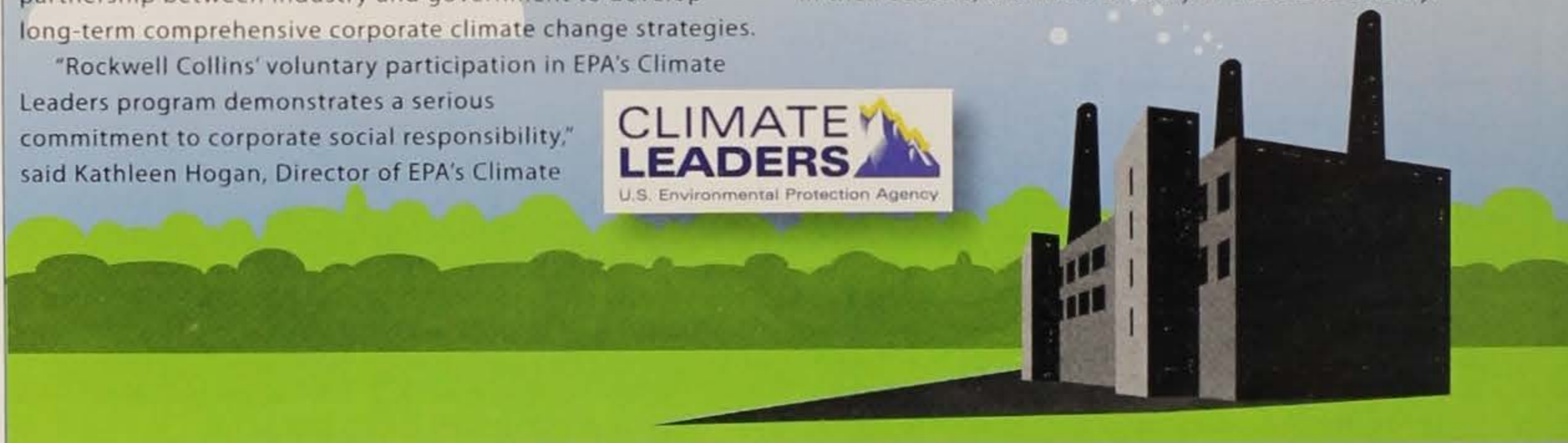
Launched in February 2002, EPA's Climate Leaders is a partnership between industry and government to develop long-term comprehensive corporate climate change strategies.

"Rockwell Collins' voluntary participation in EPA's Climate Leaders program demonstrates a serious commitment to corporate social responsibility," said Kathleen Hogan, Director of EPA's Climate

Protection Partnerships Division. Rockwell Collins reduction goal will help lead the way in improving our environment and reducing the risks of climate change."

Climate Leaders Partners set a corporate-wide greenhouse gas reduction goal and inventory their emissions to measure progress. By reporting inventory data to EPA, Partners create a lasting record of their accomplishments. Partners also identify themselves as corporate environmental leaders and strategically position themselves as climate change policy continues to unfold.

Climate Leaders Partners represent a variety of sectors, from heavy manufacturing to banking and retail. These companies all strive to set the standard for greenhouse gas management in their sectors, and more broadly in the U.S. economy.



ROSE ROSETTE DISEASE

THE PROMISE OF A BIOLOGICAL CONTROL FOR MULTIFLORA

Anyone who spends time trekking Iowa's woodlands or timbered pastures has probably tangled with multiflora rose. The invasive shrub was introduced to North America in the 1800s as an ornamental, and promoted a century later as a living fence. The fruits, called hips, are eaten by wildlife which spread the seeds far-and-wide.

Because of its numerous thorns, multiflora rose is unpalatable to most livestock. It spreads quickly in the absence of other plant competition, such as in over-grazed pastures. Common controls are digging, mowing, burning or spraying.

But a disease found in Canada in 1940 may offer a biological control. Researchers are studying whether rose rosette disease may provide a quicker, environmentally friendly solution.

This disease, first found in Iowa near Troy, is now common throughout the state. Though the disease can affect many rose species, it commonly infects multiflora rose. Once infected, it takes two to five years to kill a plant. Early symptoms include a deep red color on the undersides of leaves. Infected stems grow vigorously with a pink to



JAMES H. MILLER, USDA FOREST SERVICE

magenta color. As the disease develops, leaves become deformed and shrunk with a bright red color. The leaves turn yellow prior to browning and dying.

How the disease spreads is not well known, but it is believed that mites spread the disease as they feed. These mites are relatively weak flyers. The disease can spread to tame garden roses, but they are probably safe as long as other infected plants are farther than 300 feet away.

If you have questions on controlling multi-flora rose, contact your district forester, found at iowadnr.com/forestry/district.html or contacting forestry's Paul Tauke at 515-242-6898.

IOWA STATE RESEARCHERS CONVERT FARM WASTE TO BIO-OIL

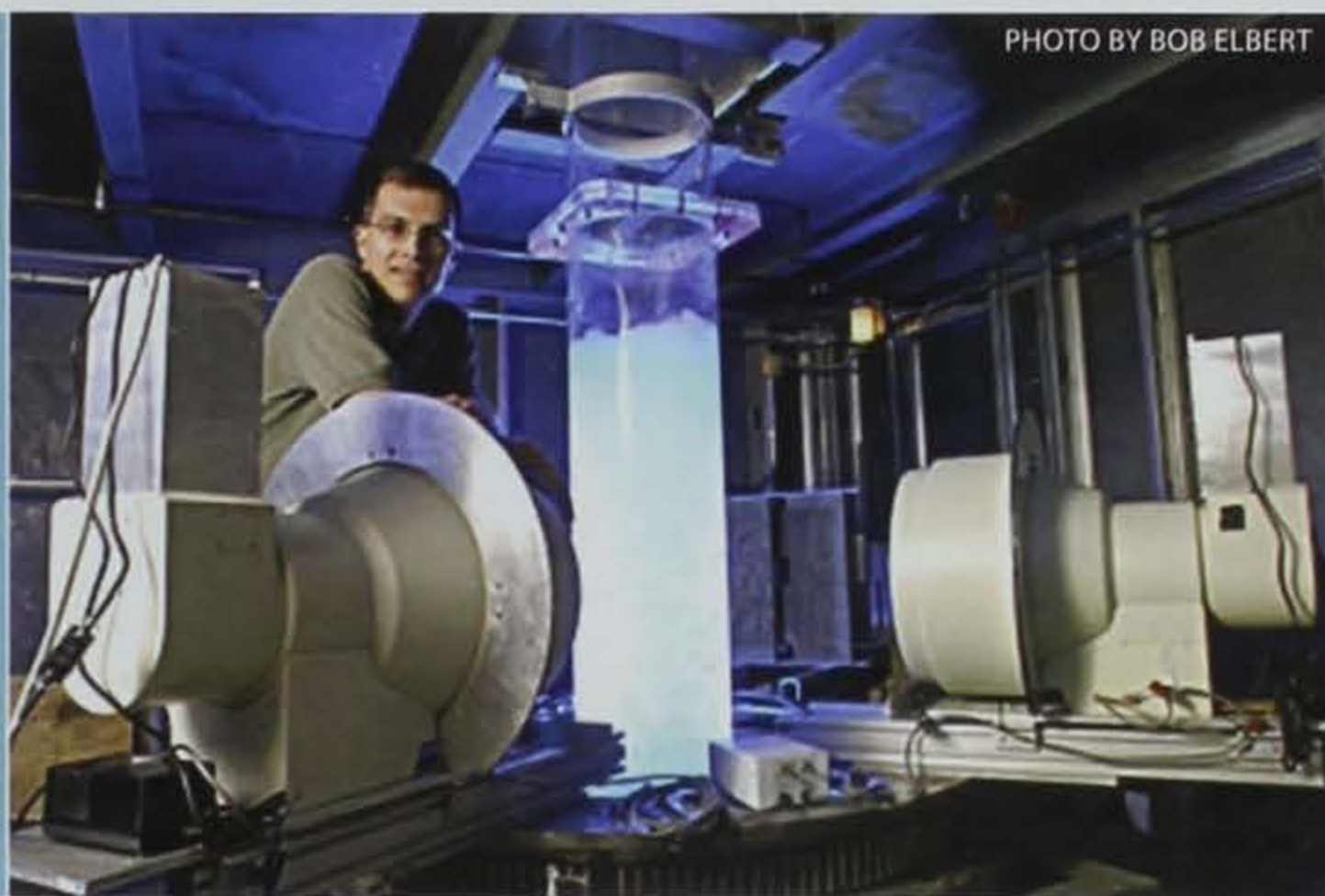


PHOTO BY BOB ELBERT

Ted Heindel will use Iowa State's X-ray flow visualization facility to observe and measure the action inside a fluidized bed where biomass can be converted into flammable gases.

Samy Sadaka reached into a garbage bag, picked up a mixture of cow manure and corn stalks, ran it through his fingers and invited a visitor to do the same.

It wasn't that bad.

That mix of manure and corn stalks had spent 27 days breaking down in a special drying process. The end result looked like brown yard mulch with lots of thin fibers. There wasn't much smell, and it was dry to the touch.

"That's about 20 percent moisture," said Drew Simonsen, an Iowa State University sophomore from Quimby who's working on the research project led by Sadaka, an associate scientist for ISU's Center for Sustainable Environmental Technologies.

The researchers are working to take wastes from Iowa farms — manure and corn stalks — and turn them into a bio-oil that could be used for boiler fuel and perhaps transportation fuel.

"The way I see manure, it's not waste anymore," Sadaka said. "It is bio-oil." But it takes a few steps to make that transformation.

First, the manure needs to be dried so it can be burned. Sadaka's idea for low-cost and low-odor drying is to mix the manure with corn stalks, put the mix in a big drum, use a small blower to keep the air circulating and use an auger to turn the mixture once a day. Within about five days, bacteria and fungi working to decompose the mix have naturally raised the temperature to about 150

degrees Fahrenheit. Within another 20 days the moisture content is down from 60 percent to about 20 percent. Sadaka calls the process bio-drying.

That makes it possible to move to the next step: rapidly heating the mixture in a bubbling, fluidized bed reactor that has no oxygen to break molecular bonds in the mixture. It produces charcoal to enrich soil. And it produces vapors that are condensed to a thick, dark bio-oil.

Preliminary tests indicate every kilogram of dried mixture produces .2 to .5 kilograms of bio-oil. Sadaka figures if half the animal manure in the country were processed into bio-oil, that would produce the equivalent of 45 million tons of oil.

Sadaka is experimenting with the process in 900-liter drums at the Iowa Energy Center's Biomass Energy Conversion Center in Nevada. So far, he has dried a mixture of cow manure and corn stalks. Next he'll test the process with poultry manure. And then he'll try pig manure.

Sadaka is working with Dave Struthers, a Story County farmer whose family runs a 1,000-sow, farrow-to-finish farm east of Collins, to try the bio-drying process on a farm.

Struthers said the farm's pigs live in hoop buildings and their manure is mixed with bedding material. That mixture is applied to the surface of crop ground as fertilizer.

"And there may be more value in using manure as a fuel source than a fertilizer source," Struthers said.

IOWA SCHOOLS TO TEST FIRST HYBRID SCHOOL BUSES IN NATION

They'll look like any other Iowa school buses. But two big yellow buses coming to the state in early 2007 might get 40 percent better mileage and cut particulate emissions in half.

So what makes these buses so special? Under the hoods you'll still find big, V-8 diesels capable of bringing 65-passenger buses to highway speeds. Look a little closer and you'll also see electric drive trains capable of moving the buses from stop to stop at street speeds while capturing the energy of braking to recharge their own batteries.

They are hybrid school buses, and the ones coming to the Nevada and Sigourney school districts will be among the first 19 in the nation.

Researchers at Iowa State University's Center for Transportation Research and Education have been working for two years to bring the hybrid buses to Iowa. Dennis Kroeger, a transportation research specialist for the center, is hoping the buses will be picking up students sometime late this year. And when they do, center researchers will be evaluating the buses for performance, fuel efficiency and emissions.

"This is a perfect application for this technology. Buses operate at low speeds. There's a lot of stop-and-go driving. And so it makes sense to use a lot of these buses. I think there is a market for this," says Kroeger.

But hybrid electric school buses are new and expensive—currently about \$200,000 per bus. The Nevada and Sigourney districts agreed to pay \$60,000 for the hybrid buses—the cost of a standard school bus. Kroeger secured grants to pay for the additional bus costs and for performance studies. Fund include \$83,000 from the Iowa Department of Natural Resources and the School Administrators of Iowa—collected from an industrial pollution settlement.

"Rising transportation fuel costs are having a huge impact on already tight Iowa school budgets," said Floyd Barwig, the director of the Iowa Energy Center. "Our grant will put Iowa at the forefront of benefiting from a national project."

"I do think this is a great idea," said Todd Abrahamson, the superintendent of Sigourney schools. "This is a way to cut down on emissions and provide better safety and efficiency. With the high cost of fuel, I see this as a big money saver and something good for our district."

Jim Walker, the superintendent of Nevada schools, said a hybrid bus is a natural. Nevada, after all, is home to two wind turbines that generate electricity for school buildings, the Iowa Energy Center's Biomass Energy Conversion Center and the new Lincolnway Energy ethanol plant. The school district has run blends of biodiesel in its bus fleet since 2001.

Iowa's Interns

THE FUTURE OF IOWA
CONTRIBUTING TO IOWA'S FUTURE




Interns with DNR's pollution prevention intern program have a unique opportunity to experience a partnership of academia, industry and government, all working together toward a common goal. After one week of training, interns become project managers, working 11 weeks in Iowa industries and other facilities to identify and implement cost effective environmental improvements.

In 2006, each host company saved an average of \$105,000, totaling nearly \$3.2 million from intern projects. Intern recommendations resulted in 139.7 million gallons of water conserved; 224,000 tons of solid waste diverted from Iowa landfills and a decrease in energy use of more than 15.5 million kWh.

Based on a growing demand for interns, the DNR secured funding for 37 students last summer, up from 25 in 2005.





ISU Looks on the Sunny Side for Power

Sure, Iowa has its share of rainy, snowy and cloudy days. But look out the window.

"We have a lot of sunlight," says Vikram Dalal as sunshine lit up a late-summer morning and the south-facing windows of his Iowa State University office.

Dalal, director of Iowa State's Microelectronics Research Center, has spent more than three decades finding ways for sunlight to generate more electricity. He thinks his latest project can boost the performance of an Iowa company's solar cells by 40 to 50 percent.

IOWA STATE RESEARCHERS HELPING TO TAKE THE NATURAL GAS OUT OF ETHANOL PRODUCTION

It takes a lot of natural gas to run an ethanol plant. A plant needs steam to liquefy corn starch and heat to distill alcohol and more heat to dry the leftover distillers grains.

Burning natural gas to produce all that heat is the second largest expense at most plants—trailing only the cost of the corn used for ethanol production. One estimate says Iowa's annual ethanol production accounts for about 16 percent of the state's demand for natural gas.

That has Iowa State University researchers working with an Ames company to develop a renewable and cost effective alternative to the natural gas burned by most ethanol plants.

The technology involves partial combustion of biomass — that could include corn stalks, distillers grains, waste wood or other biorenewables — to produce a mix of hydrogen, carbon monoxide, methane and other flammable gases. The result is known as producer gas and can replace natural gas in an ethanol plant's heaters. Producer gas can be upgraded to syngas, a mixture that can be converted into high-value transportation fuels, alcohols, hydrogen, ammonia and other chemicals.

Producer gas is made by injecting biomass into a fluidized bed gasifier, a thermal system that pumps air through a bed of hot sand, creating bubbles and a sand-air pseudo fluid. A reaction produces flammable gases and generates its own heat to sustain the reaction. It's a system that's reliable with few emissions and can be efficiently used in a plant's existing natural gas boilers and dryers.

ISU researchers are working with Frontline BioEnergy, an Ames company that produces biomass gasification systems, to study and design a gasifier large enough to produce energy for an ethanol plant. Researchers are measuring fluidized beds in action, looking to see what happens when biomass is injected.

The company hopes to improve commercial-scale gasifiers capable of processing 300 tons or more of biomass per day. That can be a boon to an industry that produces an alternative to fossil fuel.

"Using biomass to fuel an ethanol plant can reduce ethanol costs," Reardon said. "It also hedges against volatility in the natural gas market and also doubles the renewable energy ratio of the ethanol product."

Dalal is working with PowerFilm Inc., an Ames company that manufactures thin, flexible solar panels, to improve the performance and stability of the company's solar cells.

One of the challenges facing solar cell manufacturers is that most cells are made with crystalline silicon, the same material used to make computer semiconductors. Because computer parts have more value than solar cells, Dalal says there's a shortage of silicon for solar cells.

There is, however, a way to make solar cells using a lot less silicon. Dalal said non-crystalline silicon wafers that are about 2 micrometers thick can replace crystalline wafers that are about 300 micrometers thick. The result is thin solar cells that can absorb lots of light and can be mounted on flexible plastic and other materials. But the thin cells produce about half the electricity as crystalline silicon. And their performance drops by about another 15 to 20 percent over time.

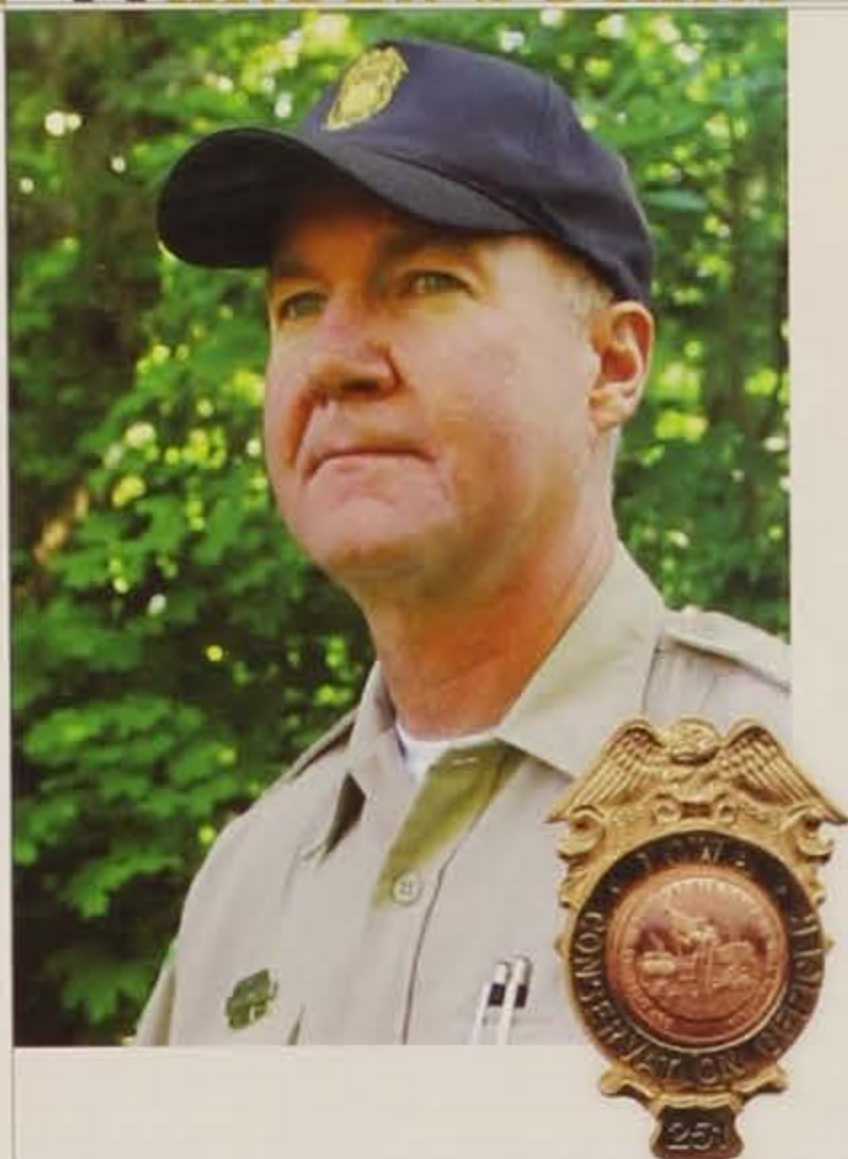
"That's where we come in," Dalal says.

ISU researchers have made discoveries in materials science and plasma chemistry that can improve cell performance nearly 35 percent and cut about 15 percent of the drop in performance.

Frank Jeffrey, the chief executive officer of PowerFilm, says he's happy to see the performance of his company's solar cells jump by even 20 percent. But he acknowledges Dalal's project won't be an easy one.

"It is a significant challenge to get the advancement he'd like to make," Jeffrey says.

But Dalal is looking forward to facing those challenges in his laboratory. "This is both challenging and interesting work," says Dalal, who started studying solar technology in 1972 when he decided he didn't want to develop smart bomb technology for a defense contractor. "I find it is tremendously interesting, even after 34 years. And it helps humanity instead of killing it, which allows me to sleep at night."



MUSINGS ON AN ICE CUBE

There doesn't seem to be much middle ground when it comes to ice fishing. You either love it or hate it.

Think of it this way. Somebody calls you up and says, "Hey, would you like to come with me today? The wind's blowing out of the northwest at 20 miles per hour. It's zero to five degrees outside." And, there's more. "We get to stand on a foot and a half of ice and take turns driving an overgrown corkscrew through it. Then, we're going to sit in a canvas tent with a small propane heater, if we can get it to work, and hold a couple of small rods waiting for crappie to bite. And, if we're lucky, it may snow. As an added bonus, we get to pull all this gear on a sled while we tromp through the snow!"

There are two responses. The first is "ARE YOU OUT OF YOUR MIND? I'm going to a movie!" The second is, "Pick me up; I'll be ready in 10 minutes."

I find the same diversion of opinion among conservation officers. When I say, "I like to check ice fishing licenses," undoubtedly, there are two responses. The first is "ARE YOU OUT OF YOUR MIND?" The second is, "I'll meet you at the lake in 10 minutes."

I like to check ice fishing licenses on the lakes, but I have coworkers who look at me like I need professional help. I try to figure out why. There are lots of reasons for me to enjoy an afternoon at the movie instead. I grew up in Southern Iowa, so I can't really say ice fishing was huge there at that time. Most of our ice outings were getting together for a pickup game of

hockey. And, that was "iffy" at best as the ice could be "iffy." And, I'll admit. I don't like the cold. And, the older I get the less I like it. (My wife and I took a trip to a Caribbean island in the dead of winter. Lying on the beach in the 80 degree temps I thought, "I could live with this.")

So why do I like checking licenses of ice anglers? The only thing I can figure out is tracing it back to my first assignment in the lakes area of Northwest Iowa. It's one of those cases where I didn't know any better. Ice fishing is a way of life up there, a culture all its own with its own customs and etiquette.


And, back to the start of the story, I found there were divisions of opinion among ice anglers. Wow! There's a revelation. Can you imagine anglers having a division of opinion? Anyway, I usually found two types.

The first were the comfort-conscious. Their ice shacks

were deceiving. They might be simple and unassuming on the outside, but, open the door and look out. I've stepped inside to find radiated heat, insulation, sunroof, television, and even a wet bar! Some even had carpeted floors with stove pipes through the floor to the hole in the ice so as not to let the cold in. You would swear you had walked into a portable condo. I'm not kidding. The drawback to this group was if they left the portable condos on the ice too long during thawing they had a real problem.

The second group I encounter I call the hard core. These snort with disdain at the comfort-conscious, and look upon them as lesser outdoorsmen. I find a




 A wide-angle photograph of a person ice fishing on a vast, flat, snow-covered lake. The person is seen from behind, wearing a dark jacket and carrying a bucket. In the distance, a line of small, colorful ice shacks is visible on the horizon under a pale sky. A small red flag marker is stuck in the ice to the left of the person.

"I FIND A LITTLE OF THE 'MOUNTAIN MAN' IN THE HARD CORE. THEY HAVE REDUCED ICE FISHING TO ITS SIMPLEST FORM."

little of the "mountain man" in the hard core. They have reduced ice fishing to its simplest form. They are the ones getting out of the car in a set of Carhartts carrying a hand-powered ice auger and a 5 gallon bucket with two rods. The form was functional. You want shelter? Turn around and put your back to the wind. You want comfort? Hey, sit on the bucket. Snow? Tighten the drawstring on the hood. Where do you think you are anyway? When the ice thaws you still find the hard core sitting on a 5 gallon bucket in the slush, and you swear they are sinking. In deciding whether or not to walk out on that kind ice to check someone, the usual response is, "ARE YOU OUT OF YOUR MIND?" Believe me; we've had some officers come home wet.

I enjoy talking to both groups. I just don't talk to the hard core as long as I talk with the comfort conscious because, as I said, I don't like the cold. Then, in keeping with our job, I also find two groups when it comes to the fishing laws. (I guess if that didn't happen there would be no need for us.)

The first group follows all the rules. The door to the ice shack is unlocked. Everyone has a license. Each person has only two rods, and so forth.

The second is a little more challenging. "I had the door locked because the wind kept blowing it open," comes the reply after standing outside pulling on the door, and listening to the scrambling inside to hide the poles. Or, the guy sitting behind the rod above the hole in the ice with wet chapped hands covered with fish scales saying, "I don't have a license. I'm not fishing."

It can be frustrating as you check a couple of shacks, and the word is out that you're there. So, you have to be a little "creative." Like working undercover, becoming an angler yourself and getting a little closer to the suspected offending shack. Or, walking hundreds of yards out of the way to come in from the direction where there's no window. Then you do your best "stealth" walking, and just as you get up to the door, it opens, and an arm extends out already holding a cup of coffee for you. It can be frustrating, but, as in trying to outwit the fish, therein lays the challenge.

At any rate, those quiet days with the snow crunching under your feet, or the wind puffing just enough to make the pines speak as the setting sun casts a deep red glow over the snow and ice: Those are the days that keep you saying, "I'll be there in ten minutes." 🐻

NORTHERN SHRIKE

The Latin name for the northern shrike is *Lanius excubitor*, meaning butcher watchman, a fitting term considering their hunting and feeding techniques. That, along with the shrike's habit of impaling prey for future consumption, has earned it the nickname "Butcher Bird."

THE HUNTER

Solitary hunters, they perch high atop trees and scan for food. When prey is sighted, they swoop down and knock their quarry to the ground. Shrikes also move through tree branches, flushing unsuspecting birds before giving chase.

EYESIGHT AND HOOKED BILL

The shrike's eyesight is comparable to that of diurnal raptors, however they lack the powerful talons to kill their prey. Instead, they kill with a series of bites to the neck from their hooked bills and tooth-like appendage on their upper beak. When insects are on the menu, shrikes remove the wings, spines and stingers before digging in.

SHRIKE DIET

Although large insects make up as much as 25 percent of the shrike's diet in season, small birds and rodents make up the bulk. Shrikes are the only songbirds that consistently prey on vertebrate animals. About the size of a robin, northern shrikes are known to take prey as large as bluejays and mourning doves.

FOOD STORAGE

Shrikes don't always strike just when they are hungry. When prey is abundant, shrikes impale their catch on a thorn, barb wire strand or similar sharp object and return to finish their meal days, weeks and even months later.

GET INVOLVED

Shrikes are dependent upon grasslands featuring scattered thorny shrubs or brushy fence rows. Landowners with CRP grasslands or pastures should retain some brush along fencelines or in scattered clumps. Wild, or American plum is an especially attractive habitat for shrikes, which use the thorns to impale their prey and to build their nests within its thorn-protected branches.

ADULT



JUVENILE

IDENTIFYING THE NORTHERN SHRIKE

One of some 70 species of shrikes worldwide, the northern shrike is a virtual twin to the loggerhead shrike. They are very difficult to tell apart on the wing. The main differences are the black mask of a loggerhead meets over the bill, while the northern's mask ends at the bill. The northern also has faint barring on its breast, while the loggerhead has no markings. Also, the northern is typically a wintertime visitor to Iowa, while the loggerhead is more summer.

BLACK-CAPPED CHICKADEE

Black-capped chickadees survive the harshest winters with amazing adaptive behaviors and abilities. From adjusting their core body temperatures to shedding and adding brain cells to memorizing hundreds of locales of stashed foods, these tiny wonders have astonishing secrets.



FLOCK AND FLOAT

In the winter, these extra downy birds form flocks of five to seven pairs. After years of study, researchers discovered "floaters," birds that move between several flocks. Not having bred within the flock or taken a mate, floaters rank low in the hierarchy but replace high ranking birds as they are eaten by predators such as hawks or cats. Floaters help diversify genetics within flocks and maintain balance and order.

SHIVER TO SURVIVE

Even down and fat are not enough to survive the cold, so chickadees shiver to maintain minimal body temperatures. By gradually lengthening times between shivers, body temperatures drop as much as 10 degrees, requiring 20 percent less in caloric needs.

MIND BOGGLING BIRD BRAIN

Small birds must be lightweight to fly, preventing large, heavy brain development for these half-ounce birds. So how does it remember the hiding spots of hundreds of newly hidden food caches? In October, new cells grow in the brain's hippocampus, critical to memory. By spring, millions of these cells die as hidden food dwindles and memory is less vital. Since human brains cannot regenerate cells, discovering how chickadees do so could advance medical care for head injury patients.

THE WINTER DIET

Thirty times as much food is consumed in winter versus the summer. Food caches are critical and backyard bird feeders also help the species.

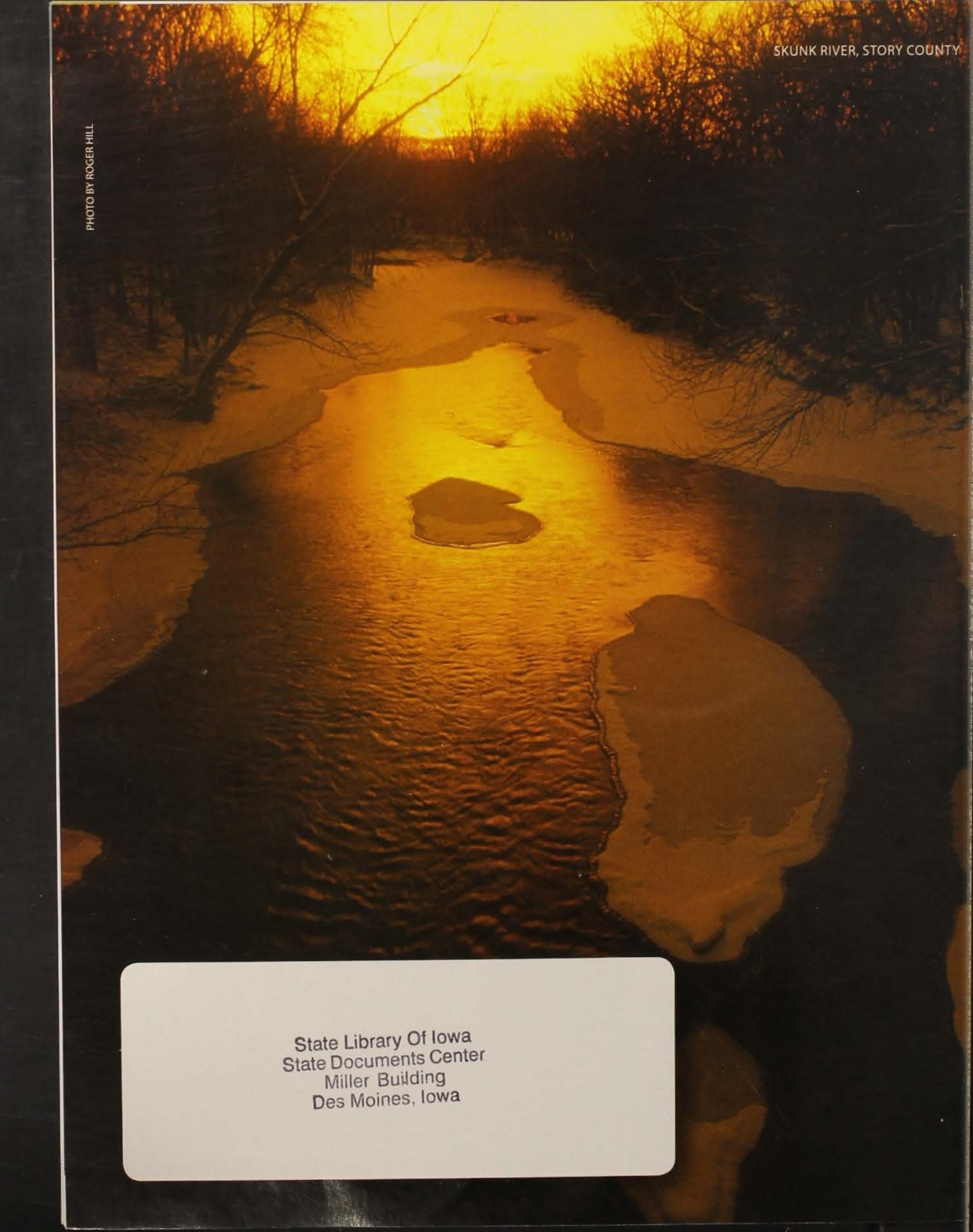
CONTROLLED HYPOTHERMIA

By reducing metabolism at night, an extra layer of fat is added by morning. On cold nights, modest energy stores last until dawn by lowering their normal 108 degree temperature to 86 degrees through controlled hypothermia. This nocturnal semi-hibernation slows metabolism rates by 25 percent.

SCATTER HOARDING

Eating mainly tree-infesting caterpillars, insects and spiders during the summer, the fall and winter diet is limited. Using a survival strategy known by biologists as scatter hoarding, chickadees store one or two bits of food in hundreds or thousands of places over several acres. (Chickadees in far northern latitudes may hoard a half-million items.) Before hiding the item, chickadees remove larvae heads, moth wings and the shells of large seeds. Caches are usually within feet of where the food is found. Sunflower seeds from feeders are taken farther away, secretly stashed from competitors. Items are stuffed and concealed in rough bark, branches and crevices.





SKUNK RIVER, STORY COUNTY

PHOTO BY ROGER HILL

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