

July / August 2008

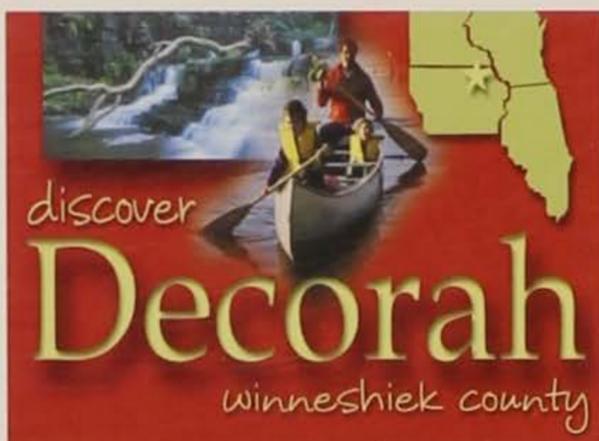
# IOWA OUTDOORS

THE DNR'S MAGAZINE OF CONSERVATION AND RECREATION

**DAY OF DEVASTATION**  
MANSON'S 74 MILLION YEAR OLD METEORITE CRATER

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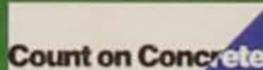


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JOHN WENCK won Best of Show for photography at the 1997 Iowa State Fair with this image. To volunteer or support a good cause, order a **signed, 8"x10" copy for \$25** at [www.riverstewards.org](http://www.riverstewards.org). Proceeds will help 400 volunteers cleanup the Des Moines River from Saylorville to Yellow Banks Park in Polk County on August 16.

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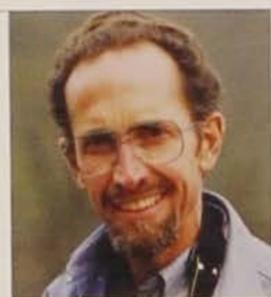
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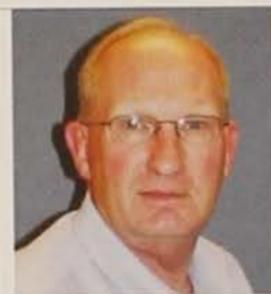
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**SAM SAMUELS** lives in Vermont and studied writing at the University of Iowa. His articles have appeared in *Smithsonian*, *Sierra*, *Discover* and *Real*

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**JEN WILSON** is a travel and features writer for *Frommers' Budget Travel* and *AAA Living*. She's eaten morels fried in butter since she was old enough to walk, but

has yet to convince her father to reveal where he finds them. [wilsonhoff@msn.com](mailto:wilsonhoff@msn.com)

# IOWA OUTDOORS

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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, inspire people to get outside and experience Iowa and to motivate outdoor-minded citizens to understand and care for our natural resources.

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### LEARN MORE

Our webpage, [www.iowadnr.gov](http://www.iowadnr.gov), is loaded with information for all ages and needs. Buy licenses, reserve campsites or learn more about our environment online.



## DIRECTOR'S MESSAGE

**E**mbrace summer's warmth and get out there! It was a long winter, and thousands of Iowans are enjoying warm weather again. Intense outdoor enthusiasts, myself included, are engaged in canoeing and kayaking, tent-camping and the like. There are active nature patrons, using our comfortable state park cabins, fishing, biking and hiking, and swimming in our lakes and rivers. Then there are the more passive, and equally important, users of our natural resources picnicking in local parks, walking their dogs around the neighborhood or just driving home with the windows down.

The important thing is warmer weather is here; so get outside! The birds are back from their winter haunts, trees and forests are cloaked in emerald splendor, the air is sweet (in most places) and cool waters are inviting.

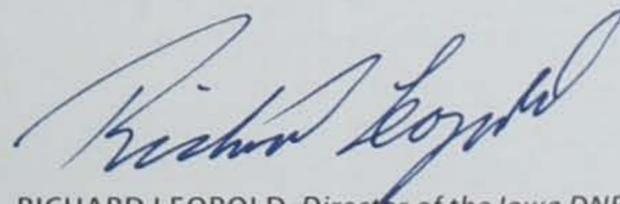
I have often taken my family "river walking." We find a shallow waterway (safety first) and just walk upstream until we tire and retrace our trail back to our starting point. We've created some powerful and lasting memories, almost always unexpected and unplanned. We've seen trees filled with bald eagles. We've sunk thigh-deep in muck in slow-moving backwaters. We've come across a deer carcass in the stream, surrounded by thousands of water skimmers scavenging. We've laughed, shared meals, been frightened, been fascinated and shared the quiet—together.

Spending time outdoors refreshes the spirit, strengthens the body and clears the mind. It's relatively inexpensive to enjoy, easy to do (walk out your front door) and provides immediate benefits.

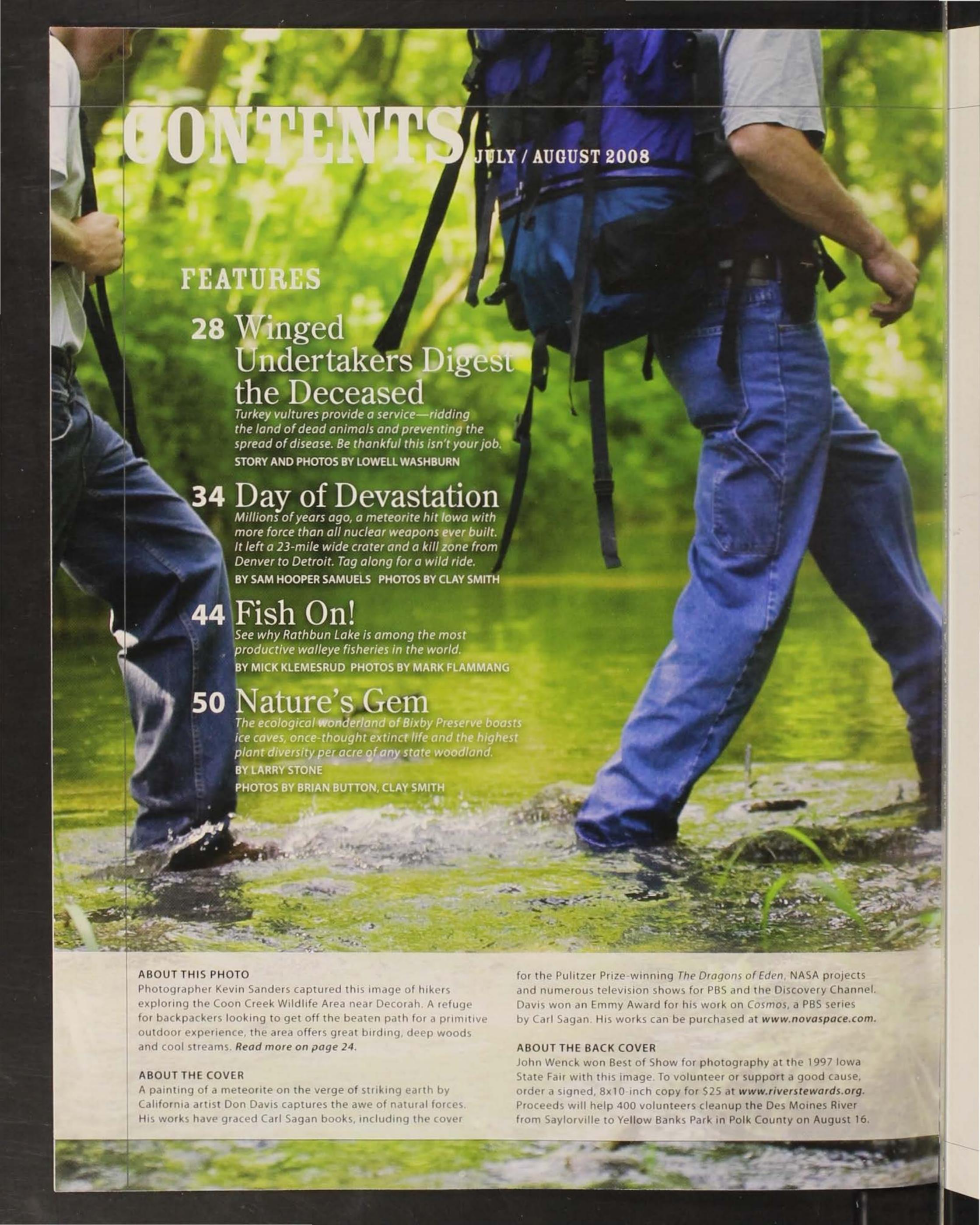
We in the DNR know this peace. It is the source of our passion for what we do, and why we exist as individuals and an agency. It is why we write permits, stock fish, perform inspections, conduct hunts, maintain our state parks and do so many other things on a day-to-day basis. Of course, we don't do this alone; we do this with other government agencies, conservation organizations, individual landowners, other partners—in short, Iowans.

In the words of author Edward Abbey, "So get out there and hunt and fish and mess around with your friends, ramble out yonder and explore the forests, climb the mountains, bag the peaks, run the rivers. Breathe deep of that yet sweet and lucid air, sit quietly for a while and contemplate the precious stillness, the lovely mysterious and awesome space." Hope to see you on the trail...



A handwritten signature in blue ink that reads "Richard Leopold". The signature is fluid and cursive.

RICHARD LEOPOLD, *Director of the Iowa DNR*



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BY LARRY STONE

PHOTOS BY BRIAN BUTTON, CLAY SMITH

#### ABOUT THIS PHOTO

Photographer Kevin Sanders captured this image of hikers exploring the Coon Creek Wildlife Area near Decorah. A refuge for backpackers looking to get off the beaten path for a primitive outdoor experience, the area offers great birding, deep woods and cool streams. *Read more on page 24.*

#### ABOUT THE COVER

A painting of a meteorite on the verge of striking earth by California artist Don Davis captures the awe of natural forces. His works have graced Carl Sagan books, including the cover

for the Pulitzer Prize-winning *The Dragons of Eden*, NASA projects and numerous television shows for PBS and the Discovery Channel. Davis won an Emmy Award for his work on *Cosmos*, a PBS series by Carl Sagan. His works can be purchased at [www.novospace.com](http://www.novospace.com).

#### ABOUT THE BACK COVER

John Wenck won Best of Show for photography at the 1997 Iowa State Fair with this image. To volunteer or support a good cause, order a signed, 8x10-inch copy for \$25 at [www.riverstewards.org](http://www.riverstewards.org). Proceeds will help 400 volunteers cleanup the Des Moines River from Saylorville to Yellow Banks Park in Polk County on August 16.

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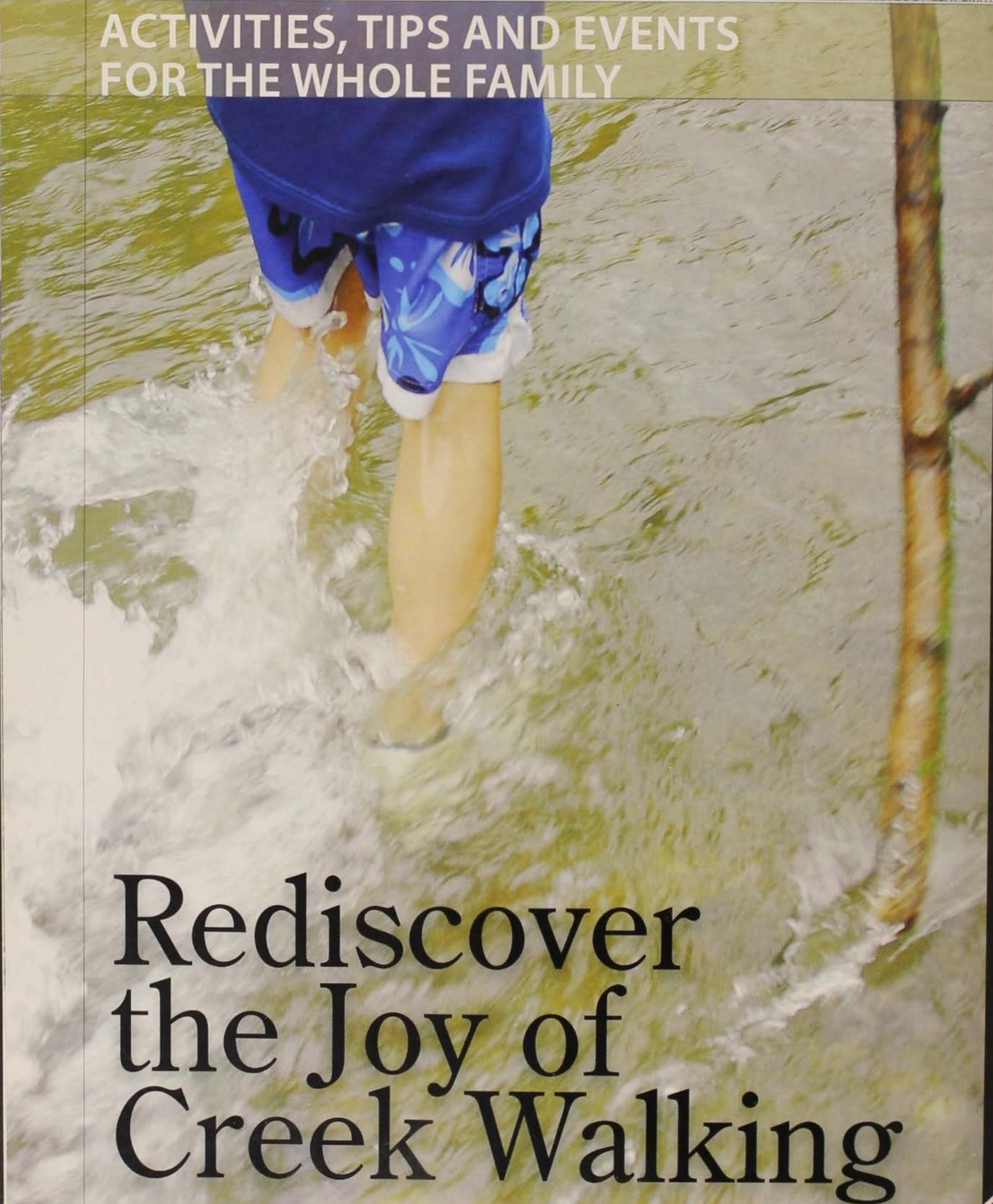
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**T**OGETHER

BY ALAN FOSTER PHOTOS BY CLAY SMITH

ACTIVITIES, TIPS AND EVENTS  
FOR THE WHOLE FAMILY



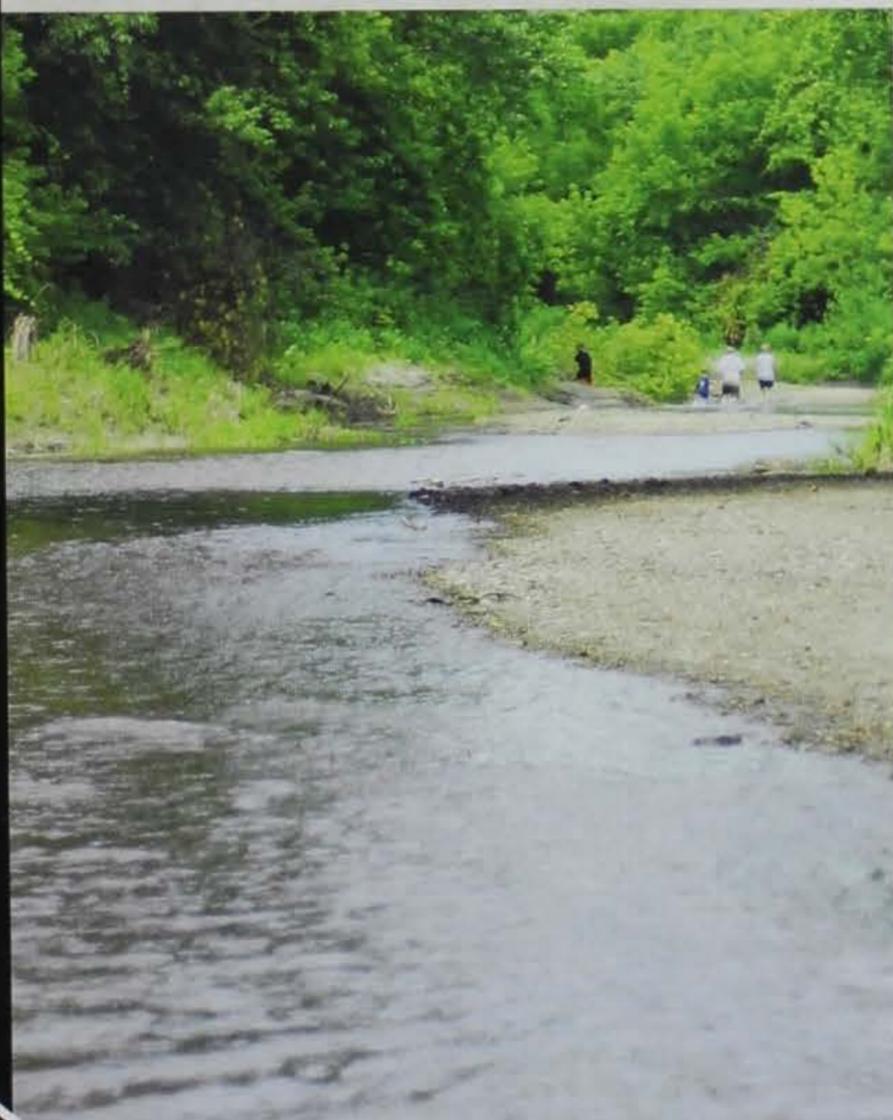
Rediscover  
the Joy of  
Creek Walking

The pair of soft, blue eyes peered deep into the gin-clear depths of the tiny pool, straining to make out anything that wasn't rock or rubble. Those eyes were young and fresh and untested—yet the vibrant, cheeky 10-year-old worked them like a hawk eyeing its next meal. And with a quick thrust of her net into the knee-deep water, she brought up her “treasures” from the deep.

“Daddy, daddy, I finally caught one,” she screamed, as if she had just opened up that coveted iPod at Christmas. “It's a big one. Can I keep it?”

This meandering, rippling stream was not unlike the one I spent countless summer days on growing up in central Iowa. And the excitement of search and discovery spilling from the leggy, athletic 10-year-old was no different than what I felt three decades earlier.

Flipping rocks, hoping that when the ripples settled, a plump crawdad would still be hiding underneath. Swooping dip nets through the water, thrilled that one time out of a hundred a minnow was trapped inside. Marveling at the “water skeeter” that so quickly and gracefully disappeared before my eyes. Wondering what overhanging tree branch the vociferous bullfrog was hiding under. Smelling the nearby prairie flowers blossoming in the summer sun. Soaking up the golden warm rays of the sun. Forgetting that chores awaited me at home. Being a kid.



Some 30 years later, I find myself reliving those days, through the youthful eyes of four young kids, who thought surely Dad would never allow such an activity, and who had just discovered that he actually encouraged it. When the calendar advances and the mercury rises, I hear four young voices pleading, “When can we go creek walking? That fish looks just like the one I caught in the creek. Can we pick raspberries along the creek again? Can we take the dog to the creek this year?”

So ditch the Xbox, don the dirty tennis shoes and dive into a “relic” of a pastime that will draw on ancient memories and make new ones. Take the kids on a creek walk. Just leave the video games at home.

#### **MAKE IT SAFE**

- Wear plenty of waterproof sunscreen and a hat
- Wear shoes or water socks for easier walking and to protect against sharp rocks and debris
- Walk only in stretches where the stream floor is visible
- Pack drinking water and snacks for longer journeys
- Pack towels and extra clothes for a dry ride home

#### **MAKE THE MOST OF IT**

- Keep a look out for artifacts, fossils, bones and antlers
- Pick up trash along the way, or organize a stream cleaning day
- Become a certified volunteer water quality monitor and help protect your stream. See [www.iowadnr.gov](http://www.iowadnr.gov).

# Raining Fire in the Sky

In the classic song "Rocky Mountain High," John Denver sang "I've seen it raining fire in the sky" after watching the Perseid Meteor shower while camping in the Rockies. You can view the phenomenon in an Iowa campground this summer. July and August make for great family outings to watch meteors.

One of the greatest shows of the year, the Perseid Meteor Shower, teems with a fiery display that ignites the heavens. "Meteors will appear to fall from the constellation Perseus, which rises in the northeast," says Chris Anderson with the Science Center of Iowa in Des Moines.

Peaking around Aug. 12, up to 60 to 100 meteors per hour can pierce the night as sand grain-sized bits of comet dust hit the Earth's atmosphere at 132,000 miles per hour.

"They burn up about 60 miles above Earth, but it looks like it happens right overhead," he says. "Rare, but spectacular fireballs are made when pebble-sized debris enters the atmosphere."

As the icy Swift-Tuttle comet moves through space, particles are thrown off, leaving a dust cloud. As the Earth passes through it each summer, an annual meteor show illuminates the sky. The pre-dawn morning of Aug. 12 may have the best viewing opportunities.

"An Aug. 16 full moon will interfere with the meteor show. But even with the moon out, you will see the brighter meteors, you just won't see as many," says Anderson. Usually midnight to sunrise is the best time to observe. Serious fans will get up early the morning

## LEARN MORE

*The Planetarium Star Theater at the Science Center of Iowa in Des Moines has an Iowa Skies Tonight program with daily discussions of astronomical viewing opportunities. Log on to [www.sci.org](http://www.sci.org) or call a local astronomy club or observatory.*

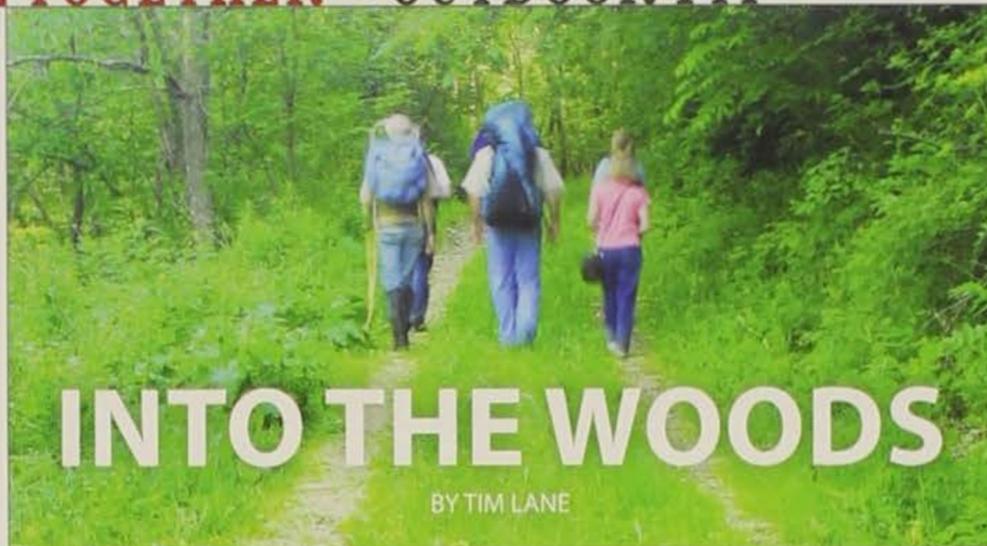
of the 11 or 12th. The best showtime begins after 2:30 a.m. after the moon sets.

### MAKE THE MOST OF METEOR VIEWING

*Escape the light pollution of urban areas. If you live near a brightly lit city, drive away from the glow of city lights northeast toward the constellation Perseus. Find a dark area away from car lights. If you plan on staying home to observe, turn off porch lights.*

### HERE ARE MORE TIPS:

- Take a nap during the day of planned viewing.
- Take a camping trip during peak days. For viewing, find an open area of the park un-obscured by trees.
- Allow 30 minutes for eyes to fully adjust to darkness. Cover flashlights with red tape to help preserve your night vision.
- Meteors can be all over the sky, just don't focus on one area.
- Take a blanket or camping ground pad or inflatable mattress and pillows.
- Lie on the ground in a reclining lawn chair.
- Bring coffee, hot chocolate for the kids, warm clothes and dress in layers.
- Have kids keep a tally sheet of observed meteors.
- Meteors move too fast to hone in with binoculars and telescopes. Simply look up with the unaided eye.
- Pack insect repellent.



My last article focused on friends and a family member dealing with cancer. Fortunately, I heard one of them, Cal, was "out of the woods." After initial relief, I pondered the phrase announcing his recovery. I assume the term began centuries ago when woods were foreboding. Tales of witches, ghouls, ogres, goblins and trolls didn't make them seem user friendly.

A Shakespearian scholar would say Macbeth's demise could have played a role in the phrase's longevity. In the play witches prophesized that Macbeth's doom would occur when Birnam Wood came to Dunsinane Castle. Macbeth felt safe as woods usually don't uproot and move. But they did, thus sealing his fate. For Macbeth "out of the woods" was good.

It is time to state "into the woods" should indicate that things are looking up and "out of the woods" the opposite. After all, convincing evidence shows that people with access to parks exercise more. One Centers for Disease Control study indicated that creation of, or enhanced access to places for physical activity led to a 25 percent increase in the number of people exercising three or more days per week. But as much as I want you to be active...all you have to do is go to a park for a little sun.

Moderate sun exposure can confer health benefits, yet most public health messages of the past century have focused on sun and skin cancer. According to the Trust for Public Lands, "scientists now believe the emphasis on completely avoiding and blocking the ultraviolet radiation in sunlight can cause as many health problems as it prevents—if not more." Sunlight promotes production of vitamin D, which can aid bone health, immune function and blood pressure regulation. Researchers are now seeking optimal daily doses of vitamin D via sunlight and/or dietary supplementation, and to craft appropriate public health messages that balance the pros and cons of sun exposure.

Last issue I called for readers to send me their plans for being active this year. I heard from some folks in northeast Iowa planning to run not in Iowa this year, but across it—several times. These Fayette County kids, ages 8 to 22 have, during the last 10 years, driven to and run relays back from Louisiana, Oregon, Maine, California, Florida, Texas, South Carolina, Minnesota and Alaska. They average 180 miles per day. In all they have traveled more than 15,950 miles with 130 runners supported by 60 drivers.

The last week of July and first week of August they will run through all 99 Iowa counties. Their coach, Lowell Lyngaas, seeks to increase awareness of wellness and exercise. The runners use state parks to crash. I love their dedication.

You could stay home and watch wild animals on the Discovery Channel and add to the effect with pine-scented air fresheners. But we all should turn out and cheer these runners. Take the kids in your life to visit the runners in a state park. I would love to hear your kids were into the woods.

Check the route and dates at [www.raceamerica.org](http://www.raceamerica.org)

*Tim Lane is the fitness consultant with the Iowa Department of Public Health. A marathoner, former director of the National Ski Patrol, climber and volleyball coach, he has cycled across America once and Iowa 25 times. He's a regular on RAGBRAI. Tim also helped design and promotes Lighten Up Iowa.*

## But Why?

Helping adults answer children's nature questions

BY A. JAY WINTER

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

### How do animals stay cool when it is so hot?

—CHRISTY, Ames, age 7

Animals do not have the luxury of coming inside a climate-controlled home when the weather isn't to their liking. Rather than manipulate their environment like humans do, animals must adapt.

Warm-blooded creatures, like birds and mammals, cool off through water evaporation, either by sweating or panting. Different species use different methods. Humans, for example, have sweat glands all over their bodies, thus they sweat. Dogs and cats have sweat glands only on their feet, so they pant. Some, like the turkey vulture, cool off via urohydrolysis, meaning they defecate on their legs, providing relief from the heat as the water in the feces and urine evaporates.

Cold-blooded animals make the most of available sunlight to warm up and increase metabolism. Reptiles, for example, lie perpendicular to the sun to maximize the amount of sunlight hitting their skin. They expand their rib cage to increase surface area and darken their skin to absorb more heat.

On the hottest days, animals may change their daily routine, lolling away the hottest parts of the day in the shade or wallowing in a pool of water. Bedding sites offering a cool breeze are prime real estate.

Many animals will also go under a metamorphosis of sorts to combat summer temperatures. Birds molt, dropping feathers used for winter insulation. Mammals often shed their thicker winter coats for thinner summer coats.



HIKING PHOTO BY CLAY SMITH; DOG PHOTO BY ISTOCKPHOTO.COM

## IOWA — THE LAND BETWEEN TWO RIVERS

Iowa's forefathers viewed Iowa as a great agricultural state lying between two mighty rivers. Early Iowans wanted the state's boundaries to include both the Mighty Mississippi to the east and the Missouri—known as “Big Muddy”—to the west so farmers could use these natural river roads to sell and transport their crops.

On Dec. 28, 1846, Iowans agreed on these natural boundaries and created a splash by becoming the 29th state, known as the land between two rivers. Iowa is the only state bordered on both sides by navigable waterways.

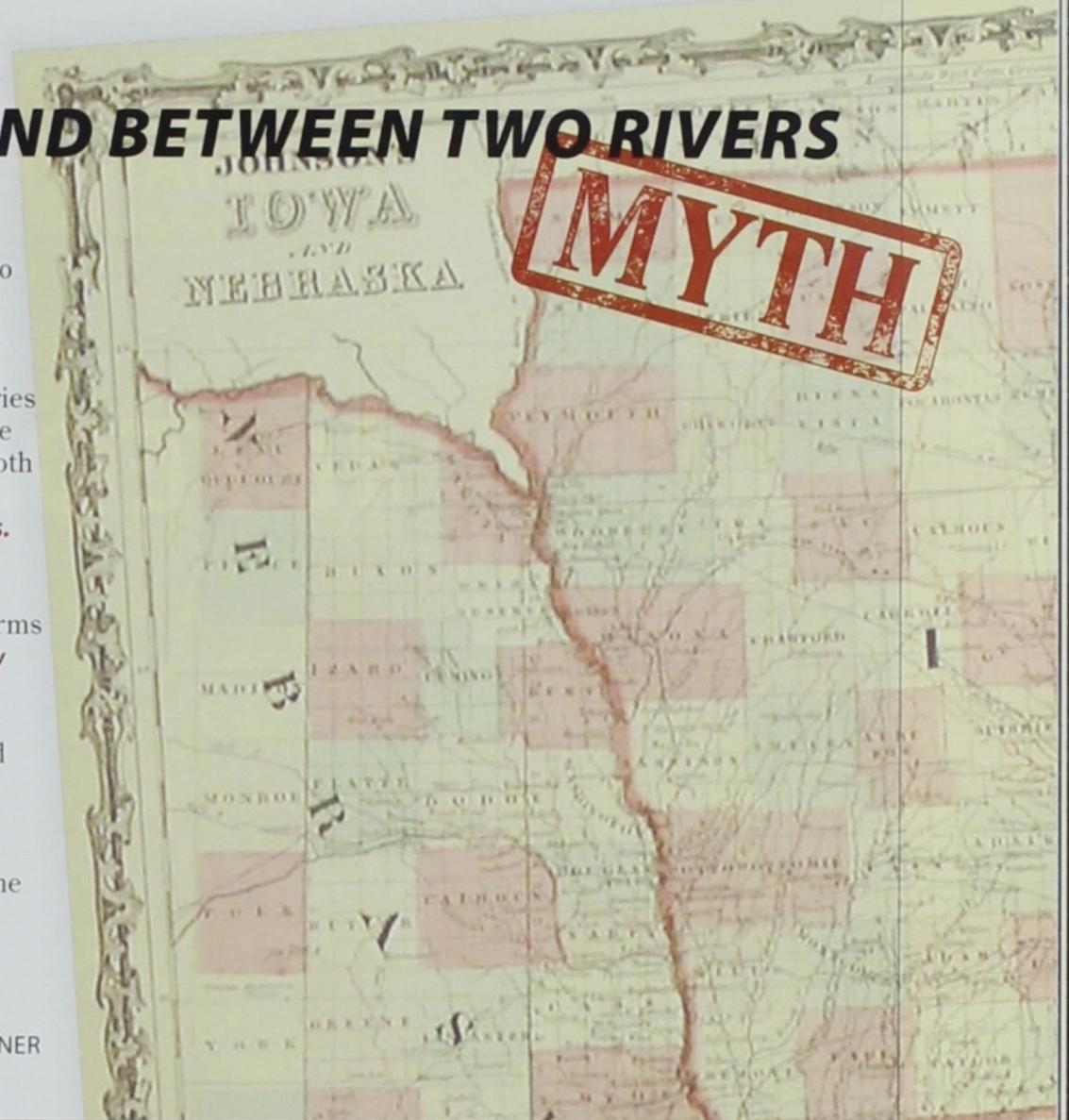
**HOWEVER, Iowa is actually a land bordered by three rivers.**

The Missouri does not border the entire western side of the state. The **BIG SIOUX** which converges with the Missouri at Sioux City, is actually a tributary of the Missouri River and forms the northwest border of Iowa. *Therefore Iowa is geographically the land between THREE RIVERS—with one specific historical anomaly and exception.*

In 1877, flooding and shifting of the Missouri River created an oxbow lake, originally called Cut-Off Lake and later Lake Nakomis. This shift left about 2,000 acres of Iowa terra firma bounded on three sides by Nebraska.

After extensive litigation, in 1892 the United States Supreme Court finally ruled **CARTER LAKE** as the only town in Iowa located west of the Missouri River. In 1930, Carter Lake was officially incorporated. Interestingly, you cannot get to Carter Lake, Iowa without traveling through Nebraska.

—BY SHELENE CODNER



## ASK THE EXPERT —Gretchen in Lyon County asks, “Do vultures fly circles over dead animals?”



Immortalized in Road Runner cartoons and Wild West movies, the image of vultures circling above dying animals or parched gun-slingers crawling across the desert is mostly myth.

**“Circling vultures are simply taking advantage of thermals—warm air rising off the land,”** says Doug Harr, DNR wildlife specialist and Iowa Audubon President. The rising air helps the birds gain altitude without expending energy. From great heights, they can glide for hours searching for food or another thermal to circle even higher. **“Among the most capable of all soaring birds, you can watch them sail without flapping for hours on end,”** he says.

Far from holding their noses during a rank meal, turkey vultures have the most acute sense of smell of any bird in the nation. From aerial heights, the sensitive sniffer constantly tests the air for **MERCAPTAN**, an aromatic gas given off at the beginning of flesh decay. They quickly descend to devour small meals, but may wait to gather a group to finish a large carcass.

Sight-feeding black vultures, a species rare in Iowa, often follow odor-seeking turkey vultures to a meal. “There are only six recorded sightings of black vultures in Iowa,” says Harr, “including a sighting in Polk County at Saylorville Lake last summer.” Learn more about vultures on page 28.

→ **GOT A QUESTION?** Send to: [ASKTHEEXPERTS@DNR.IOWA.GOV](mailto:ASKTHEEXPERTS@DNR.IOWA.GOV) ←

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

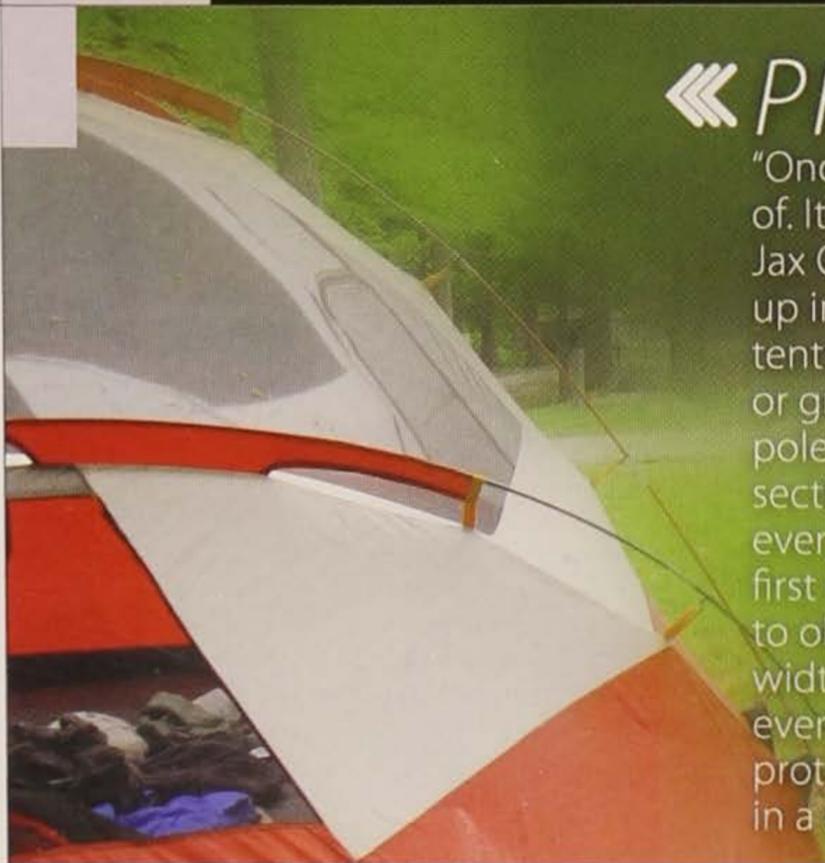
### BEST METEOR PHOTOS

July and August are known for meteor showers. Preserve meteor memories with night photography. A tripod, cable release and digital or film SLR 35mm camera with a "B" or bulb setting work best. Attach the cable release to the camera. Set the shutter speed to "B." Aim the camera toward the darkest sky area for greater contrast. Use a 50mm lens. While a wider angle lens captures more sky, meteor streaks will be smaller. Set the lens focus to infinity. Keep the shutter open until a meteor streak is seen, then release the shutter. Experiment with exposure times to see what works best given the light pollution in your area. Long exposures will begin to wash out the sky or show star movement.



### « PROTECT YOUR TENT

"Once you get tent mildew, the smell is hard to get rid of. It will ruin your tent," says Marshall Toms, manager of Jax Outdoor Gear in Ames. After camping, set the tent up in the yard at home until it is dry. For free standing tents, unzip doors and lift the tent to shake out dirt or grass. To avoid stretching shock cords, disassemble poles from the middle and work out, alternating sections. "People typically have a hard time getting everything back into the stuff sack," he says. To store, first unzip any tent windows to allow air to escape to obtain tighter folds. Fold tent and rain fly to the width of the stuff sack. Put the poles on top and roll everything up, brushing off any dirt which can harm protective coatings on the tent floor and rain fly. Store in a dry place.



CAMERA PHOTO BY STUDIO Z; TENT PHOTO BY CLAY SMITH

## PUTTING WATER SAFETY FIRST

**PHIL PETERSEN, OKOBOJI**

Iowa Great Lakes retiree takes on water safety and water quality

Growing up on the Iowa Great Lakes, Phil Petersen's father taught him to help others if the water brought trouble. Petersen still follows that guidance, but on a much larger scale. As a founding board member of the Iowa Great Lakes Water Safety Council (WSC), Petersen works for water safety and water quality. After a 30-year career with Motorola in Chicago, Petersen retired to an Okoboji lakefront home and dove into volunteering. With his radio background, he and the WSC helped improve radio communication equipment for the DNR water patrol and Dickinson County. "Phil's a very tenacious individual—when he feels something is right, he goes after it," says Bill Maas, a 35-year veteran of the patrol. Since the council's creation in 2001, it has helped upgrade equipment and staffing for the DNR water patrol and other local water rescue teams, and promoted life jackets and boating safety. The council also works with legislative issues like preventing aquatic invasive species, creating lake speed limits, and boating and drinking issues. "Where other people do a crossword puzzle, I research boat speed laws in other states," Petersen says. The head judge of the Okoboji Yacht Club, president of Dickinson County Taxpayers Association and president of Okoboji Protective Association, Petersen finds time to work on water quality, too. "I think we're holding our own and improving a little bit," he says, focusing on keeping urban stormwater from reaching the lakes and making sure water that does is cleaner. "He gets an idea and moves forward until he accomplishes it," says DNR Dickinson County Conservation Officer Gary Owen.



KRYSTAL AND JASON DINGBAUM



## A PATTERN FOR CLEAN WATER

**KRYSTAL DINGBAUM, ONSLOW**

Storm sewer stenciling project teaches residents about helping Mineral Creek

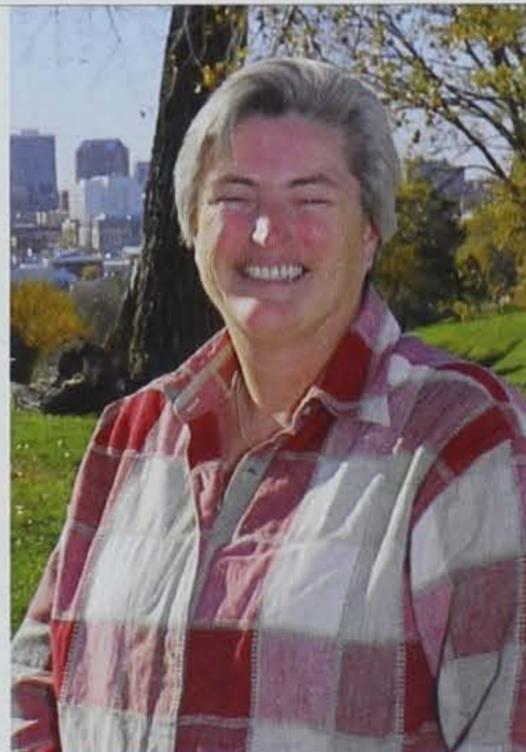
For many of us, drains seem like a magical thing—you dump something down one, and it disappears, no harm, no foul. But those drains along our curbs—where so many rake leaves or toss motor oil—head straight to a lake, river or stream without an iota of treatment. Krystal Dingbaum wanted to help people make that connection. As an Americorps volunteer in Jones County, she organized a project in the small town of Onslow that marked each storm drain with the message "dump no waste; drains to stream." With three volunteers in tow, Dingbaum scrubbed down each storm drain with a wire brush, stenciled the drain and left information about the project at homes—all in one afternoon. "People did come out and ask about what we were doing, and we had kids following us from storm drain to storm drain," she says. "People didn't realize that storm water isn't treated, that it goes directly into Mineral Creek." The stenciling project fit in well with the larger Mineral Creek Watershed Project, which worked with landowners and farmers on the land to keep pollutants out of the stream—a stream where people fish and kids splash around. Project coordinator Darcy Keil, one of Dingbaum's volunteers, is now planning a storm sewer stenciling event for a new watershed project in the nearby town of Wyoming. "It's about bringing an awareness of where the water goes," he says. "It's not out of sight, out of mind."

## BECOMING AN OUTDOORS LEADER

**KATHY SHANNON, MADRID**

Leading the way for Iowa outdoors-women

Ask some of the women that Kathy Shannon has worked with over the years, they may say she can do anything—which is exactly what she wants to teach *them*. Through her work with Iowa Women in Natural Resources (IWNR), the Outdoor Journey (OJ) camp for girls and the Becoming an Outdoors Woman (BOW) workshop, Shannon has helped girls and women learn outdoor skills for about 20 years. "Women have the opportunity to see that there isn't anything they can't do," she says. She's served on the board and as president of IWNR, helped create OJ and was part of the group to bring BOW to Iowa. While she just started with simple tasks at BOW, like registration and driving people to workshops, she's learned new skills herself and now serves as an instructor. "Her enthusiasm is contagious, and since she's grown so much as an individual through BOW, she's able to reach out to our participants—she's been in their shoes," says Joli Vollers, a DNR conservation officer and instructor at BOW. One of Shannon's most rewarding moments came while teaching a woman in her 70s to shoot for the first time. "When she hit her first clay pigeon, her eyes just lit up," Shannon says. "There's nothing better than that to let you know you're doing a good thing. That just keeps drawing me in." **Learn more about these camps at [www.iowadnr.gov/camps.html](http://www.iowadnr.gov/camps.html).**



# 15 Things You Need to Know About

HONEY CREEK RESORT  
STATE PARK



ON RATHBUN LAKE



You've heard the news that there will be some changes around Rathbun Lake. But what's going on exactly, and how will it affect you? For starters, it means no more eight-hour drives to that Minnesota lake resort.

Let's be honest. The new Honey Creek Resort State Park is the biggest news in our park system since, well, since the Civilian Conservation Corps started building them in the 1930s. It will be a destination resort unlike any in Iowa.

Honey Creek State Resort Park will rival most state park resorts nationally, with its upscale stone-and-beam lodge, indoor water park, on-site interpreters and Audubon-certified 18-hole golf course.

And that's just the short list.

Located just 80 miles southeast of Des Moines at Honey Creek State Park, the resort opens August 29-31, Labor Day weekend.

*Here are a few things you'll need to know before then...*

# 1 What is a state park resort, anyway?

A state park resort is a state park with resort amenities. Most of them, including Honey Creek, feature an on-site lodge, restaurant, organized activities, cabins and camping.

This is Iowa's first state park resort. Kentucky and Ohio have several. You may have visited Eugene T. Mahoney State Park Resort in Nebraska.

A state park resort is a good first step for people who aren't super outdoorsy, but still want a nature experience. They're a good bet for group gatherings, such as reunions, where everyone has a different entertainment agenda. They're a very low-maintenance couples getaway or family weekend, too.

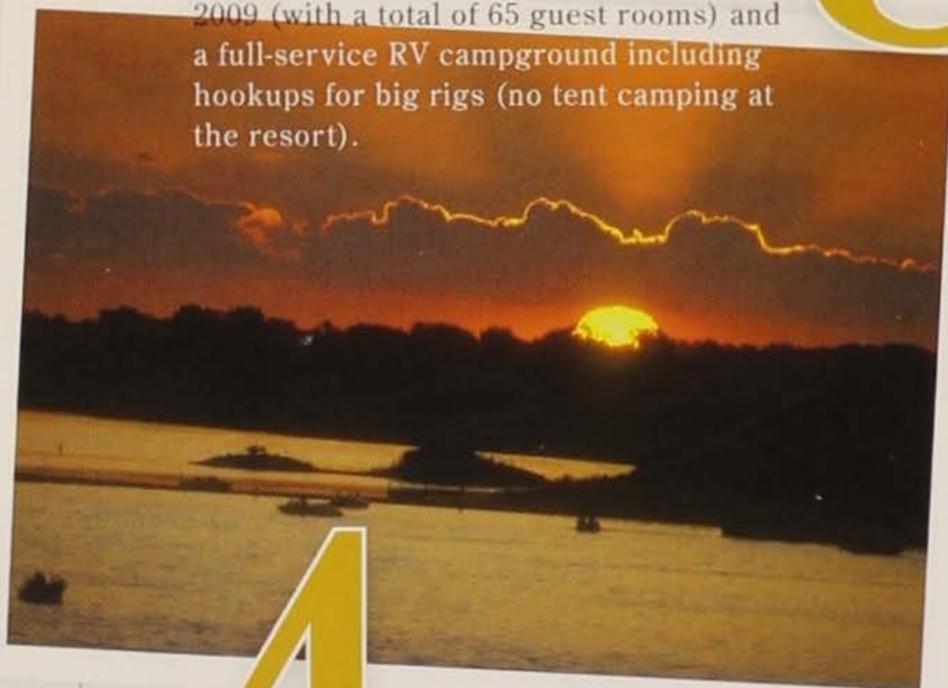
Think of it as roughing it—with a comfy bed at the end of the day and lots of sweet amenities.



# 2 What will ours be like?

Honey Creek Resort State Park will be situated on southern Iowa's 11,000-acre Rathbun Lake, our second-largest lake, created by the Chariton River.

The lodge has 105 rooms, a restaurant, lounge, indoor water park, conference center for 240 people and 18-hole golf course. There will be 28 cabins ready in 2009 (with a total of 65 guest rooms) and a full-service RV campground including hookups for big rigs (no tent camping at the resort).



# 4 What's the area like?

Southern Iowa is all rolling hills and timber. The ecosystem is oak/hickory savanna with scatterings of choke cherry, mulberry, dogwood and cottonwood.

The towns of Centerville, Moravia and Albia are typical small towns with Main Street shopping—Centerville being the largest of these. This part of Iowa is rich in history. It was part of the Underground Railroad, the historic secret network that helped free slaves. The Mormon Trail passed through here, too. Many of these towns grew from simple coal-mining communities.



# 3 How close is it to the original Honey Creek State Park? Will the existing park change?

The new resort is built on a former cornfield across a creek from Honey Creek State Park. Someday, the two will be connected by a pedestrian/bike trail bridge. But for now, it's a quick 10-mile drive between the resort and park (the two units are separated by a tract of private land).

The physical amenities of Honey Creek State Park will not change with the addition of the resort. In essence, we're getting a bigger public playground.





6

What will the lodge and cabins look like? How will the building impact the land?

5

How will the resort lay out?

The resort is built on the highest topographical point overlooking Rathbun Lake, on the north shore. It's surrounded on either side by creeks that feed the lake, so it has a nice little sequestered area all its own.

Right on the point is the sandy beach, dock and lodge. Behind the lodge on the west side are the cabins, RV park and a new boat ramp. To the northeast is the existing two-mile trail and The Preserve golf course.

Everything is open for play and exploration by guests and visitors.

This is an upscale lodge with some Mission-style details. The four-story building centers around a lobby with a 50-foot-high stone fireplace. Rich fabrics, natural colors, stained-glass windows and wood furniture accessorize the design.

At one end of the lodge is Buccaneer Bay Indoor Water Park; at the other end is a conference center and Rathbun Lakeshore Grille restaurant and bar.

The cabins will resemble lake homes, each with its own plumbing and kitchenette/bar area, plus lake views throughout. Cabins range from one- to four-bedrooms, each with an electric fireplace. (There will still be four rustic camping cabins at the state park campground, plus its year-round campsites with a heated shower house).

The resort is shooting for its LEED certification, which means it's working to meet the environmentally friendly building practices of the U.S. Green Building Council.

The resort park is comprised of former farm land, but along the east side it has maintained some of its original prairie. The resort has only changed the ecosystem on the areas that had been cultivated in the past. During the park design, areas were left untouched where certain habitats or plants were discovered. Road designs were changed so loops would not trap animals that couldn't cross the roads or would be in danger if they did. The DNR spent a lot of time identifying threatened/endangered species long before architects began putting pencil to paper.



# 7 What's going to happen to Rathbun Lake?

The only way in which Rathbun Lake will change is that it will be more popular. Resort guests will be able to rent boats, pontoons, kayaks, jet skis and canoes.

But rest assured: There will still be plenty crappie, walleye, bass and channel cat to go around.

# 8 What trails and other natural features will the resort add to the area?

Two miles of paved trails, and guests can rent bikes to explore them. An existing 2.5-mile interpretive gravel trail near The Preserve golf course identifies the natural surroundings. There will be regular guided hikes by the interpretive staff on that trail.

Honey Creek State Park also has a short hiking trail system on its 828 acres, winding past woodlands, prairie and Woodland Indian mounds with interpretive signs.

Another interesting feature is the resort's ecological play area for kids, with grasses and natural features such as big rocks and trees, rather than the typical plastic equipment.



# 9 What's the restaurant like?

**RATHBUN**  
LAKESHORE GRILLE

Rathbun Lakeshore Grille serves American cuisine such as steaks, fish and pastas. Iowa wines take the spotlight at the bar.

The restaurant seats 150 indoors. A patio overlooking the lake seats an additional 150 guests. It's a great spot to sit with a cocktail and soak up the lake life.

There will be boat slips reserved at the marina for free temporary docking for non-guests who want to visit the restaurant.

# 10

We're not very outdoorsy, but we'd like to learn. Will there be someone there to show us how to fish or paddle?

Absolutely. One of the intentions of this resort is to act as an entry point into nature for those who aren't familiar with such settings. It will be very activity-focused—if you and your family stay for a week, you can try something different every day. The full-time staff interpreters are there to guide you into the natural surroundings and the ways to explore them, no matter what time of year you visit.



# 11

But my crew thinks that nature is boring.

Then a state park resort is your kind of outdoor experience. There are people working at the resort whose job it is to make sure you're having a good time and learning new stuff.

As soon as you check in, you'll have a barrage of activity choices, organized by a different theme each week. Sign up for idyllic nighttime campfire programs. Check out backpacks outfitted with equipment from binoculars to bird guides and head for one of two wildlife observation blinds, or explore the public lands surrounding the lake. Go on a guided canoe trip, or rent a boat and water ski. Fish from the covered dock, or tour the Rathbun Fish Hatchery in Moravia, which raises more than 1 million channel catfish, 50 million walleye fry and other warm-water species each year (641-647-2406).

Swim on the beach, or at the pirate-themed Buccaneer Bay Indoor Water Park. Swing by the natural playground to steal ideas for your own backyard wildlife garden.

Sign up for daily, interpreter-led outings—from learning to fish to moonlight hikes to geocaching.

Head into Moravia and ride the historic Wabash Rail Line, a 90-minute excursion to Albia and back in open-air passenger cars, with Appanoose County Train Rides (800-611-3800). Centerville has an old-fashioned drive-in theater—one of five that remain in Iowa.

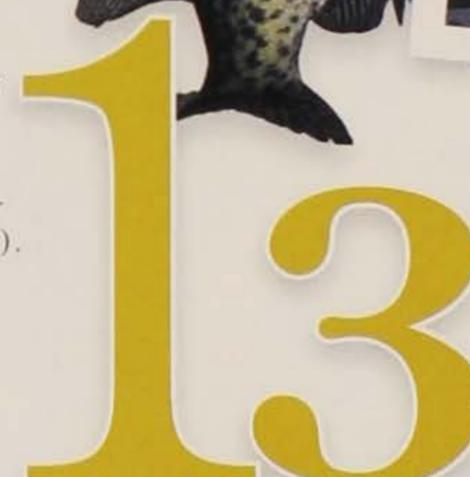
You can even pose for the family Christmas card at some of the resort's most picturesque viewpoints.

If your kids are bored with all that, then you might be better off paying \$10,000 to go to Disney World.

This place sounds pretty fancy. What if we just want to hunt and fish?

Then hunting and fishing is about to get a lot more convenient for you. There are plans for an on-site bait shop and fish-cleaning station, fishing instruction and hunter-education classes, plus small game cleaning and storage. Even Rover is welcome—the cabins and campground have a pet-friendly policy (no pets in the main lodge, though).

Near the lodge is a 50-slip marina and covered dock structure—a nice little spot if you're new to angling or just want to cast a few more times before dinner.



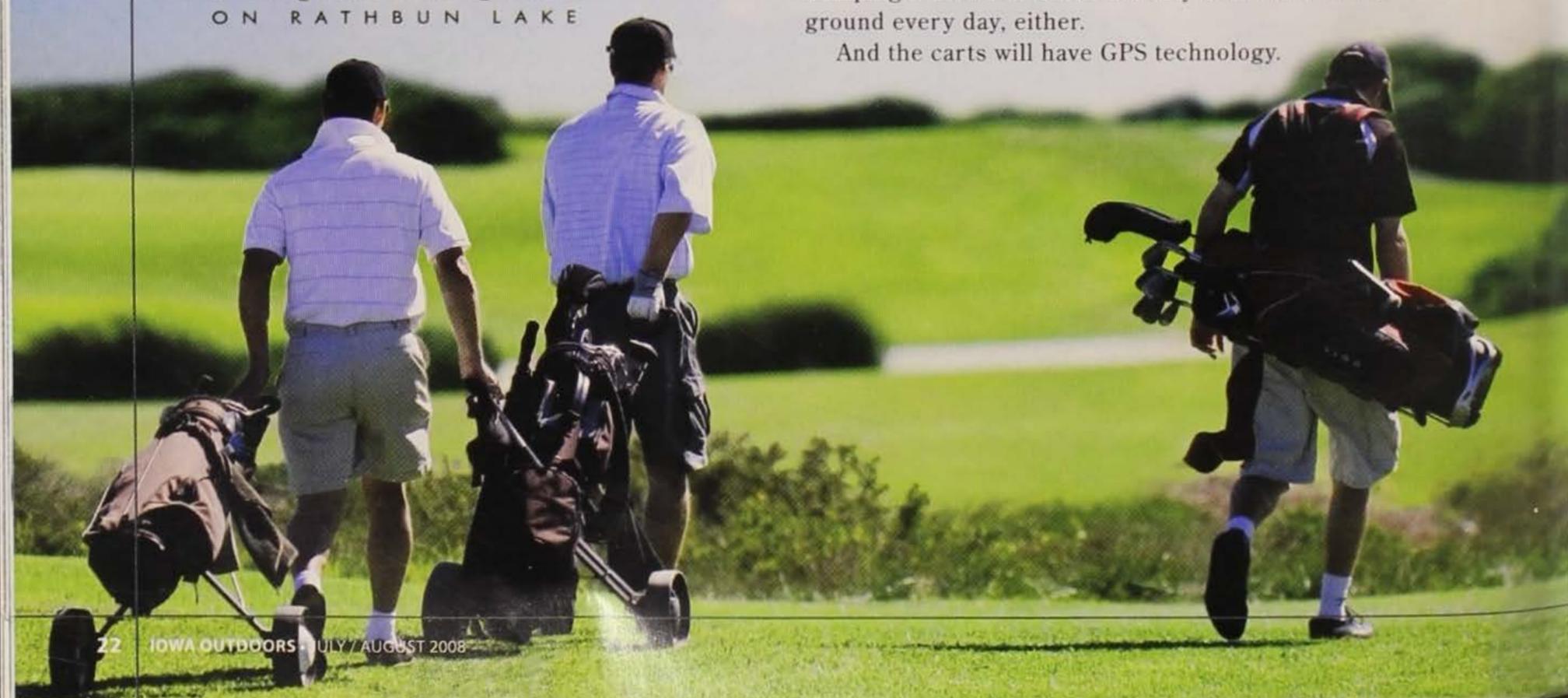
About that golf course... Tell me more.



THE PRESERVE ON RATHBUN LAKE

The Preserve is a phenomenal addition to the resort. Eighteen holes of bent grass tees, fairways and greens. This former cornfield is also Audubon-certified, which means it will be gorgeously landscaped and won't be dumping massive amounts of nasty chemicals on the ground every day, either.

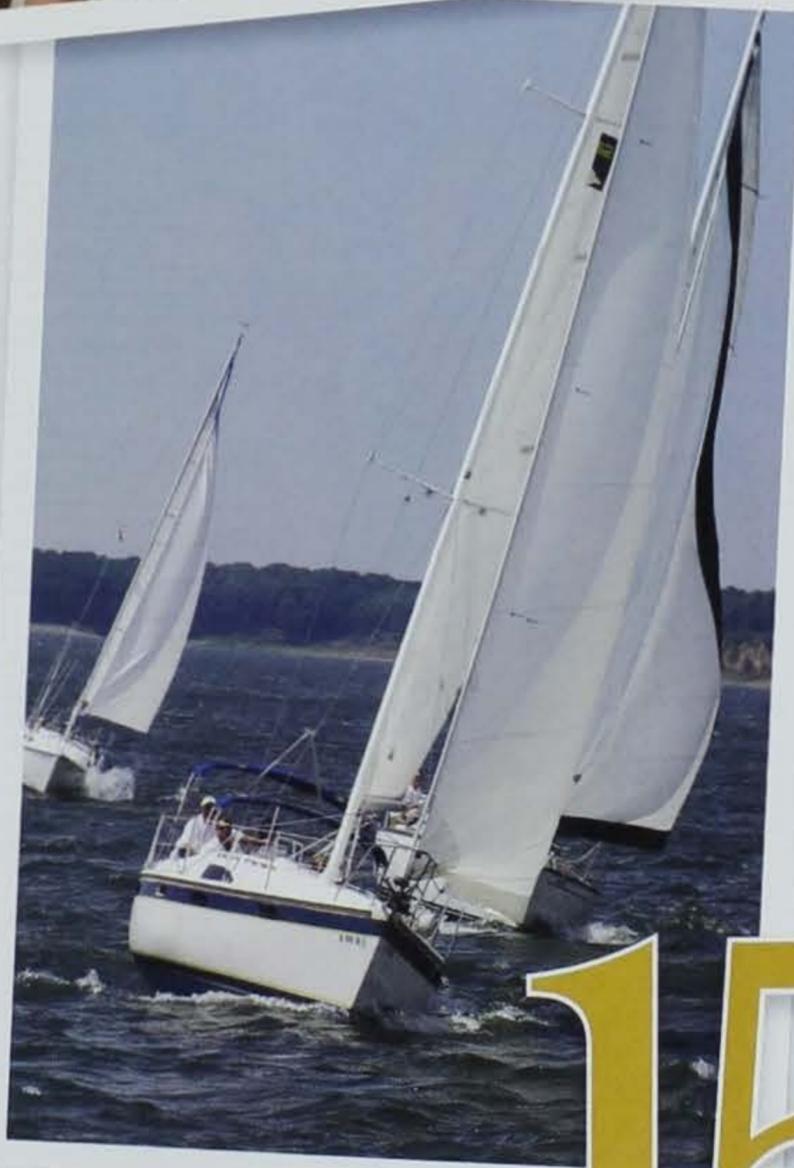
And the carts will have GPS technology.



# 14

## What will the resort have for group facilities?

The conference center can handle groups of up to 250 people—we've already booked groups of up to 3,000 who will use the entire property. For events such as weddings, there is a spectacular veranda overlooking the lake, plus an additional space on the golf course for a large tent. There will be several vantage points for photography, and the catering service is on site. For questions about group gatherings or to make reservations, call **877-677-3344**. Make group reservations at **515-343-4248**.



## Okay, I'm sold! When will Honey Creek Resort State Park open?

# 15

Lodge, boat slips, boat ramp, RV campground and The Preserve golf course all open late August of this year. Opening later will be cabins, activity center and picnic facilities.

**The target opening day is scheduled for Labor Day Weekend, August 29-31.**

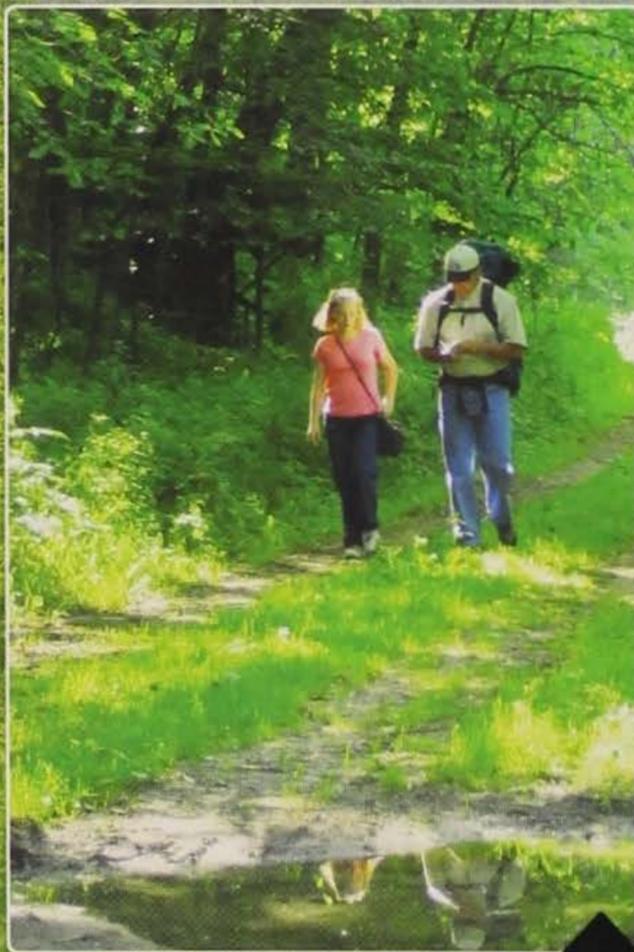
# PERFECT DAY: SEEK SOLITUDE IN WILD WINNESHIEK COUNTY

NEARLY 1,000 ACRES OF LITTLE-USED COON CREEK WILDLIFE MANAGEMENT AREA BECKON BACKPACKERS AND BIRDERS

“Get off the beaten path and go where few venture,” says Larry Reis, a Winneshiek County naturalist. Bushwhack or hike forestry roads in the Coon Creek Wildlife Area. Better yet, make it a rugged backpacking trip and spend a night in the wild. “There is good bird watching on rugged, steep primeval woodlands,” he says. Get lucky and see a bobcat or ruffed grouse.



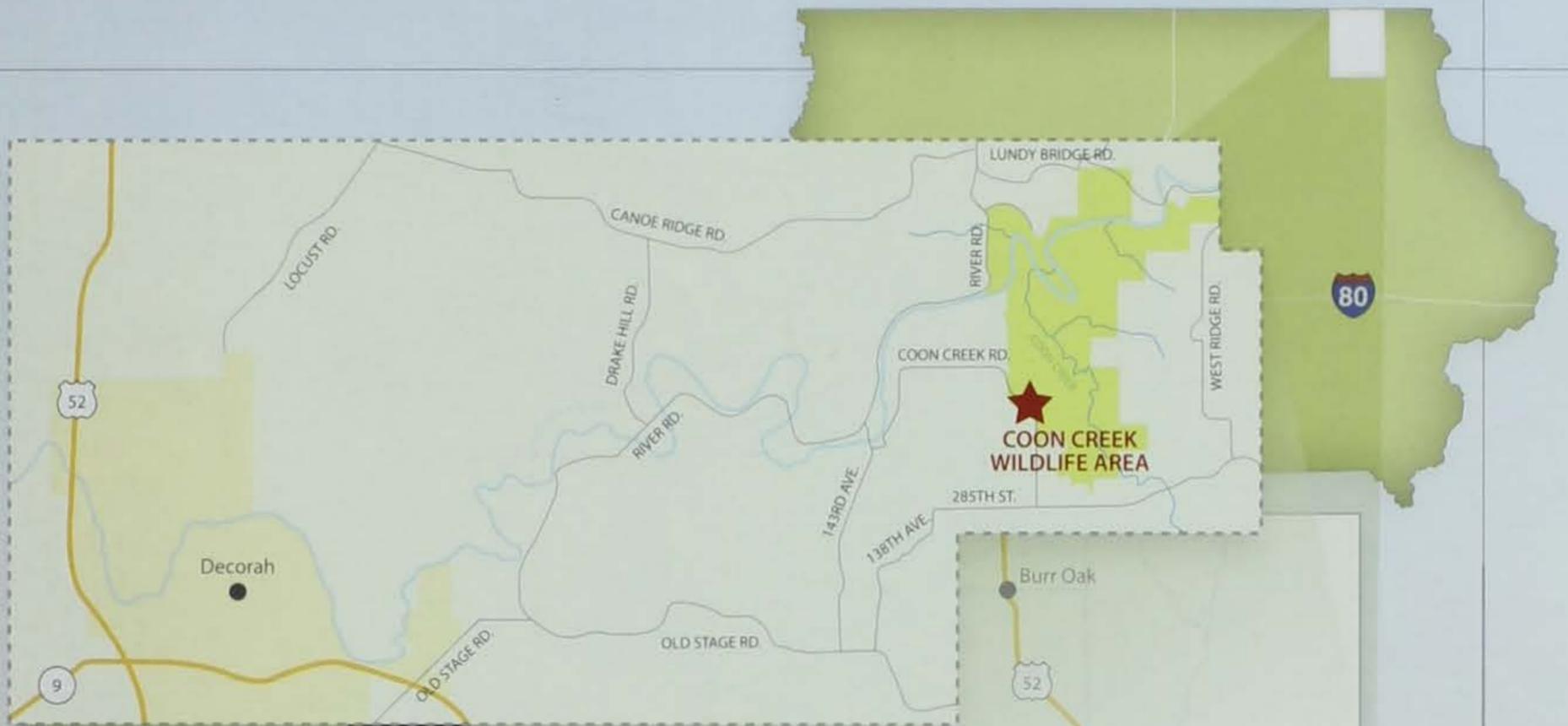
THRUSH



**7:15** Grab a big Ronnie's cinnamon roll at Ruby's in Decorah.

**8:03** Bump along Coon Creek gravel road to parking lot.

**8:38** Hike along lush bottomland forestry road adjacent Coon Creek. View American redstarts perched on creekside branches.



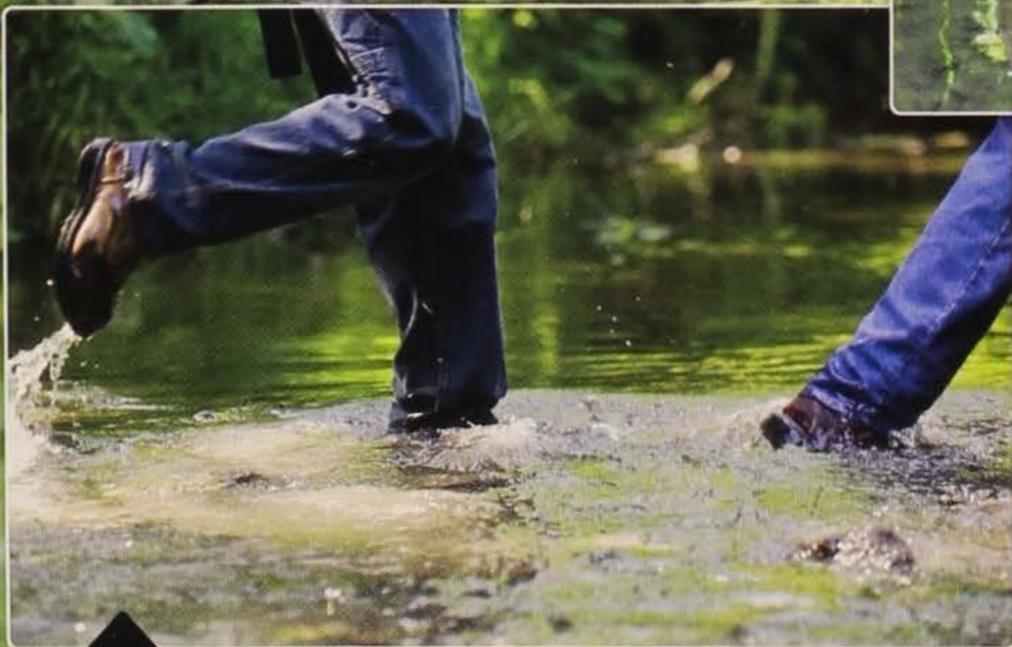
SCARLET Tanager



**10:19** Find raccoon and opossum tracks in mud puddles. Escape the sun—scramble into steep upland forest. Look for century-old oak and hickory stands to spy scarlet tanagers, Acadian flycatchers, thrush and ovenbirds.

**12:05** Sit among northern lady and maidenhair fern and snack on deli sandwiches packed from Ede's Gourmet in Decorah. Find sunlit, open areas for raspberries. Keep an eye out for blue-winged and Kentucky warblers.

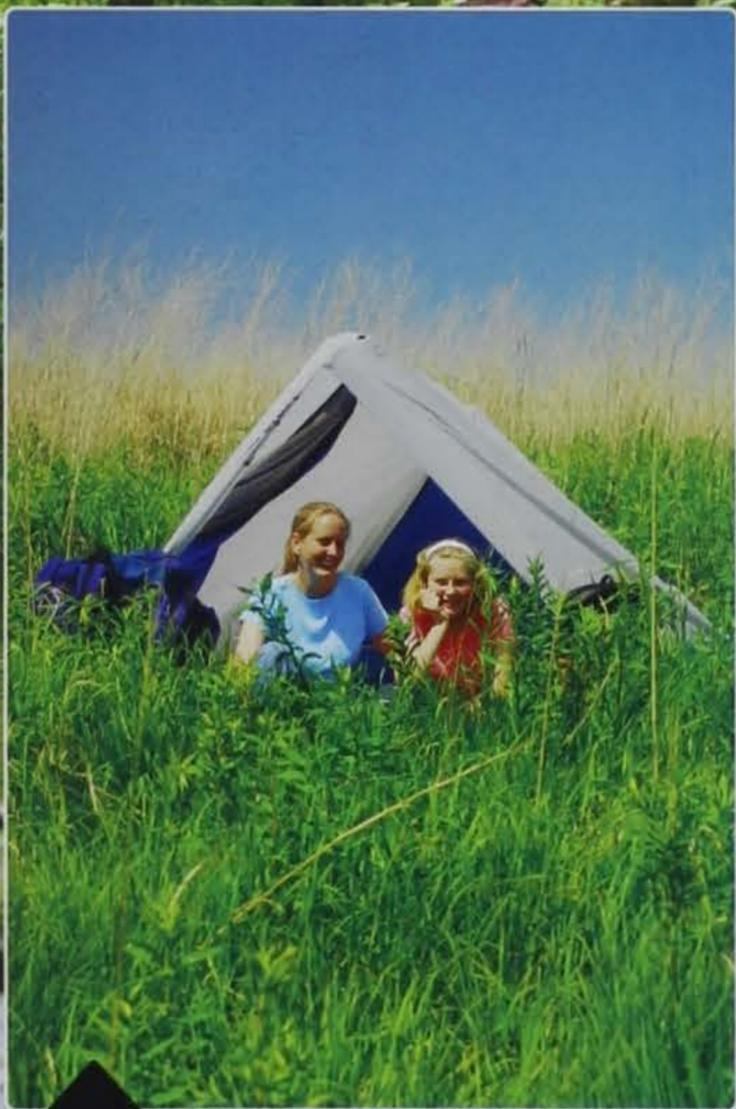
AMERICAN REDSTART



**2:00** Soak tired toes in Coon Creek. Find crayfish under rocks. Cast for trout in deep pools.

**3:15** Explore stands of aspen for ruffed grouse, woodcock, eastern towhee and uncommon yellow- and black-billed cuckoos.

OVENBIRD



**5:13** Drive to west access, hike half mile to prairie hillside, pitch tent among black-eyed Susan and red admiral butterflies. Gaze for hawks. View Upper Iowa River Valley in distance.

**6:10** Sneak into Decorah for "The Regular" pizza at local icon Mabe's. Top off with a Boston Sundae at the Whippy Dip.

**8:30** Watch sunset paint the skies and valleys below.

**10:30** Gaze at stars in dark skies, hear barred owls hoot and coyotes howl.



# U

# nderrated and nappreciated

Winged Undertakers Digest the Deceased

STORY AND PHOTOS BY LOWELL WASHBURN



Although no one can for sure say why, turkey vultures have become increasingly common during the past two decades. Often referred to as "TVs" by birding enthusiasts, turkey vultures derive their name from the featherless, red heads of adults. And there's no denying that, at least from a distance, a roosted vulture does somewhat resemble a male wild turkey.

There's good reason for the vulture's distinctive, though ugly, bare head. As an avid consumer of carrion, TVs routinely forage in some pretty nasty places. The complete lack of head and neck feathers aids in maintaining cleanliness. Contrary to popular belief, vultures are among the cleanest of birds, spending up to four hours per day bathing and preening—more time than is documented for any other Iowa bird.



# “It’s a dirty job but someone has to do it.”

“It’s a dirty job, but someone has to do it.”

We’ve all heard that line a thousand times.

But for me, the well-worn phrase gained new meaning as I paused to watch members of a local highway cleanup crew doing their dirty job.

The crew was a gathering of turkey vultures, and the job site was located on the edge of a busy blacktop roadway. At the present moment, crew members were eagerly focused on the task of making last night’s roadkilled opossum disappear. Well tenderized by the tires of commuting motorists, the carcass had been reduced to a flat and greasy, fly-attracting mess. I could go on, but in the event you’re reading this article just before your own meal time, I’ll spare the details.

Let’s just say that, to a human observer, the scene was more

than a bit disgusting. But for hungry vultures, the opportunity represented nothing less than a four-star banquet—an asphalt version of a carrion eater’s 21 Club of New York fame.

After slowing and pulling aside to observe, it quickly became apparent this bird show was not designed for anyone with a queasy stomach. Standing atop the unfortunate ‘possum’s remains, the vultures greedily slurped a savory blend of guts, fur, blood and bone.

Whenever speeding traffic approached, the huge birds reluctantly launched into the air. Once the coast was clear, the circling scavengers would land again and another bird or two would take their turn at the table. The scenario was repeated time and again. The efficiency of the cleanup was remarkable. In less than 10 minutes, all that remained of the deceased ‘possum was the tail, a

Serving as Iowa's "winged undertakers," turkey vultures have become increasingly common across much of the state. Although no one can say for certain, biologists speculate the species' continued expansion into Canada is at least partially the result of an increase in roadways—and more roadkilled mammals.



ob,  
ehas to do it.”

few bits of hide, and a distinct grease spot on the rapidly warming pavement. Mission complete, the vultures flapped heavily into the air. Within minutes, the flock had soared high and drifted from view.

Anyone who spends much time outdoors is aware the turkey vulture has become an increasingly common feature of the Iowa landscape. With the species' six-foot wingspan, carnivorous habits, and soaring flight, most people assume that vultures are card-carrying members of the raptor family. Amazingly, they are more closely related to storks and flamingos than to hawks or eagles.

Unlike real birds of prey, who capture their food live and on the fly, vultures subsist on carrion. In other words, they are scavengers. As is the case with most scavenger-types, vultures routinely dine on some extremely nasty

entrees. But while the practice of feeding on decaying, maggot-infested dead animals may seem repulsive, the bird provides an essential environmental service by sanitizing the countryside. The vulture's bizarre and often odiferous menu selections aid in suppressing the spread of disease—particularly to domestic livestock.

As vultures consume wholesale quantities of carrion, they also ingest large doses of potentially dangerous bacteria. To survive that exposure, the scavengers disinfect their meals through means of a smoking hot, 108-degree digestive system that effectively destroys any living organisms that may happen to slide down their gullets—including such nasties as cholera and *E.coli*. With feeding vultures, it's a case of lethal pathogens coming in, and completely sterile whitewash going out.



Although vultures have keen eyesight and may locate food while soaring at great heights, they also have an acute sense of smell. Unlike most birds, which have little or no sense of smell, vultures have the unique ability to track down sun-ripened meals by simply following their beaks. Natural gas companies have utilized the turkey vulture's powerful olfactory to detect suspected leaks in underground pipelines. After adding a "carrion-like scent" to their naturally odorless product, gas workers simply sat back and watched the skies as gathering vultures pointed the way to defective lines.

I've had a couple of interesting vulture encounters of my own.

While searching for mushrooms in the bluff country of northeast Iowa's Clayton County, I once discovered the not-so-fresh remains of a Holstein cow which had fallen into a steep ravine and died. Because of overhanging rock ledges and thick brush, the cow was barely visible. Nevertheless, a large group of turkey vultures had successfully located the meal and were feeding with gusto. As I approached, the scavengers reluctantly took wing and vacated the premises. Then,

much to my amazement, another half dozen vultures began to emerge from inside the bloated carcass. One by one, the disturbed birds exited through a large tear in the Holstein's midriff. Disgusting to be sure, the scene gave new meaning to the term "dining in."

Even more memorable was an event that happened while hunting spring turkeys near western Iowa's loess hills.

After three hours of scaling some particularly rugged terrain, I finally gave in to what had become an unseasonably warm afternoon. Stretching out on a soft carpet of grass and leaves, I was soon fast asleep. Sometime later I was awakened by the loud flapping of wings. Cautiously opening my eyes, I was greeted to the intense stare of a turkey vulture standing less than a dozen feet away. To me, it was obvious that the feathery scavenger had been sizing me up as a potential meal. Upon discovering that I was still alive, the huge bird immediately left the scene.

I still think about that big, black turkey vulture from time to time. I've always hoped the bird found me by using its eyes instead of its nose. 🐼



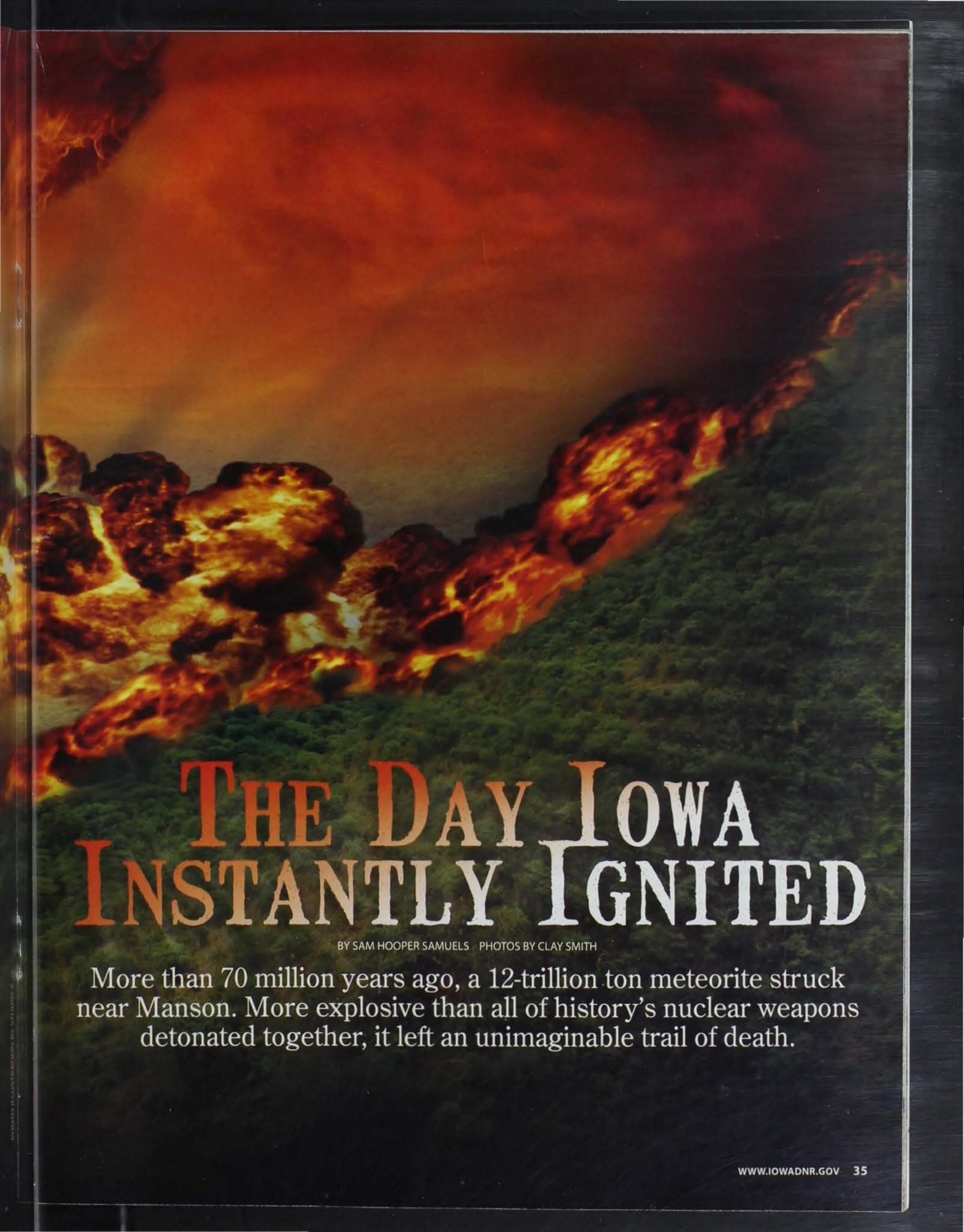
Turkey vultures build no nests but prefer to lay their eggs in natural cavities. Large birds require large nest sites, and vultures frequently use spacious cavities found within rotting trunks of aging trees. Along the bluff-shrouded corridor of the upper Mississippi River, turkey vultures may nest in natural shallow caves found on vertical walls of limestone cliffs.

Ever resourceful, vultures also find nest sites in abandoned farm buildings—especially across Iowa's less timbered interior. Located in barn hay lofts or attics of retired wooden corn cribs, nests are often situated in dimly lit corners where rafters or crude board shelving provide a platform for eggs and young.

Although adults do little to defend their nest, startled nestlings will eject a vile stream of partially digested carrion. The smell alone is usually enough to discourage further advances from intruders.



PHOTO ILLUSTRATION BY STUDIO Z



# THE DAY IOWA INSTANTLY IGNITED

BY SAM HOOPER SAMUELS PHOTOS BY CLAY SMITH

More than 70 million years ago, a 12-trillion ton meteorite struck near Manson. More explosive than all of history's nuclear weapons detonated together, it left an unimaginable trail of death.

1) Writer Sam Samuels looks through a hand lens at a core sample from the impact site. 2) Core samples of rocks altered by the impact force. The boxed slab on the left was almost completely melted, with the dark area glass and recrystallized feldspar grains appearing light gray. Specimens on each side of the circular core show bits of broken, or brecciated, rock torn apart from the impact shock wave. The circle-shaped core is mostly white—formed as intense heat turned rock to glass. 3) Held core sample shows granitic rocks, once buried thousands of feet down, then brecciated, mixed and lifted to near-surface by the impact. 4-6) Along Lizard Creek in Webster County, Ray Anderson examines Cretaceous shales near the outer limit of the crater. The shale itself was little changed by the impact energy. Easily eroded, the shale exists as a part of one of many large blocks of rock layer that sank down inside the crater. Similar rock outside the crater area eroded away thousands of years earlier. 7) Just outside crater limit, Ray stands in a limestone quarry near Gilmore City, an important geological resource in the area.



I'm standing in a rock library, or "core shed" as the geologists call them, at the University of Iowa's Oakdale Research Park in Coralville with Ray Anderson of the Iowa Geological Survey. A core shed looks less like a library than a hardware store. The aisles are constructed of rough wood in a warehouse-like ambience, with fork lifts and canvas bags of rocks here and there on the cement floor. The shelves are stacked not with books, but with cardboard boxes full of rock samples, all marked with cryptic codes denoting where they were drilled and from what depth. Anderson, a geologist with a thick sandy-red beard, a mane of curly hair, and a special interest in meteorites, is trying to retrieve a box of longitudinally-sawed core samples of Phanerozoic clast breccia he extracted in Calhoun County near Manson a few years back, which he really wants me to see.

"Shoot, I was going to show you the M-1 cores," Anderson says as he looks at the unstable pile of lumber someone has decided to store in the aisle between us and the sought-after rock samples. "There's lots to see, if I can get to it." He clambers in, his large frame teetering on loose boards, and finds the box he wants. That's when I notice a small cylindrical yellow object hanging from his neck by a leather lanyard.

"That's my Kennecott copper magnet," Anderson says, showing me the flat metal tip. If you're a bank, you give customers a nice pen with your company's name on it, or perhaps a travel mug. If you're an international mining company like Kennecott Exploration, you give out magnets.

"Folks bring in what they think are meteorites all the time," he says. But most true meteorites contain lots of iron, while most ordinary stones do not. "This is to see if it's magnetic."

OK, I think, this really is a meteorite expert. He may not have a pencil on him, but he is never without his meteorite-testing magnet.

"I know more about the Manson Crater than anyone alive or dead," Anderson tells me. I believe him.

The Manson Crater, or more correctly the Manson Impact Structure, is what I've come to find. It is the remains of a mountain-sized meteorite that plowed into the ground in northwest Iowa near Manson, about 74 million years ago. Most meteors start out as asteroids, small rocks floating in space within our solar system that never quite came together to become a planet but that orbit the sun in a messy band between Mars and Jupiter. Occasionally, one is yanked out of orbit by the tremendous force of Jupiter's gravitational field. Some become "Earth-crossing asteroids," their erratic paths crossing the Earth's orbit. Some of those actually fall to Earth and become meteors.



Most of those never make it to the ground. They burn up in the atmosphere as falling stars, fleeting streaks of light that glow and die in the sky. The few that do make it through the atmosphere are dubbed meteorites. Most of these are fairly small, and they induce a strange, almost cultish fascination among geologists and collectors.

Meteorites are the oldest dated materials in the solar system, about 4.5 billion years old, making them nearly a billion years older than the oldest rocks on Earth. There is something about holding in your hands this ancient object that fell from outer space that induces awe and covetousness. A small slice sawed from a well-documented meteorite may cost \$100 to collectors.

Eight are known to have landed in Iowa.

Earlier in his office, Anderson let me handle one of the most spectacular of these, the Marion Meteorite. In 1847 it blazed across the sky right over Iowa City, then the state capital, on the same day that the governor signed the proclamation declaring the University of Iowa. Turning the thing over in my hands, it felt like meeting E.T. This nearly black object with its deeply pockmarked surface worn smooth by the intense, melting heat of friction as it streaked through the sky was, not so very long ago, a neighbor of Mars and Jupiter. Composed largely of iron, it felt oddly heavy, about the size of a

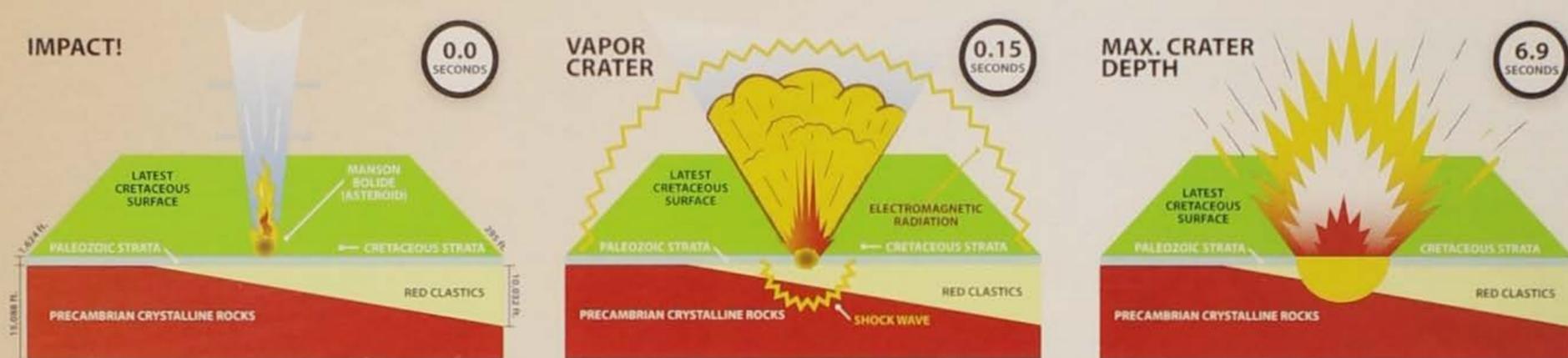
Nerf football but weighing as much as a larger rock.

The Manson Meteorite was more like 1.5 miles in diameter. It probably weighed about 12 trillion tons. When it landed, it was traveling about 45,000 miles per hour.

## BOOM!

"Here it is," Anderson says, emerging from the lumber-strewn aisle at the core shed with the box he wanted. He opens it to reveal the desired Phanerozoic clast breccia. The rock samples are cylindrical, about two inches in diameter, and have been sawed in half lengthwise to reveal a nice, readable flat surface. Breccia are rocks composed of angular rock fragments. Clast means something smashed up, as in "iconoclast," or one who shatters an icon. And Phanerozoic refers to the long period of geological history that leads up to the present, in which living creatures inhabit the Earth.

In other words, the samples we're looking at were formed by an event so powerful, it shattered the very bedrock into pieces, some the size of pinheads, hurled the fragments for miles around to be mixed with other rocks of different vintages, and liquified the earth into a cauldron of molten rock wider than an Iowa county. The ensuing soup hardened and then waited patiently a few



tens of millions of years for Anderson and his colleagues to extract and interpret these stony rods of prehistory.

"This is from up in the meltrock area," Anderson says, picking up two samples, clanging them together, and enjoying the nice, ringy sound they make. He points out some lighter areas floating around among the dark ones. "These white blobs? That's what melted and recrystallized."

To me, these are white blobs. To Anderson, they read as clearly as a letter only he can decode. "We are white blobs, Ray," they say. "And as you well know, we were put here by the only force on earth that could possibly have placed us exactly where you found us: a giant meteorite."

A few days later, Anderson and I climb into the Iowa Geological Survey government-issue SUV and make a pilgrimage to the place that meteorite landed.

I would like to report that we drove up the side of a ridge, then gazed down from the lip of it into the vast bowl of the Manson crater. Unfortunately, there is no visible crater on the surface. It's deep underground. Thousands of years ago, this 23-mile-wide crater was buried by glaciers beneath hundreds of feet of fine mineral material called glacial till. People have been finding small clues to its existence for years. In the 1920s, when people drilled wells in the area, they found bizarre results. They had to drill much deeper than expected before hitting water. Along the way, they hit granites and gneisses normally found thousands of feet below the surface. When they did hit water it was inexplicably pure, much softer than from wells only a few miles away. Some children who drank only Manson water growing up

developed strangely brownish teeth from high fluoride levels. Something had happened long ago that busted up the ground very deeply, leaving pieces of it very far from where they were supposed to be. Only in recent history did anyone realize it was a meteorite.

When we hit Lizard Creek, Anderson pulls over to the side of the road. Here lay meteorite signs.

"I'll put on my official geologizing tool here," Anderson says as he straps on a web belt with a holster from which hangs a hammer with a long, curving claw. You wouldn't want to walk all the way down the creek bed without something to bang rocks with.

According to an old annual report written a couple of generations ago, geologists passed this spot and noticed something odd. Where the earth was revealed by the erosion of the creek, they saw some kinds of rock that by rights should have been buried hundreds of feet below the surface but had been pushed upward by some mysterious force.

"The old report said it was near the bridge," Anderson says as we begin to clamber downward, through burr oaks and sumac, to the creek below.

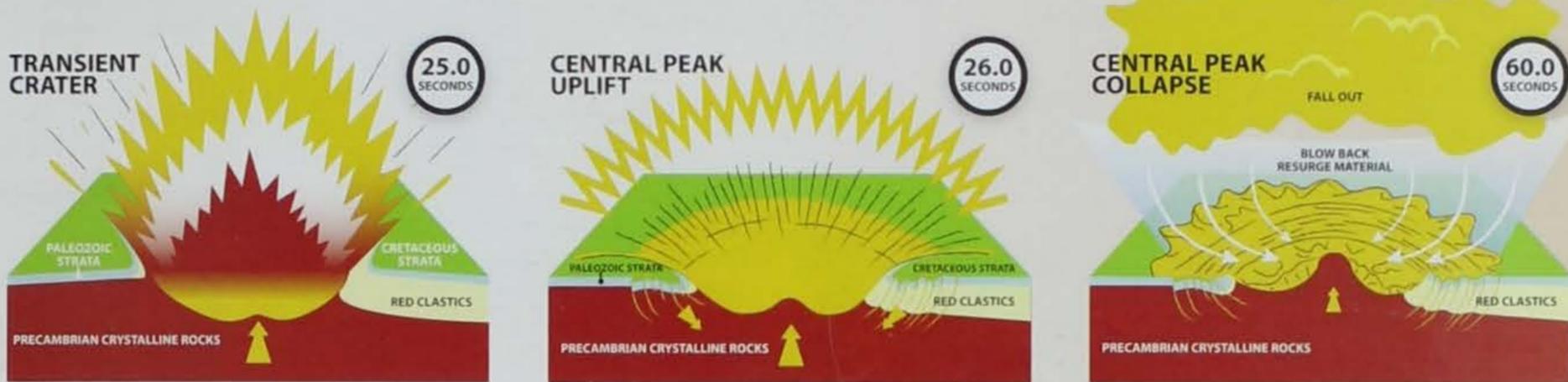
"This is the only thing around to tell you that there's something weird around here," Anderson says. "Why is that Cretaceous rock here? We only know that because those old geologists were such great observers. They told us where to look."

Standing on a sand bar just at water level, he crouches low to examine the wall of the creek bed, then starts to claw at the clayey soil with his hammer.

"What do you know?" he says. "This is an exposure.

ILLUSTRATION BY STUDIO Z - ORIGINALLY DESIGNED BY DR. RAY ANDERSON, IOWA GEOLOGICAL SURVEY





A new one." The river has cut a fresh surface of rock and, with obvious excitement, Anderson knocks a piece of it from the wall. "This is material that was deposited by the Cretaceous seaway when it covered Iowa. It's about 100 million years old."

Anderson hands me the rock to take home, my one souvenir of the meteorite. It's flat, about an inch thick. The edges, where they are broken off and exposed, are gray. The top and bottom are yellowish brown, like a thick sandwich in very thin bread. Later at home, my new Cretaceous paperweight would take a place of pride on my writing desk.

As we drive closer to Manson, we're entering the perimeter of the impact structure. We are now inside the crater, although you couldn't tell from looking.

Anderson takes me along a road that nearly bisects the crater through the center. This is where the geologists did their work to confirm the existence of the crater far below the surface. Along this road, Anderson and colleagues drilled a series of holes and pulled core samples from deep below the surface, including the samples he showed me at the rock library. The samples reveal what's going on below the surface in one spot. Put together, they form a sort of interrupted portrait of the underground landscape, like looking at a picture through a series of slits. It's enough information to recognize the picture, but with big gaps.

The gaps were filled by a 1986 petroleum exploration survey. Large seismic trucks sent sound waves deep into the earth and recorded the reflected waves, to get a profile of the rock formations below. It was like getting an ultrasound picture of the crater below the surface. True to the predicted

models, the picture that emerged looked something like a crater, with a volcano rising up in the middle.

As we look out through the windshield, all we can see is farm fields.

"Ah, the old scenic Manson Impact Structure," Anderson chuckles, and drives us into town. "Population 1,044" says the sign outside of Manson.

"It's really 1,983 as of the last census," corrects Ann Schlapkohl, director of Manson Public Library.

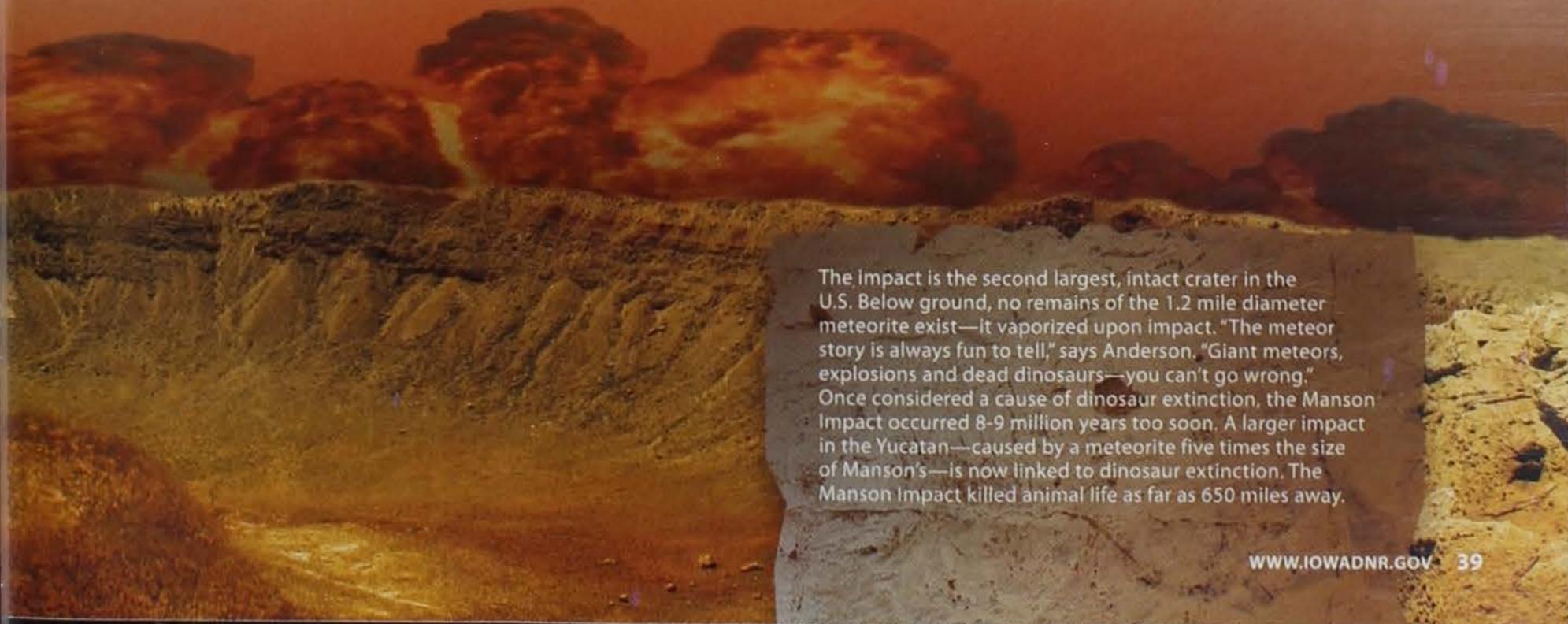
There is no tourist bureau in Manson, and only now are a few citizens working to put together a historical society. So when people come to look for signs of the meteorite, Schlapkohl is the person they see. And they do come.

"We had a gentleman write a letter from California, doing a research project, asking did we have an extra piece of the meteorite we could send him?" Schlapkohl says with a smile.

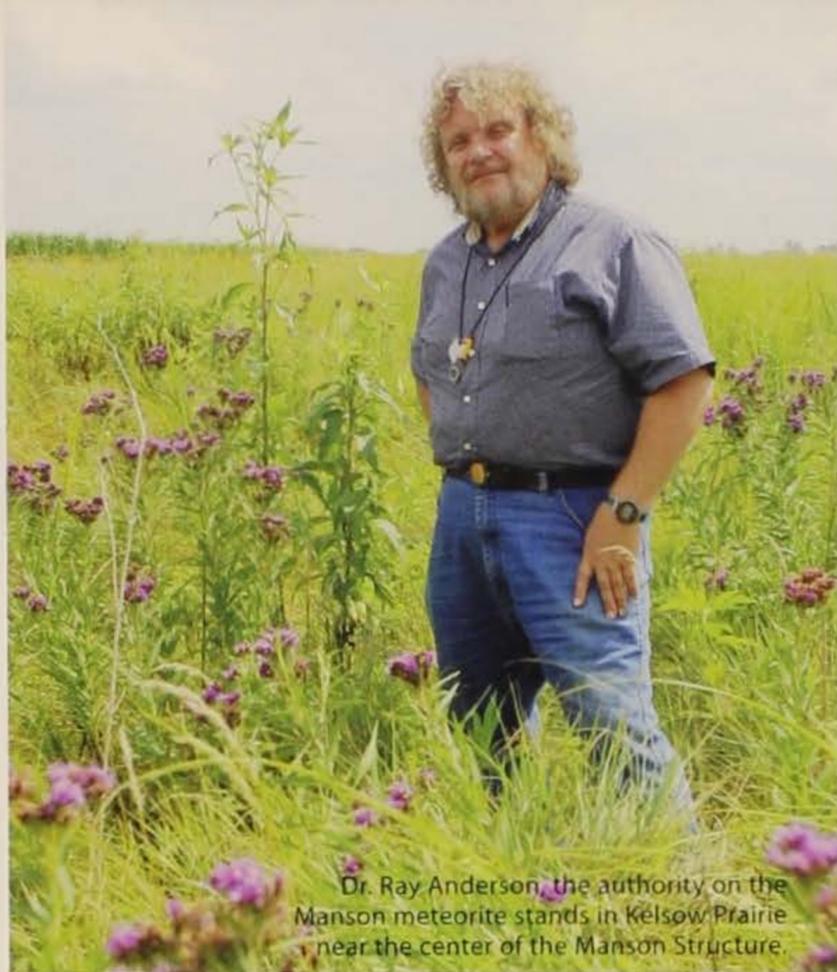
Asking for a piece of the meteorite is a bit like asking for a breath of the carbon dioxide exhaled by a dinosaur.

When a meteorite of this size strikes the earth, the force of the impact creates an explosion so powerful, the meteorite itself is instantly vaporized. Small meteorites leave a trail on the ground; as they descend at an angle, they burrow into the earth and leave a sort of wake. Huge meteorites like Manson don't leave a trail. They behave less like a bullet and more like a bomb. No matter how steep the angle of their descent, when they hit they explode with equal force up, down, and in all directions.

About a tenth of a second after a Manson-sized meteorite hits, a "vapor crater" about two miles across



The impact is the second largest, intact crater in the U.S. Below ground, no remains of the 1.2 mile diameter meteorite exist—it vaporized upon impact. "The meteor story is always fun to tell," says Anderson. "Giant meteors, explosions and dead dinosaurs—you can't go wrong." Once considered a cause of dinosaur extinction, the Manson Impact occurred 8-9 million years too soon. A larger impact in the Yucatan—caused by a meteorite five times the size of Manson's—is now linked to dinosaur extinction. The Manson Impact killed animal life as far as 650 miles away.



Dr. Ray Anderson, the authority on the Manson meteorite stands in Kalsow Prairie near the center of the Manson Structure.

and a mile deep forms, essentially having evaporated a hole in the earth. By about half a second, the earth liquefied in a circle about 3.5 miles across and nearly two miles deep. After seven seconds, the crater is three miles deep and six miles across. Material ejected from this hole blasts upward and outward, widening the crater further. Ejecta from the Manson meteorite has been identified as far away as South Dakota. The molten earth swells up at the crater edges, pressing upward and peeling rock layers from the inside of the crater, forcing the solid surface around it to rise up and fold over onto itself.

The rock at the crater center is so liquid it begins to behave like a pool when a drop of water falls into it. The uplifted edges begin to sink back downward. This causes the center of the crater to rise up. In the case of water, there is an instant when a perfectly round drop of water rises up above the surface, suspended over the center of the circle before falling back down. In the case of rock, as the energy dissipates, the liquid hardens and leaves a rocky peak in the center of the crater. At Manson, below land surface, there remains that rocky peak, which early geologists mistook for a prehistoric volcano.

And oh yes, Manson was also at the bottom of a shallow sea at that time. So along with pulverizing the seabed, the Manson meteorite also pushed the waters back. A few minutes later, all that water rushed back into the center, carrying mud and rocks the size of buildings.

The crater lay for millions of years until glaciers, which steamrolled over Iowa and made most of the state as flat as it is, covered nearly every last trace of it for thousands of years.

So no, Schlapkohl does not have an extra piece of meteorite to send the gentleman in California.

What she does have, for the frequent curiosity seekers, is a box of core samples like the ones Anderson showed me. And in a public park right near the library, there is a model crater dug into the earth, about 30 feet across. In the center stands a tower of rocks about three feet tall, representing

the underground peak at the center of the real crater.

According to Schlapkohl, some are disappointed when they come to see the crater and find only farmland.

"Some people say, 'Oh, I've been to the one in Arizona. They've got a gift shop there.'"

For those dead set on owning a souvenir, there is one option. The U-Haul company decorates their rental vans with scenes of the 50 states, part of their Venture Across America campaign. The image they chose to represent Iowa is that of Manson, with its giant meteorite about to strike. For about 10 dollars plus shipping, you can order a Manson Meteorite t-shirt from U-Haul, complete with a complicated mathematical equation provided by Anderson.

At last, we reach the Kalsow Prairie, a small, fenced-in patch of native prairie situated in the southeast corner of Pocahontas County, just near the Calhoun County line. Anderson stops the car and we step out, wading into the native grasses.

"This is about the closest point to the exact point of impact," Anderson says.

Across the flat horizon, the sun glints off a metal barn roof. Heat rising up from the earth makes the horizon shimmer. Prairie butterflies flit past. Looking out over this scene of serene natural beauty, it's hard to imagine this spot was once the site of an event of such unimaginable destructive power. How big was the blast?

"Ten times all the nuclear weapons on Earth at the time of the cold war," Anderson says. "Pile them all up at Kalsow Prairie and set them off." If it struck the same place today, everything in the state of Iowa would be incinerated in a cloud of flames, and most people in a circle stretching approximately from Detroit to Denver would be killed.

Scientists believe that a meteorite impact caused the extinction of dinosaurs, along with about 70 percent of all land species and 90 percent of all ocean species. For a while, the Manson Meteorite was a strong contender for the title of dinosaur killer. But it turns out that the timing was wrong. The great dinosaur extinction happened about 65 million years ago, and Manson struck somewhat earlier, about 74 million years ago. Another meteorite, which struck in Mexico's Yucatan, is now believed to have brought about the extinction of T-Rex and stegosaurus.

In fact there are not one, not two, but many such impact structures on the earth and under the oceans. A sobering thought. According to an on-going study of Earth-crossing asteroids, a meteorite the size of Manson hits our planet on a land mass about every 3.5 million years. There is no way to predict the arrival of another such catastrophe. By the time it was detected, it would be over.

Standing waist-deep in prairie grasses, I look straight up. Then, chastened, I let my eye drop back down at the butterflies. Better not to think about it.

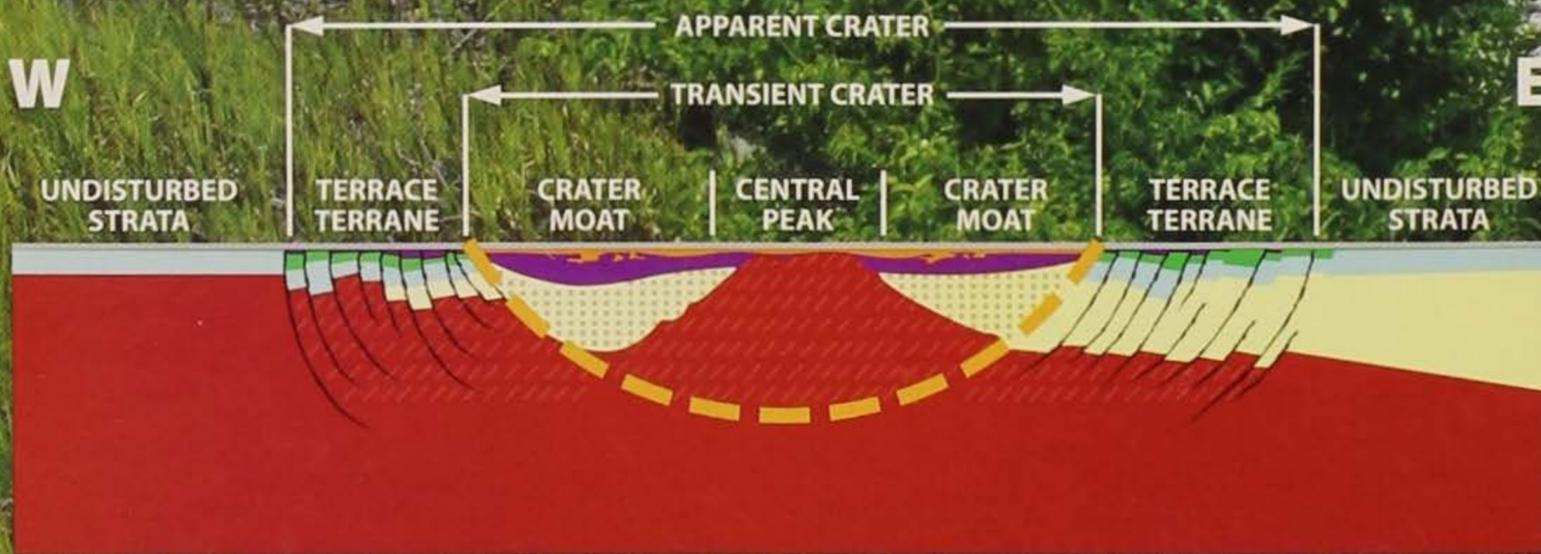
Anderson and his colleagues continue to study the Manson rocks and learn more about the cataclysmic event that happened here those millions of years ago.

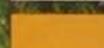
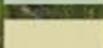
"It's one of the best understood impact structures in the world," Anderson says. "And there are zillions of things we don't know about it." 🐞

## RINGS OF DESTRUCTION



# MANSON IMPACT STRUCTURE



- |  |  |
|--|--|
|  GLACIAL DRIFT                  |  CRETACEOUS ROCKS  |
|  FALL-BACK                      |  PALEOZOIC STRATA  |
|  DEBRIS FLOW                    |  RED CLASTIC ROCKS |
|  TRANSPORTED, BRECCIATED STRATA |  GRANITE BASEMENT  |
|  BRECCIATED CRYSTALLINE ROCK    |  TRANSIENT CRATER  |

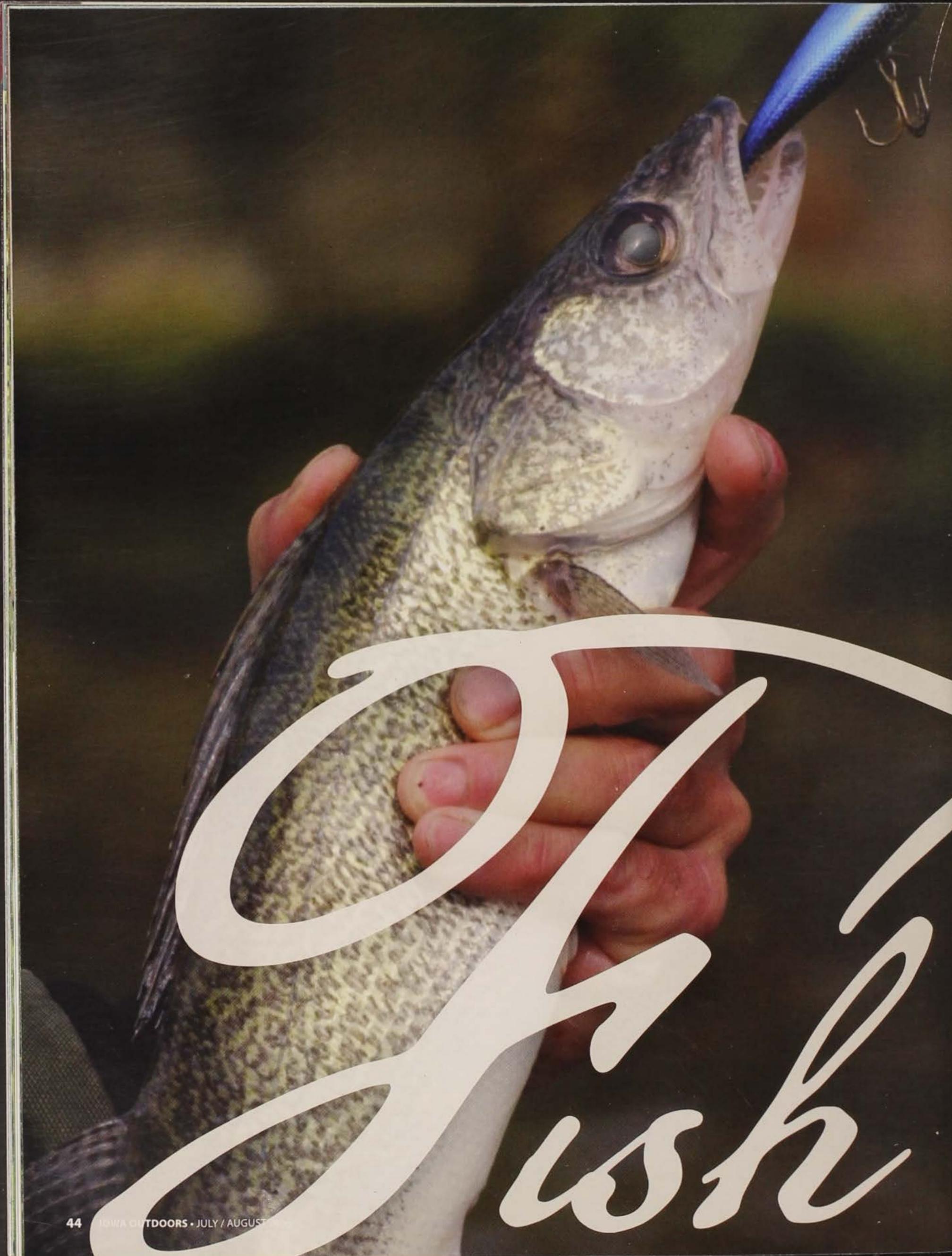
**BACKGROUND PHOTO**—An early quarry near Gilmore City just outside the crater rim. Used for concrete, the valuable limestone would not be easily reached without help from outer space. The meteor strike pushed the rock up some 200 feet, making quarrying less costly.

In the early 1990s, geologists theorized the meteorite impact played a role in the dinosaur extinction 65 million years ago. Twelve core samples totaling over 4,000 feet were studied along with other crater data by scientists throughout the U.S. and other nations. They identified the structure as a complex crater that includes an outermost terrace terrane of down-dropped blocks, an inner central peak, and a crater moat in between (diagram, below left). But they learned the impact occurred nine million years before dinosaur extinction, so the Manson meteorite was not the demise of dinosaurs. Today there are no visible signs of the crater—it lays 100 to 300 feet below the surface.

Learn more about famous Iowa meteorites online at:  
[www.igsb.uiowa.edu/browse.htm#meteor](http://www.igsb.uiowa.edu/browse.htm#meteor)

## CRATER SPANS 23 MILES AND FOUR-COUNTIES





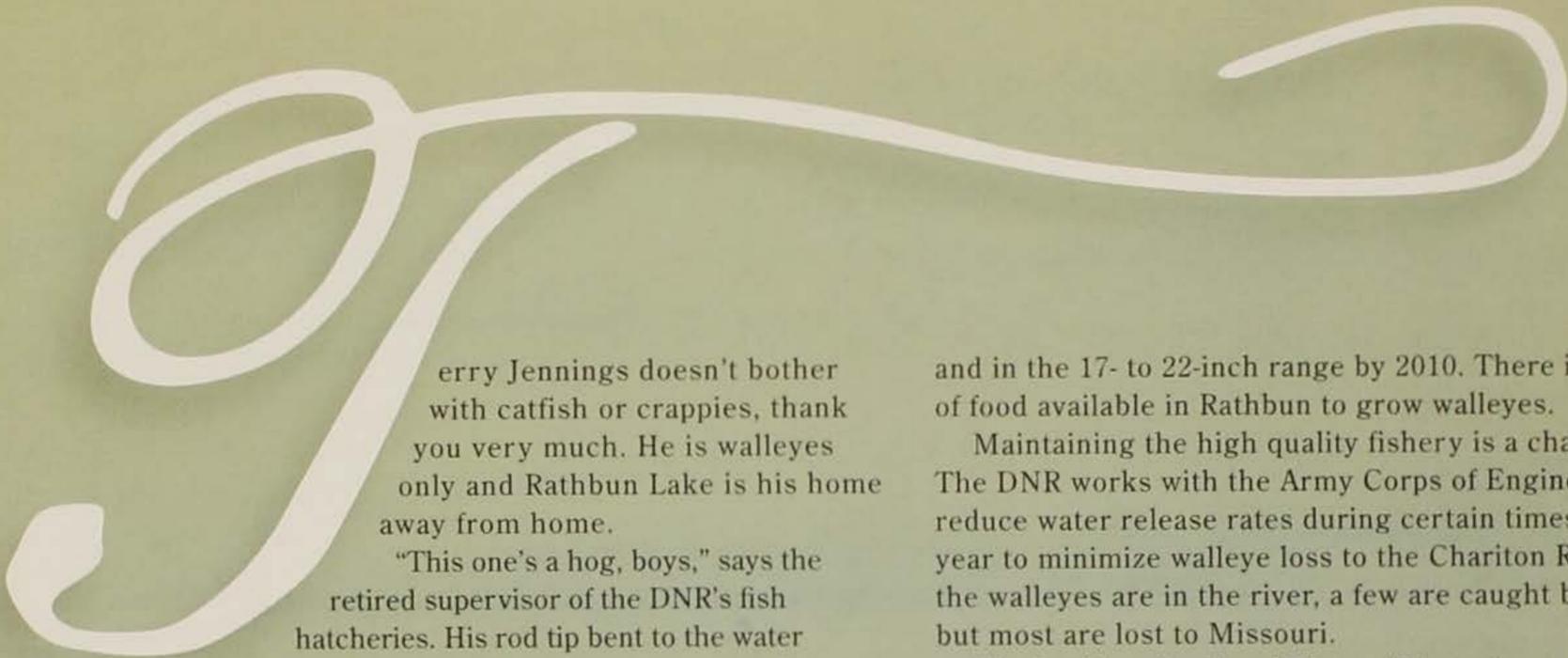
*fish*



*Unmatched Walleye Fishing on  
Southern Iowa's Spectacular Rathbun Lake*

BY MICK KLEMESRUD

*Or!*



erry Jennings doesn't bother with catfish or crappies, thank you very much. He is walleyes only and Rathbun Lake is his home away from home.

"This one's a hog, boys," says the retired supervisor of the DNR's fish hatcheries. His rod tip bent to the water surface, Jennings slowly reaches over to shut off the kicker motor.

Netted and boated, the 22-inch walleye slid into the live well to join three others caught earlier in the day. She was the largest, so far.

Rathbun Lake, the 11,000-acre reservoir across Appanoose and Monroe counties, is Iowa's most substantial walleye resource south of Interstate 80 and is in the top 25 percent of the most productive walleye lakes in the world.

The Rathbun walleye fishery has come a long way since the 1980s collapse when numbers dropped dramatically due to a not-so-successful stocking program. It was a boom or bust cycle, but by the 1980s, it was mostly bust. The DNR was determined to do better.

and in the 17- to 22-inch range by 2010. There is a lot of food available in Rathbun to grow walleyes.

Maintaining the high quality fishery is a challenge. The DNR works with the Army Corps of Engineers to reduce water release rates during certain times of the year to minimize walleye loss to the Chariton River. Once the walleyes are in the river, a few are caught by anglers, but most are lost to Missouri.

The Rathbun Land and Water Alliance is an active group of federal, state, local officials with private groups and landowners working together toward a goal to improve and maintain the lake water quality.

"Water quality is the key," says Mark Flammang, fisheries management biologist at Rathbun Lake since 1995. "The common thread is we all want good water quality at Rathbun. Anything we do to improve the water quality will improve fishing and the lake in general."

Fishing at Rathbun Lake differs from other walleye lakes. The best fishing begins mid-May at the earliest. In 2007, it didn't begin until Labor Day. Rathbun is primarily a summer fishery, improving as the weather gets warmer. If a cold front comes through, fishing slows and anglers may want to wait until the weather heats up.

*"This one's a hog boys,"*  
says the retired supervisor of the DNR's fish hatcheries. His rod tip bent to the water surface...

To help lessen the impact of the down years and to rebuild the fishery, the DNR grew and stocked larger fingerlings, which have a much higher survival rate than fry-size fish.

The hatchery still released 33 million newly hatched fry in Rathbun each spring, but would add 80,000 8-inch fingerlings in the fall. Fisheries staff set a goal of tripling the walleye biomass in the lake—accomplished in the early 1990s. Then they set the bar higher to double the previous goal. That was accomplished in the late 1990s. The process of growing large walleyes before stocking resurrected the Rathbun Lake fishery and now benefits other Iowa lakes. The 8-inch walleyes stocked in 2006 will have reached the 12- to 14-inch range by fall 2007. The walleyes stocked in 2007 will be that same length in fall 2008, then in the 15- to 17-inch range in 2009,

## *Fish on!*

"Got it! Fish on," Flammang says with a solid hook set from the middle of the boat.

"Is it a bluegill?" jokes Jennings as Flammang swings in the nearly 15-inch walleye.

Anglers attack Rathbun in one of two ways: with live bait at specific areas either trolled or drifted, or by pulling crankbaits around the lake. Jennings knows the lake, and prefers to back troll.

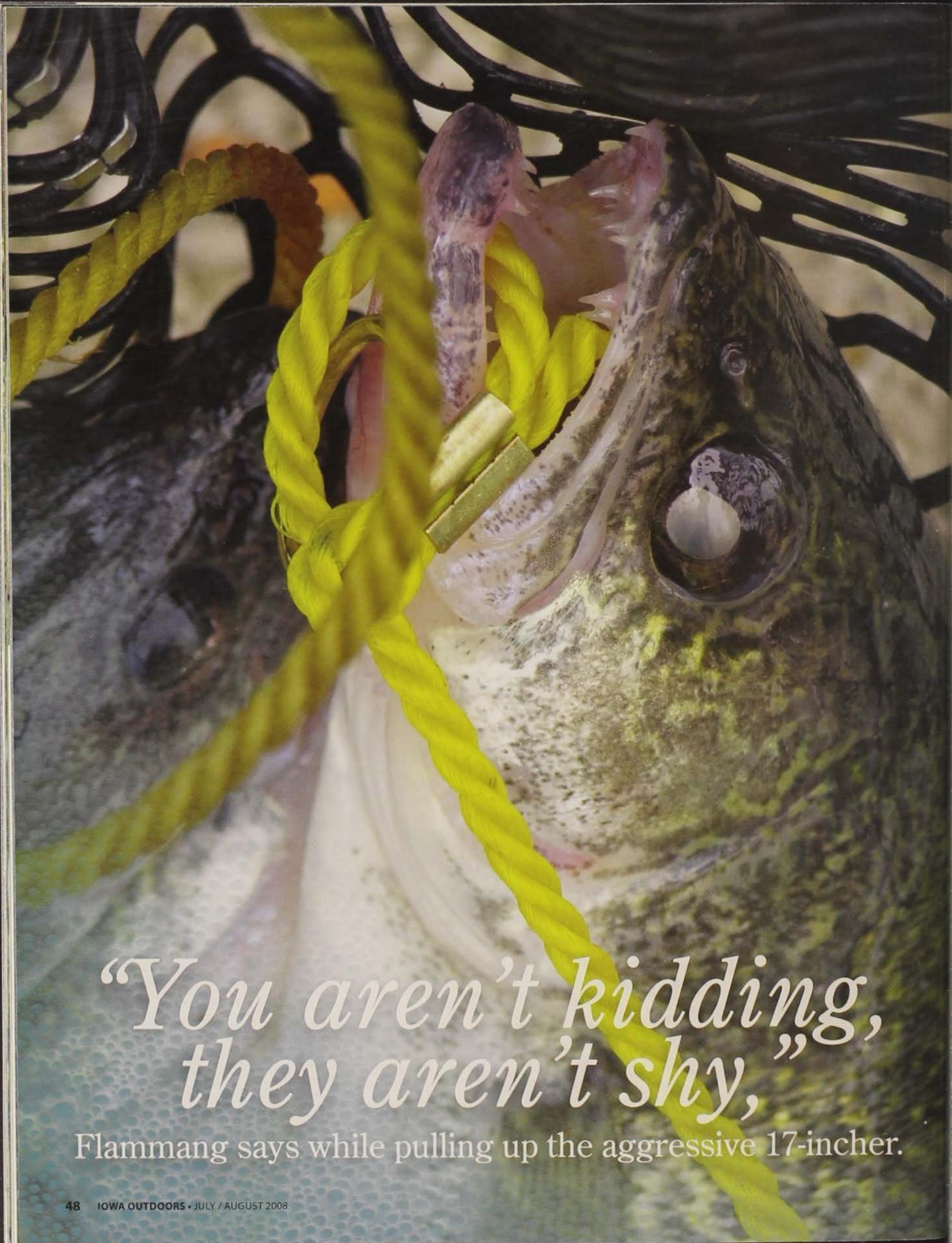
Trolling backwards in shallow water among rocks and stumps can be tricky. Jennings back trolls in a zigzag pattern over sunken islands and other underwater mounds. He goes as fast as he can and stay in contact with the lake bottom, usually between 1 to 1.5 miles per hour.

"You get another one Terry?" Flammang asks.

"Yep, and it's another big one," Jennings says. A scoop

Rathbun Lake is 11,000 acres of top walleye water. When hot summer days cause fish in other lakes to get lockjaw, walleye fishing is often at its best at Rathbun.





*“You aren’t kidding,  
they aren’t shy,”*

Flammang says while pulling up the aggressive 17-incher.

of the net and a 19-inch walleye is in the boat. "When a big one hits, it feels like you hit a snag."

Walleyes primarily feed on gizzard shad, spottail shiners, emerald shiners, and young crappies. The Corps will raise and hold the water level from April 1 to mid-June, which benefits of crappies and gizzard shad. The flooded vegetation provides food and escape habitat for young fish, which also works to the advantage of walleyes.

Jennings uses night crawlers exclusively for bait. "Some guys use minnows, not many use leeches. Leeches are hard to come by in this part of the state," he says. Jennings uses spinners with two hooks—one about three or four inches below the other, so he can set the hook without giving so much line or hooking them too deep.

Pulling crankbaits is another popular way to fish as anglers can cover a lot of water and don't need extensive lake knowledge. Plus, crankbait-caught walleye tend to be larger than those caught with live bait. Live bait anglers need to know where the sunken humps and other structures are located to be successful. On average, live bait will produce more walleyes, but they will be smaller.

Even in the heat of summer, walleyes can be found close to shore, in less than 4 feet of water. Jennings favors using a 1 ounce to 1 and a half ounce bottom bouncer with a spinner harness tipped with a night crawler. The bottom bouncer helps to keep the bait up off the bottom from hungry 10-inch channel catfish as well as all the snags.

## Looking ahead

"You aren't kidding, they aren't shy," Flammang says, pulling up the aggressive 17-incher.

"How'd that feel?" Jennings asks.

"Hit it like a deer running into a fence—smacked it," Flammang says, placing it into the live well.

The past few years, Rathbun walleye fishing has been better in April and May than June and July, a reversal of trend. Some anglers take that as a sign the fish are gone, which is not the case, and protections are needed. Flammang says they continue to evaluate the impact of regulations, including the possibility of adding a minimum length limit.

Currently, Rathbun has no length limit and Flammang receives a number of questions on why. Sorting through reams of data, he shows only 10 percent of walleye caught below 15 inches are kept, mainly because anglers are concerned about the fish dying after release from being hooked too deeply. Those fish make up about 22 percent of all walleyes harvested.

"Length limits would reduce the harvest substantially, with no real improvement in the walleye population," Flammang says. "We're always looking at it, but biologically, that need hasn't risen yet."

## Opportunity knocks

Rathbun Lake draws anglers from across Iowa and surrounding states for its excellent walleye and crappie fishing. An estimated 40,000 to 45,000 anglers fish Rathbun for walleyes annually, and that number could increase with the opening of Iowa's first resort state park on the lake's north shore.

The new Honey Creek Resort State Park will offer a hotel, a new RV park with 20 full hook-up sites, a fish cleaning station, 48 boat slips, boat rental and a freezer to store cleaned fish and game.

"There definitely is going to be added opportunity here with the new resort state park," Flammang says. 🐟



**TERRY JENNINGS** knows Rathbun. He arrived in 1973 as the hatchery was being built and has netted, reared and released more walleyes and walleye fry than can be counted. Retired since the end of 1999, he spends four or five days each week, as often as the weather allows, fishing for old marble eye.

Jennings keeps a fishing diary recording the length and number of every walleye he catches. In 2006, Jennings caught 957 walleyes. In 2005, he caught more than 800. By mid 2007, he had not surpassed 400. At the end of each year, that diary goes to Mark Flammang, fisheries management biologist responsible for Lake Rathbun. Flammang uses that information along with the fall survey to track the walleye population.

Jennings keeps on the move while fishing. He works shallow out to deeper water and doesn't spend too much time in one spot. If there are no fish in the boat after 15 to 20 minutes, it's off to another area. Keep on the move, work a spot over, and go. Always back trolling around structure, his eye carefully watching the depth finder and GPS. Don't overlook shallow water even in the heat of late July. Try different depths to see what is working. Jennings was using an orange colored spinner blade during the interview, but walleyes were caught on a white silver and chartreuse blades.



# explore a nature lover's gem

From ice caves to rare snails, Bixby State Preserve packs diverse life into a small setting

BY LARRY STONE PHOTOS BY CLAY SMITH, BRIAN BUTTON

## ICE CAVE

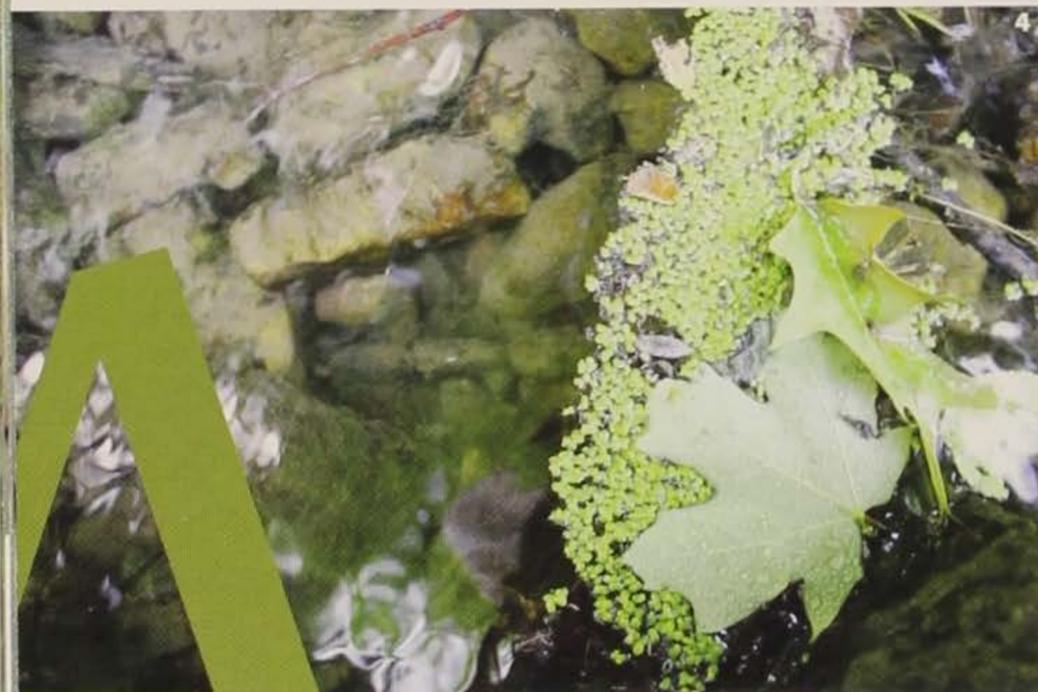
With all its other natural features—diverse plant life, spring-fed stream, and fascinating geology—Bixby's ice cave still may be the feature for which the park is best known.

About a century ago, lead miners dug into the hillside and enlarged a crack in the limestone—although the date and the names of the miners are uncertain. Several local residents claim to have seen mining tools, an ore cart, and rails for the cart in the rear of the cave, which may have extended about 80 feet into the hill.

Legend has it that the mining effort was abandoned when too much ice formed in the cave. A newspaper account, apparently from the 1930s, describes "a wagonload" of ice. Many Edgewood area residents tell of collecting ice from the cave to make ice cream. Some admit to cooling their contraband beer there as teenagers.

Geologists say ice caves form when cold air seeps down into underground cracks or crevasses in the winter, chilling the bedrock. Water from melting snow or rainfall freezes when it contacts the cold rock.

Air sinking down through cracks or sinkholes often flows out the mouths of ice caves or cracks in the rocks, creating a cool microclimate around the site. The cooler pocket of habitat provides a suitable environment for plant and animal species found in few other places. Biologists have coined the term "algific slope" to describe such cold air seeps.



A spring-fed creek twists through a canyon where bedrock meets prairie; rare plants grow on lush, wooded slopes; cool air pours from a legendary ice cave; scenery to take the breath of Midwesterners jaded by vistas of crop fields: this is Bixby State Preserve.

For more than a century, this secluded valley just north of Edgewood, in Clayton County, has charmed naturalists. Yet the 184-acre preserve remains as much of an ecological gem today as in 1887, when R. J. Bixby bought the first parcel of land that later would become "Bixby's Park."

Part of the charm of Bixby is that there are "a lot of habitats packed into a small area," says DNR botanist John Pearson. "Iowa had a lot of diversity to start with, but Bixby had even more than most areas." He cites the stream, which flows through a steep, wooded valley dissected by tributary ravines. On the adjacent hilltops, savanna blends into more open prairie. "There are so many habitats coming together," Pearson says, "and each habitat has its own diversity."

On a spring hike at Bixby, Pearson beams with delight

as he quickly identifies several uncommon species: leatherwood, bulblet bladder fern, yellow birch, golden saxifrage, dwarf scouring rush, Canada yew. Even northern monkshood, a federally threatened species, is found here.

"Bixby may contain the highest diversity of plants per acre of any Iowa woodland," concludes botanist William Norris, who inventoried the plants for the State Preserves Board. He found 380 native species, and another 60 or more introduced species.

In 1988, botanist Gerould Wilhelm, of the Morton Arboretum near Chicago, proclaimed the algific slopes of Bixby's Bear Creek Valley "absolutely the best such slopes I have ever seen." He called a visit to Bixby "a genuine thrill."

But you don't have to be a scientist to appreciate Bixby. Anyone can relish the sound of Bear Creek gurgling over moss-covered boulders as it slithers its way through the cool, lush-green shade of a deep ravine. A green frog "plucks" its banjo-like call from beneath the stream bank. Light-green patches of duckweed, with thousands of perfect, tiny leaves, dot the quieter pools. Blocks of dolomite—some larger than an automobile—lie strewn along and in the stream, and at the base of the canyon slopes.

Anglers sometimes prowl the little creek in search of wily brown trout that may have grown to lunker size after being stocked as fingerlings.

In the spring, the forest floor is dotted with thousands of wildflowers: Dutchman's breeches, bellwort, bishop's cap, toothwort, sweet William, wild geranium and nodding trillium—and an occasional yellow lady's slipper orchid. Later in the season, delicate, dangling yellow or orange blossoms accent streamside clumps of jewelweed. Tall coneflowers, with drooping, pale-yellow flowers, stretch above the rich, shady stream banks.

Up a side canyon, only a pool of still water in an otherwise dry ravine marks where runoff from spring snow melt had cascaded over a ledge and into the valley a few weeks before.

A delightful bird chorus floats through the trees. Along with the more common songs—phoebe, house wren, northern yellowthroat, redstart, indigo bunting, warbling vireo—you may hear the melodious wood thrush, or the downward-spiraling trill of the veery, or the staccato "kuk-kuk-kuk" of a pileated woodpecker.

Bixby even smells wild and lush, with the earthy aroma of fallen logs moldering back to the soil, the fresh scents of myriad green leaves, and the cool, moist air that hangs over the stream.

#### THE BEAUTY SPOTS OF IOWA

R. J. Bixby and his family may have sought that same peace and solitude when they bought 84 acres of land that would become the nucleus of Bixby State Park, and the expanded Bixby State Preserve. Bixby, who was a businessman and state legislator from Edgewood in the late 1800s, built a summer cabin at the site. The Bixbys welcomed public use of the area, which became known locally as "Bixby's Park."

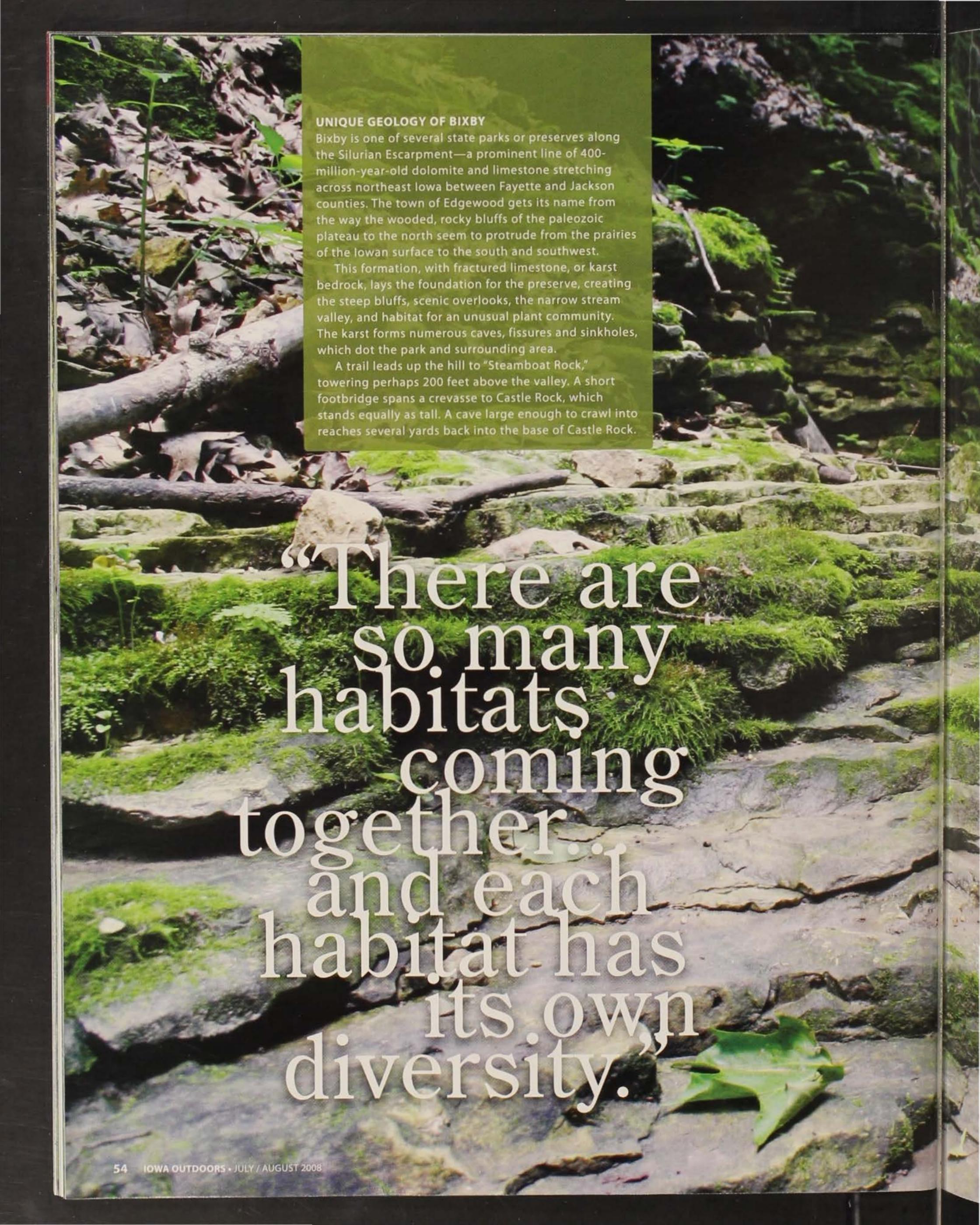
Botanist Louis H. Pammel, who helped establish the first State Board of Conservation in 1917, praised the Bixby family in the 1919 book, *Public Parks of Iowa*.

"Some men and women for the pure love of nature have whole-heartedly set aside areas to be preserved so that not only the present, but future generations can enjoy what has been given to us," Pammel wrote, after a visit to the site. "It was, indeed, a rare pleasure to view one of the beauty spots of Iowa."

Pammel described leaving the fertile prairies and driving down a steep road to reach the Bixby property. "This ravine connects with a larger one, the real mecca of the lover of nature," he said. "A beautiful stream of pure water fed by springs comes from the adjacent outcrop of limestone." He marveled at the



1) Cool, shady ravines offer solitude. 2) Late spring bloom of sweet William (*Phlox divaricata*) graces rich, moist soils in deep woods. 3) A painted turtle (*Chrysemys picta*) basks in the sun of Bear Creek. Active until late October, they are one of the first reptiles to emerge from hibernation. 4) Duckweed, sugar maple and red oak leaves float in cold, clear spring waters. 5) Bellwort (*Uvularia grandiflora*) flower hangs from April to June in rich, moist upland forests. Its stalks and leaves were cooked and eaten as greens by settlers, with shoots used like asparagus. 6) Dolomite rocks show layering and jointing, or vertical cracks, that allow water and air to move underground. Winter's frigid air seeps deep underground creating a subterranean freezer. Water from spring thaws turns to ice upon hitting the frozen rock, creating microclimates of cool airflow during the summer that host rare plant and animal species. 7) Cold spring water flows from between fern covered rocks. 8) Toothwort (*Dentaria laciniata*) blooms March to May across Iowa in large patches. Pioneers used its tubers for cooking. 9) A gravel road winds and descends into the park valley. To the left of the road is the narrow canyon shown on the next pages. 10) Close up of the gurgling spring hidden in a rocky crevice in photo seven.



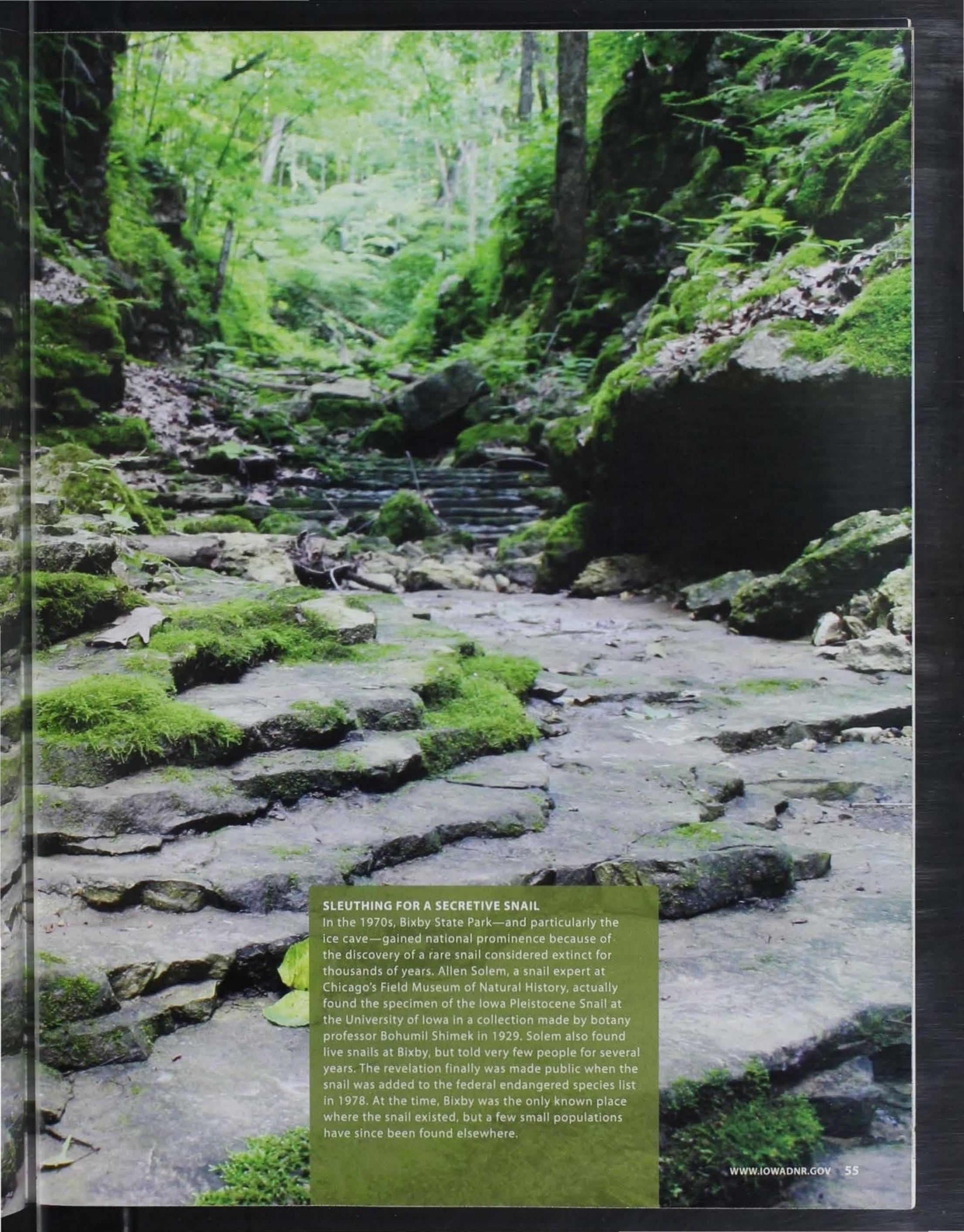
**UNIQUE GEOLOGY OF BIXBY**

Bixby is one of several state parks or preserves along the Silurian Escarpment—a prominent line of 400-million-year-old dolomite and limestone stretching across northeast Iowa between Fayette and Jackson counties. The town of Edgewood gets its name from the way the wooded, rocky bluffs of the paleozoic plateau to the north seem to protrude from the prairies of the lowan surface to the south and southwest.

This formation, with fractured limestone, or karst bedrock, lays the foundation for the preserve, creating the steep bluffs, scenic overlooks, the narrow stream valley, and habitat for an unusual plant community. The karst forms numerous caves, fissures and sinkholes, which dot the park and surrounding area.

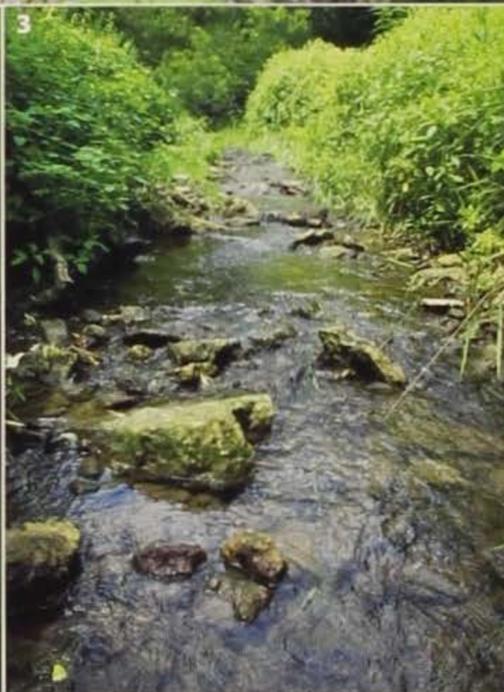
A trail leads up the hill to “Steamboat Rock,” towering perhaps 200 feet above the valley. A short footbridge spans a crevasse to Castle Rock, which stands equally as tall. A cave large enough to crawl into reaches several yards back into the base of Castle Rock.

“There are  
so many  
habitats  
coming  
together...  
and each  
habitat has  
its own  
diversity.”

A photograph of a forest stream. The water flows over a series of large, flat, grey rocks that are heavily covered in bright green moss. The surrounding forest is dense with various shades of green, including ferns and other leafy plants. The lighting is soft, suggesting a shaded forest environment.

### SLEUTHING FOR A SECRETIVE SNAIL

In the 1970s, Bixby State Park—and particularly the ice cave—gained national prominence because of the discovery of a rare snail considered extinct for thousands of years. Allen Solem, a snail expert at Chicago's Field Museum of Natural History, actually found the specimen of the Iowa Pleistocene Snail at the University of Iowa in a collection made by botany professor Bohumil Shimek in 1929. Solem also found live snails at Bixby, but told very few people for several years. The revelation finally was made public when the snail was added to the federal endangered species list in 1978. At the time, Bixby was the only known place where the snail existed, but a few small populations have since been found elsewhere.



1&10) Calcium-shelled creatures and sediment of ancient shallow seas formed limestone, but over time magnesium replaced some of the calcium to form dolomite, an erosion resistant rock. 2) Roots of the rare yellow lady's slipper (*Cypripedium calceolus*) benefit from local soil fungi that aids nutrient uptake. Attempts to transplant lady's slipper upsets this root-fungi balance—killing the plant. Removing wildflowers is illegal and unethical and decreases their survival chances. 3) Bear Creek beckons trout anglers. 4) Settlers used tannins in wild geranium (*Geranium maculatum*) to tan hides. 5) Soaring shady trees, cold springs and the ice cave make Bixby a cool summer bet. 6) Liverworts are found on rocks near dripping seeps and splashing springs. The plant lacks water-conducting vessels and must absorb water through direct contact. 7) Nodding trillium (*Trillium cernuum*) blooms March to June in moist loose soil woodlands. 8) This log cabin built in 1897 on the R. J. Bixby property near Bear Creek later became the site of Bixby State Park. 9) On sultry days the ice cave steps are shrouded in foggy, chilled air.

diversity of trees and shrubs, from Canada yew and paper birch to butternut and red oak. He called the valley “a paradise for the lover of plants and the lover of wild life in general.”

Family traditions—and even some DNR publications—hold that R. J. Bixby donated the land to the state of Iowa for a park. In reality, the state purchased the land from I. P. Gates in 1926—apparently after the Bixby family had suffered financial problems and lost title to the property. Edgewood area residents lobbied for the acquisition, raised part of the money and continued to praise the Bixbys for their long-time preservation efforts.

Although the topography of the Bixby valley has changed little in the past century, management of the site has continued to evolve. Initially, the Bixbys saw their land as a summer getaway, with a comfortable log cabin reached by horse and buggy or automobile.

With state park status came more roads and picnic areas. In the 1930s, Civilian Conservation Corps (CCC) crews built picnic areas, latrines, shelters, trails and steps to the ice cave. The CCC “boys” also installed pipes and a holding pool for a spring. Over the years, local volunteers helped clean and maintain the park.

In the 1970s, park management was transferred to

the Clayton County Conservation Board. The state took over again after Bixby was dedicated as a State Preserve in 1979. The preserve designation recognized the unique biological and geological features of the original park, and of a 115-acre addition acquired in 1978 along the rugged stream valley to the west.

Now DNR parks staff maintains only a picnic shelter and parking lot near the preserve entrance. A steel gate over the mouth of the ice cave prevents people from entering the slippery chamber and either injuring themselves or damaging the unstable rock formations. A wooden guardrail limits access to adjacent algalic slopes. The rest of the preserve is relatively undeveloped, except for a trail up the north side of the valley to an overlook at Steamboat Rock.

A short footbridge leads to adjacent Castle Rock.

After decades of change, however, a 1938 newspaper article about Bixby still rings true:

“More spectacular scenery is crowded there . . . than in any tract of land of similar size in Iowa. The massive tumbled rocks, the steep wooded hills, the clear ice-cold water from the many springs and the cave with ice in it throughout the summer, awe one and so thrills the visitor that his visit to the park is never forgotten.”

The impressive silence of the place is outstanding. 🐾



#### HOW TO GET THERE

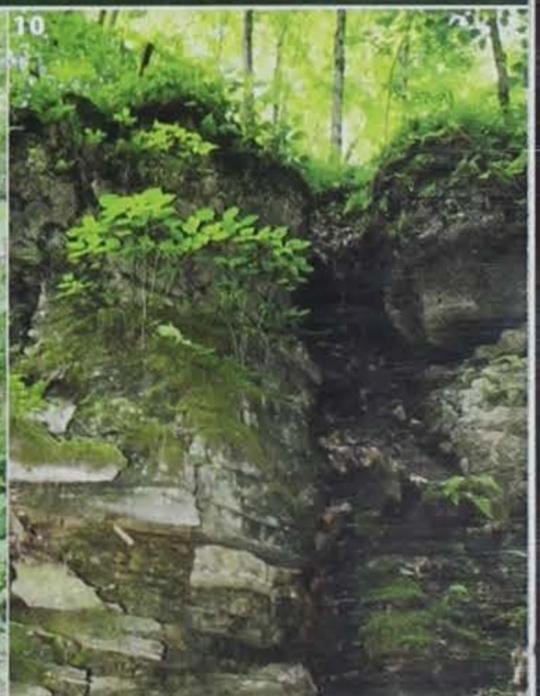
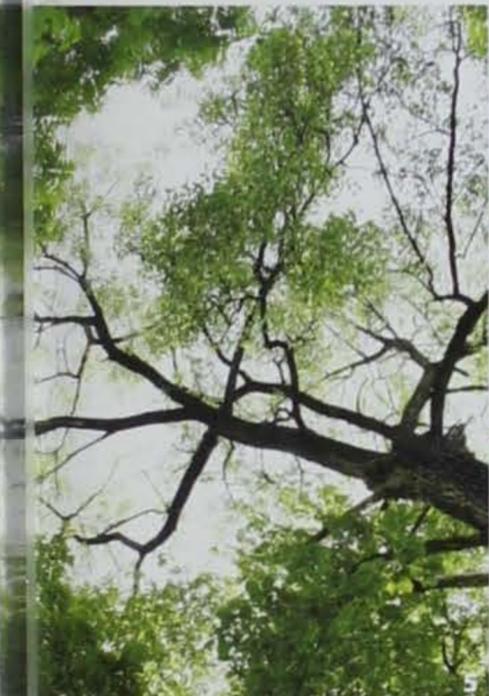
Bixby State Preserve is about two miles north of Edgewood along Fortune Avenue, a gravel road. Use extreme caution if Bear Creek is flowing over the low-water crossing. The road through the preserve is gated and not maintained in the winter, although walk-in access is permitted.

#### BEAR CREEK

Although black bears have been reported in Clayton County only a handful of times in the last century, the animals commonly roamed the area more than 150 years ago. Time-worn stories suggest the tiny creek flowing through Bixby is aptly named.

A favorite tale, from an 1878 history of Delaware County, recounted the adventures of brothers Samuel and Missouri Dickson, when they tracked a bear north of Edgewood in 1839.

Soon after they had parted, Missouri came up with the bear, which had curled down to sleep beneath an overhanging rock. He fired his rifle and wounded the bear, when it immediately turned upon him, and he fled in the direction of the creek. Dickson wrote of his adventure: "Fur half a mile or so, there wuz nuthin' more'n daylight atween us, an' if Sam hadn't afired just as I wuz hoovin' it across the crik, there'd abeen one old bear hunter a considerably spiled."



# GREENING UP YOUR YARD

*Global warming, greenhouse gases, carbon footprints, water quality—the problems are huge and the impact we can deliver seems minimal. But, you can do something simple—cut back on yardwork.*

Most people don't think about the carbon footprint left by their lawns and lawn care. Green is green, right? However, if you add it all up, America's 31.6 million acres of turf have a big impact.

Lawn care for an individual household can add up to one-third of the water bill during summer months. That water takes energy to pump and treat—costing about \$4 billion and using 56 billion kilowatt-hours of electricity per year on a nationwide scale. Fuel, fertilizer and carbon emissions all have their costs to the environment, too.

But we can make a difference, one yard at a time. Simple changes in your management style and landscaping can save more than money. Use these tips to save energy, time, greenhouse gas emissions and water.

## 10 COST-FREE TIPS

1. Set your mower high to leave two to 3.5 inches of grass blade. Cut no more than one-third of the grass blade at a time to increase plant health and retain moisture.
2. Let lawns go dormant during the hottest weeks of summer. Most turf grasses will survive more than a month without water.
3. If you must have green grass, water during the early morning (most preferable time to prevent disease problems) or evening to reduce evaporation.
4. Sprinklers put water on sidewalks, streets or lose spray to the air. Use drip hoses or soak systems to place water where it's needed to cut water use up to 50 percent.

5. Don't over water. Add rainfall and watering together by setting up a rain gauge or an open tin can. Most lawns need about one inch of water per week, so only water enough to make up for lack of rainfall.

6. Use alarm clocks, kitchen timers, outdoor water timers or rain sensors to make sure you turn the water off.

7. Water deeply and slowly. Give water time to soak into the soil to promote deep roots and healthy plants. You'll prevent water pollution, too, by keeping nutrients in your yard, not in runoff.

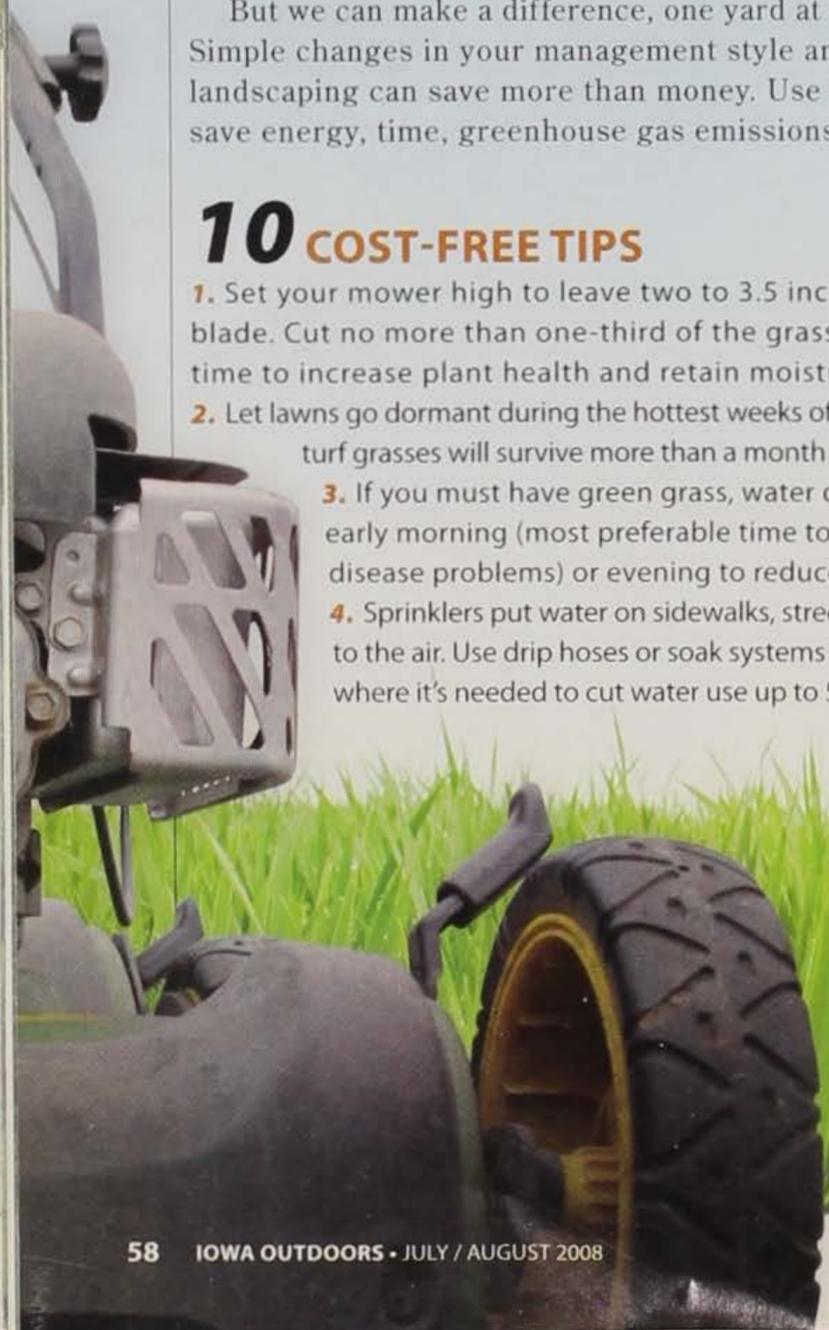
8. Take advantage of rainfall by directing downspouts into shrubs and gardens, and away from your foundation.

9. Minimize fertilizer (often made using natural gas) use, particularly in dry years. Heavily fertilized turf looks great, but uses more water and can actually stress plants during a drought. The most important time to fertilize is during the fall, so plants go into winter with strong root systems and extra food supplies. Use a slow release product and apply it during dry spells.

10. If washing your car at home, park it on the lawn to take advantage of the runoff and keep pollutants from storm sewers.

## 10 LOW-COST TIPS

1. Use mulch around plants and in gardens to reduce evaporation and keep weeds at bay.
2. Add compost, cow manure, peat or other organic matter to increase your soil's capacity to absorb water and add nutrients.
3. Start a compost pile to decompose yard wastes instead of sending





them to a city facility. See guidelines from Iowa State University Extension at [www.extension.iastate.edu/Publications/PM683.pdf](http://www.extension.iastate.edu/Publications/PM683.pdf) and from EarthEasy at [www.eartheasy.com](http://www.eartheasy.com).

4. Add composted leaves and grass clippings to the top layer of your lawn to provide organic matter and fertilizer.
5. Consider replacing annuals with native ecotype perennials for low maintenance and lower water requirements. Generally, native plants will perform better and require less water, fertilizer, and pest or disease management because they have adapted to local conditions over thousands of years. For more on natives, see Iowa State University Extension publications at [www.extension.iastate.edu/Publications/SUL20.pdf](http://www.extension.iastate.edu/Publications/SUL20.pdf) or [www.extension.iastate.edu/Publications/SUL18.pdf](http://www.extension.iastate.edu/Publications/SUL18.pdf)
6. Consider downsizing large expanses of lawn, replacing turf grass with native plants that also attract birds and butterflies. You'll reduce time and gas used for mowing, while decreasing maintenance and costs for fertilizer and pesticides.
7. As you plan garden areas, put plants with the same moisture requirements in groupings so you can water according to their needs.
8. Use a mulching lawn mower to cut down on mowing time and carbon emissions while adding organic matter and fertilizer to your lawn.
9. Consider an electric mower to reduce air and noise pollution. Or, in a small yard, a modern push mower can limit greenhouse gas emissions while providing a calorie-cutting workout.
10. Check garden hoses and hose fittings for leaks. Fix leaks and replace washers in the hose ends. Use the "Drip Calculator"

at [www.awwa.org/awwa/waterwiser/dripcalc.cfm](http://www.awwa.org/awwa/waterwiser/dripcalc.cfm) to determine how much water a leaky hose is wasting. Just 12 drops per minute can add up to 52 gallons per month or 631 gallons per year. This can save you money inside your house, too.

### 3 HIGHER COST TIPS TO REDUCE CARBON FOOTPRINTS

1. Select native tree species and plant them to shade other plantings, reducing heat stress and water losses. Properly placed and selected, they can shade your house in summer and protect it from winter winds, saving energy.
2. Consider adding rain barrels to collect rainwater that drains from your roof. Modern systems have lids, and can easily be added to downspouts, storing water on-site until you need it.
3. If you are considering collecting and reusing gray water (untreated water used in showers, sinks and clothes washers) in your yard, research the system and economics carefully. Many high tech systems may not be cost effective. However, some effective, newer technologies exist.

#### ADDITIONAL RESOURCES:

- WATER SAVER HOME [www.h2ouse.org/index.cfm](http://www.h2ouse.org/index.cfm)
- SAFELAWNS [www.safelawns.org](http://www.safelawns.org)
- EARTH OBSERVATORY <http://earthobservatory.nasa.gov/Study/Lawn/printall.php>
- AMES SMART WATER [www.cityofames.org/WaterWeb/Conservation/LandscapeTips.htm](http://www.cityofames.org/WaterWeb/Conservation/LandscapeTips.htm)

## MY BACKYARD

# Toddler Proof Your Toilet With a **DUAL FLUSH WATER SAVER**

Do you have a toddler that loves to flush an entire roll of toilet paper? It's no problem for the water-stingy dual flush toilet, devised down-under by water-savings minded-Australians at Caroma Industries.

Besides handling large waste volumes, "this thing saves a lot of water and the big thing is it works really well," says Joel Hirschberg, owner of Green Building Supply in Fairfield. "We sell them all over the United States." He should know—he fields 100 calls a day from customers looking for environmentally friendly and money-saving products. He also replaced a toilet that plugged up constantly at his home with a dual flush model.

The secret is the 4-inch outlet, or trap, at the bottom of the bowl—nearly double that of typical Yankee toilets. Substantial water and sewer rate savings of up to 68 percent arise from better design—a forceful wash down approach that pushes waste, versus the swirling water siphon design of standard toilets that pulls waste. Two buttons on the tank allow users to flush with a scant 0.8 gallons for liquid waste or 1.6 gallons for solid waste. "They work so well, most people never even use the 1.6 solid waste flush button," says Hirschberg, who adds that older toilets can use up to seven gallons per flush.

Prices range from \$350 to \$492. [www.greenbuildingsupply.com](http://www.greenbuildingsupply.com)  
508 N. Second Street, Fairfield, IA 52556 (800)405-0222  
Find other Iowa vendors at [www.caromausa.com](http://www.caromausa.com)



## SAVE 50 CENTS A GALLON & CUT CARBON EMISSIONS

Saving gas money and reducing carbon dioxide emissions is as simple as slowing down on the highway. Every 10 miles per hour driven over 60 mph is like adding an extra 54 cents per gallon. Why? Just hold an outstretched arm out from an open window and feel the pushback—that's aerodynamic drag and it cuts fuel efficiency like a meat cleaver.

"When cars move through space, they tend to plow through the air," says transportation specialist Dennis Kroeger of Iowa State University's Center for Transportation Research and Education in Ames. "That air swirls all around and beneath the car," he says. As speed doubles, the aerodynamic force quadruples, creating four times the work. Driving faster does the work in less time, which requires up to eight times the power—and a lot more gasoline and carbon emissions. As a rule, assume that each five mph you drive over 60 mph is like paying an extra quarter a gallon for gas.



## Omelets In a Bag

The smell of breakfast cooking is quintessential camping. But you don't need to spend hours over a fire or camp stove to serve a hearty, hot breakfast. Custom-made omelets in a bag satisfy the entire clan without the mess and time of cooking conventional omelets. Everyone gets their own made-to-order omelet, and clean-up is a breeze.

### Sealable plastic storage bags

Enough eggs to feed the crew, about two per person

Milk

Fixings of choice, chopped (ham, bacon, sausage, onions, green peppers, mushrooms, etc.)

Toppings of choice (salsa, cheese, etc.)

Salt and pepper to taste

Whether preparing at home or camp, label each bag with the camper's name. In a large bowl, premix eggs,

milk and salt and pepper to desired omelet consistency. Ladle  $\frac{1}{2}$  to 1 cup egg mixture into each bag. Cut and add personalized fixings to each bag to create a customized meal. Remove excess air and seal. Store in fridge, cooler or cook immediately. When ready to serve, boil large pot of water. Carefully drop bag in boiling water and cook 10 to 13 minutes. Remove, cut top of bag and roll omelet onto plate. Garnish with desired toppings.

### TIPS FOR THE PERFECT OMELET IN A BAG

- Use heavy duty-freezer bags—they better withstand touching hot pan sides.
- Knead bags before placing in water and with tongs during cooking to ensure better mixing.
- Remove as much air as possible from the bag before cooking.
- Pre-cook fixings at home to speed process.





LaCorsetteQuail



Six courses ensure diners won't go away hungry—or disappointed—from John and Anne Gerken's upscale country fare. It just might be hard to decide between the prime rib encrusted with Templeton Rye peppercorns or the salmon fillets en papillote with julienne vegetables. Cap off the night with a relaxing, romantic evening in one of the five cozy guest rooms.

## Simple, hearty everyday recipes turn wild game into memorable meals JUST BLOCKS FROM DOWNTOWN NEWTON, LA CORSETTE MAISON INN—KNOWN FOR ITS ELEGANT, GOURMET MEALS—TURNS WILD GAME INTO "UPSCALE COUNTRY" FARE

### FALL VENISON STEW

- 1½ pounds venison cut into bite-size pieces
- 1 green pepper cut into bite-size pieces
- 2 tablespoons olive oil
- 1 large onion, chopped
- 3 cloves garlic, chopped
- 1 sweet potato or Iowa sugar pumpkin, cut into bite-size pieces
- ¾ cup tart dried cherries or cranberries
- 1 cup Iowa red wine
- 2 cups low sodium beef broth
- 1 cup water
- 1 tablespoon all-purpose flour
- 1 teaspoon cumin
- 1 teaspoon tumeric
- ½ teaspoon cayenne pepper (optional)
- salt and pepper to taste

For an added twist, smoke venison in perforated foil pack over low fire on grill for 20 to 25 minutes. Sauté onion and garlic in oil until soft. Add meat and brown for about 5 minutes. Add the flour and spices, mix and cook over medium heat. Add the wine, stock and water and simmer over low heat for 1½ to 2 hours. Add remaining ingredients and simmer until potatoes are soft but not mushy. Serve with homemade crusty sourdough bread and a hearty glass of red wine or stout with friends around a roaring fire.

### LA CORSETTE QUAIL

- 2-4 quail or pheasants

- 1 cup Iowa white wine
- 1 shallot, chopped
- 10 juniper berries, separated
- 1 tablespoons butter
- 2 ounces dry gin

Clean quail and snip wing ends at joint. Tuck wings under breast and tie legs together. Place quail breast-side up in baking dish lined with foil. Saute shallots in butter until soft. Add wine and 5 crushed juniper berries. Simmer over low heat until reduced by half. Strain into a separate sauce pan, mashing shallots and berries with a spoon to extract juices. Add the gin and remaining whole berries and reduce by half.



Sourdough Bread



Fall Venison Stew



Pecan Encrusted Catfish

Budget plenty of time for a meal at La Corsette, where dining is rightfully treated as an intimate social event where the food is as appreciated as the company. Dinner is a leisurely three-hour affair set to the romantic backdrop of soft piano music. Daily entrées are set by the first reservation for the day, and John designs the rest around the choice.

**HAVE A GOOD RECIPE OF WILD FOODS TO SHARE? Send to: WILDCUISINE@DNR.IOWA.GOV**

Brush birds with sauce and let sit for 15 minutes in refrigerator. Brush again and place in preheated 375° oven for 30 to 40 minutes or until breast is golden brown. Remove and brush birds with sauce. Serve over wild rice, pouring remaining sauce on top. Sauce also works well with chicken and light fish, like tuna. Quail can be served as appetizer or main course.

**PECAN ENCRUSTED CATFISH**

- 4 catfish fillets, 4-6 ounces each
- ½ cup melted butter
- 2 tablespoons Dijon mustard
- 1 cup fine ground pecans
- 1 cup fine ground sourdough bread crumbs

- SAUCE:**
- 1 cup sour cream or plain yogurt
  - 2 tablespoons Dijon mustard
  - 1 teaspoon milk

Mix melted butter and mustard and dip catfish in mixture, coating both sides. Dredge fish in crumb and pecan mixture, pressing dry ingredients into fish to evenly coat both sides. Place fish on greased baking sheet and place in a 400° preheated oven. Bake 30 minutes until brown. Mix sauce ingredients and heat in saucepan on low until warm. Spoon over fish and serve. Coating also works well on chicken and pork. Meat can be baked or fried.



**La Corsette Maison Inn**

629 First Ave. E.

Newton

641-792-6833

lacorsettemaison@aol.com

www.larcorsette.com

**HOURS:**

LUNCH: Reservation only. Requires 48-hour advance notice.

DINNER: Reservation only. Call by noon day of dining.

LIQUOR: Wide selection of domestic, imported and local wines.

# WATER STRIDERS

*(Heteroptera - Gerridae)* They skate across the water with the elegance of an Olympic figure skater and the speed of a champion sprinter. Yet water striders aren't in it for fame and fortune. For them, it's a way of life.

**A.K.A.**

A member of the family *Gerridae*, water striders also go by the names Jesus bugs, water skeeters, water skaters, water skimmers, water skippers, water scooters, water bugs, magic bugs and pond skaters. Call them whatever you will, the names are apropos.

**ODDS AND ENDS**

Living almost solely above water, striders are tolerant to water pollution. Their bodies are covered in soft, velvety hairs that hold a thin film of air through which they breathe. Water strider nymphs grow for about a month before becoming adults. Adults can live for many months, sometimes even over-wintering inside a plant stem.

**WALKING ON WATER**

Until recently, experts thought the water strider's seemingly Biblical ability to walk on water was due to a wax secreted on the insect's legs and their light weight that prevented them from breaking the water surface tension. However, scientists now say the insect's legs are covered with microscopic hairs that trap tiny air bubbles, keeping their legs dry and allowing them to float.



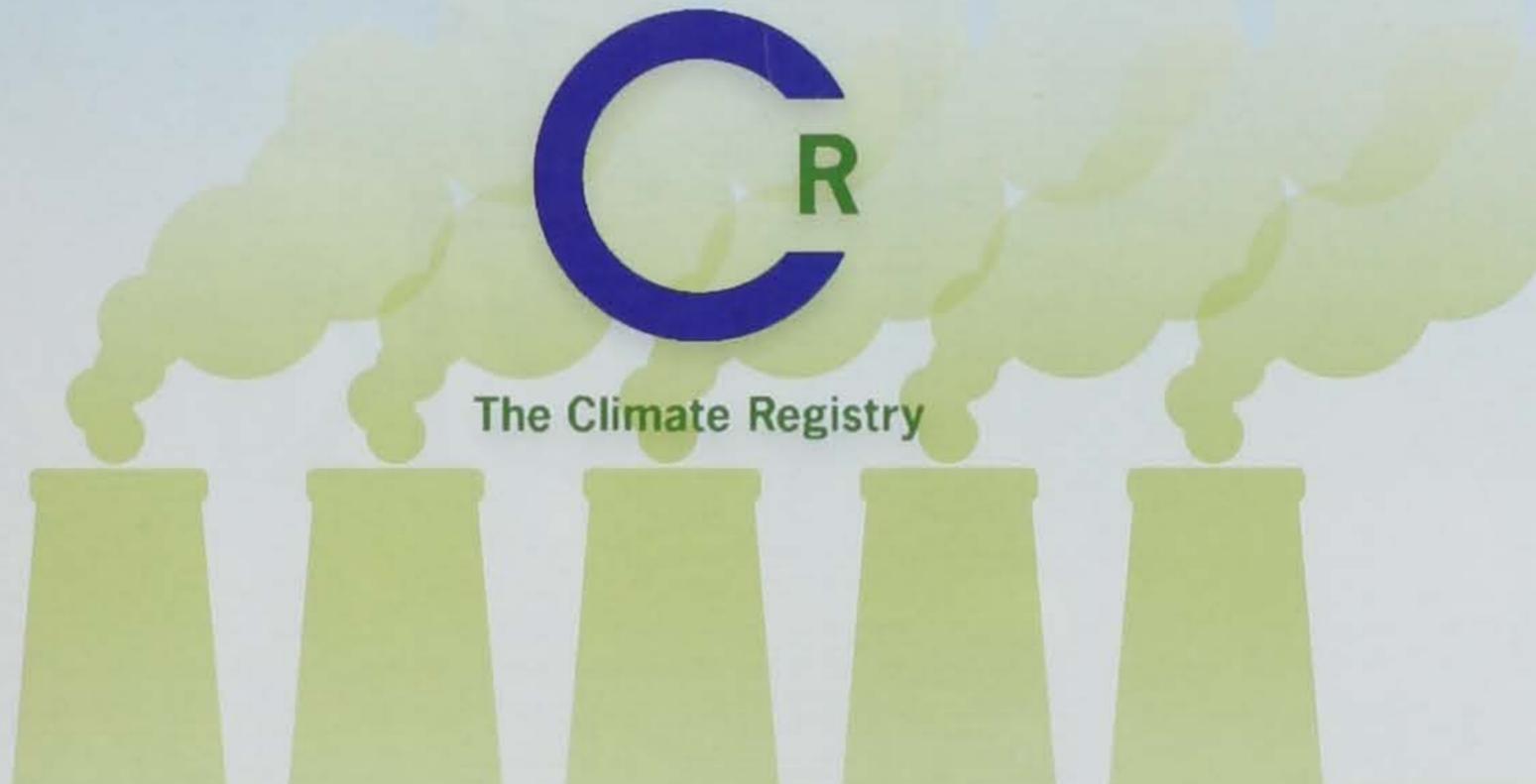
**EAT OR BE EATEN**

Water striders are finely adapted predators not above cannibalism when the pickings get slim. They are both predators and scavengers, feeding on a variety of aquatic invertebrates and insects, living or dead, that fall or float to the surface of the water. Injured dragonflies are a favorite, as are mosquito larvae and worms. They have a sharp mouthpart, called a rostrum, to pierce their prey and extract body juices. They must keep moving lest they become prey themselves to hungry fish below and avian attackers above. They can dive under water briefly to avoid predation, popping back to the surface when danger passes.

**IT'S ALL IN THE LEGS**

Water striders have six legs—two shorter front legs for detecting ripples on the water and subduing prey, two middle legs for propulsion and two back legs for steering. Their legs are also used to send "love ripples" on the water to attract potential mates.

## WHAT'S HAPPENING IN IOWA



### MIDAMERICAN ENERGY, ALCOA JOIN CLIMATE REGISTRY

MidAmerican Energy and Alcoa Inc. have become Founding Reporters in The Climate Registry, a non-profit organization established to measure and publicly report greenhouse gas emissions (GHG) in a common, accurate and transparent manner consistent across industry sectors and borders. Thirty-nine U.S. states (including Iowa), six Canadian provinces, three Native American tribes, two Mexican states and the District of Columbia are the founders of the organization.

Alcoa operates in more than 300 locations in 44 countries, including a secondary aluminum production facility in Davenport.

MidAmerican will start by reporting 2008 GHG emissions for all its Iowa facilities. Alcoa will begin transitional reporting in 2009 with its facilities in the state of Washington. All other Alcoa locations, including its Iowa facility, will report beginning in 2010.

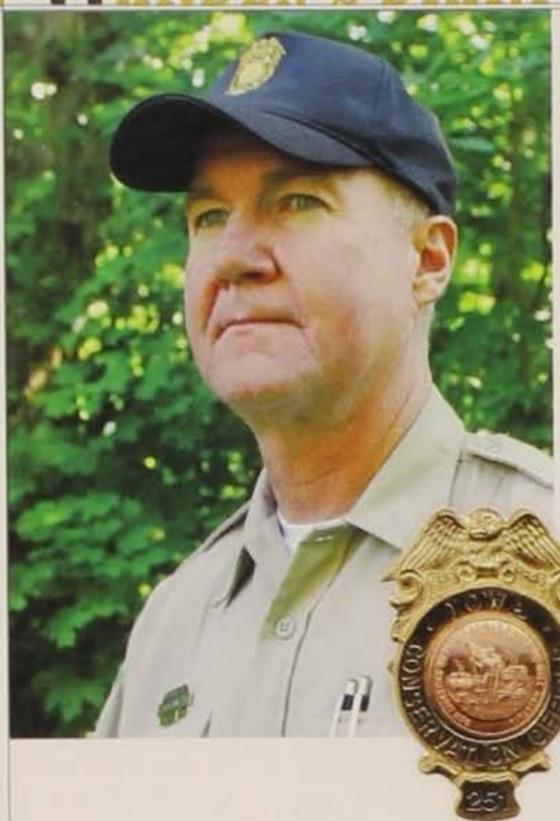
*"MidAmerican Energy has demonstrated exemplary environmental leadership by stepping forward to support The Climate Registry in its preliminary stages. We are deeply grateful for their integral support in helping to address the challenge of climate change,"* said Gina McCarthy, chair of The Climate Registry.

By voluntarily committing to measure, independently verify, and publicly report their greenhouse gas

emissions on an annual basis utilizing The Climate Registry General Reporting Protocol, both companies demonstrate a commitment to environmental stewardship. The protocol is based on the internationally recognized greenhouse gas emissions measurement standards of the World Resources Institute and World Business Council on Sustainability.

*"The Climate Registry provides a common tool to track greenhouse gas emissions and will provide accurate data to scientists and policymakers working to reduce emissions and address carbon sequestration,"* said Richard Leopold, Director of the Department of Natural Resources. *"MidAmerican Energy should be applauded for voluntarily joining the Registry. The DNR encourages other Iowa industries, educational institutions, nonprofits and other organizations to follow MidAmerican Energy's lead and report their greenhouse gas emissions to The Climate Registry."*

The Climate Registry supports both voluntary and regulatory programs. Iowa joined The Climate Registry in July 2007, which fulfilled the legal mandate to create a voluntary greenhouse gas registry in cooperation with states' climate change efforts. The DNR Air Quality Bureau provides administrative support for The Climate Registry in Iowa. Learn more at [www.theclimater registry.org](http://www.theclimater registry.org) or contact the DNR's Marnie Stein at 515-281-8468.



# For Jack

One of the best pieces of advice I ever got was very early in my career from one of my neighboring officers. I was somewhat out of sorts at the time, after receiving what I considered an unjust berating from someone I had ticketed for a violation. I know nobody likes getting one, but, man, this guy was all over me.

The officer gave me a, "been there before you," smile and said, "Just remember this. Whenever you are dealing with someone, at any given time, everyone is going through something." Then he walked away. He had ventured many more miles on a journey I had only begun. I've never forgotten what he told me. But, sometimes it's tough to remember.

Not too long ago my truck was in the shop getting an oil change. I was standing by the counter in the waiting room reading a magazine. A guy walked in, looked at the decals on my truck, looked at my uniform, and sneered in a tone for his audience, "D-N-R. Now there's the biggest

joke that ever was." That was followed by a perilously pregnant pause I'm sure which was designed for my response. My first thought was, "Well at least the guy can spell DNR."

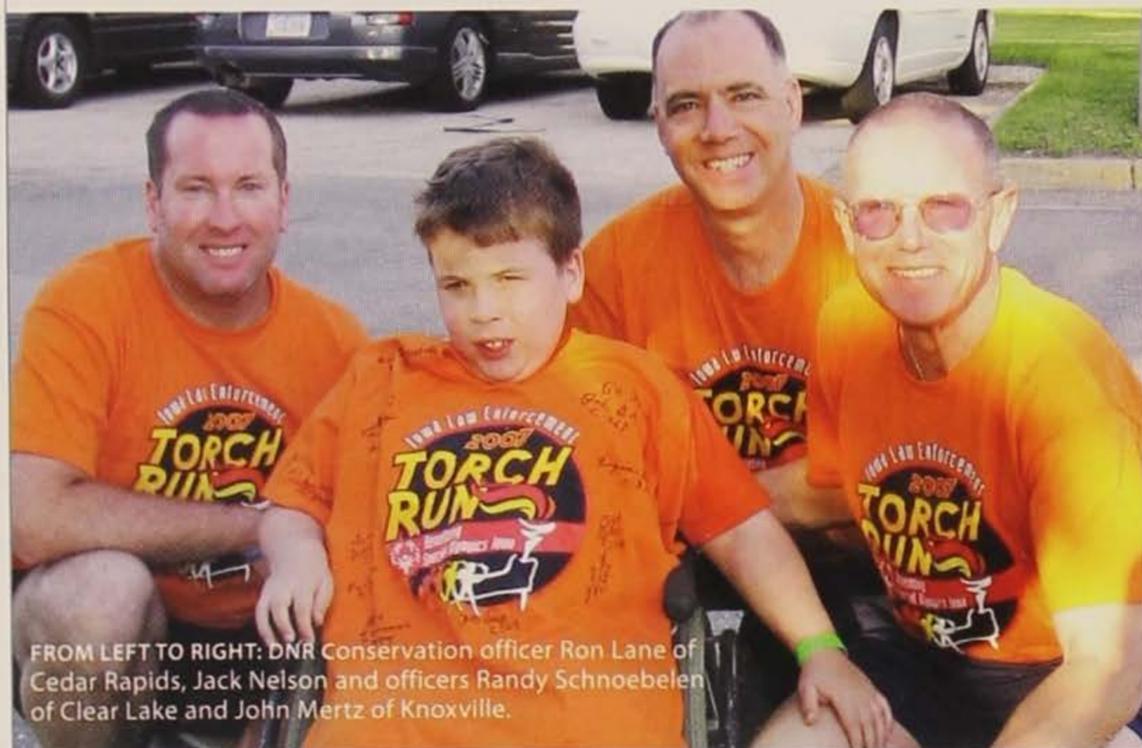
I noticed a few other people looking down at the floor or looking like they wished there was a hole into which they could fall. I've learned two important truths from all the hunting and fishing I've watched over all these years. The first is no one can shoot at you if you don't give them a target. The second is you won't end up on somebody's stringer if you don't rise to their bait. Fighting the urge to say, "If it's a joke, I don't get the punch line," I ignored him and continued to read the magazine. Evidently I wasn't any fun because he left.

I realize some people think when they pay someone else's salary, then they get to say whatever they feel, or they get to paint everybody with the same brush. I guess some call it justification. Where I was raised, it simply

would have been called incivility and bad manners, of which, sadly, seems in large supply sometimes.

I guess the unfortunate thing is they don't get to see the people I work with the way I do. Sometimes the only time one may encounter a public employee is in a confrontational situation. That's not always enjoyable, and the person may walk away with a one-sided opinion. They don't see the other side.

Here is that side. Every spring, one event many conservation and other law enforcement officers join is the Special Olympics Law Enforcement Torch Run. In May, officers carry a torch from Des Moines to Ames for the opening of the Special Olympics.



FROM LEFT TO RIGHT: DNR Conservation officer Ron Lane of Cedar Rapids, Jack Nelson and officers Randy Schnoebelen of Clear Lake and John Mertz of Knoxville.

PHOTOS: LEFT, CINDY HINKLE; RIGHT, JOHN MINTON



Jamie and Jennifer Nelson of Urbandale with son Jack. Jennifer is chief of the DNR's budget and finance bureau in Des Moines.

Each officer pledges to run or bicycle a certain distance of the route and secures monetary sponsorships from friends, family, organizations and businesses which help fund the Special Olympics. For years, IVESCO, an animal health products distributor in Iowa Falls, has generously sponsored me.

At the end of the run there is a barbecue for the participating officers, and then an opening ceremony as the torch and the athletes enter the stadium for the event.

Over the years it's been an adventure. One year it was stifling hot. We were running with an ambulance right behind us. "This must be a bad omen," I thought. The wind was coming from behind us and blowing the engine heat off the ambulance onto our backs. We finally convinced the driver to go away. Another time it was an absolute monsoon. Driving rain and wind in our faces made it miserable, but some way or another we still had fun. I think everyone involved thinks about the reason they are there, and are grateful they can make the run for someone who may be unable.

My distances in the run get shorter over the years while the aches and pains get bigger. In fact, last year I wasn't going to participate. Then I heard about Jack.

Jack is the son of a DNR employee in our Des Moines

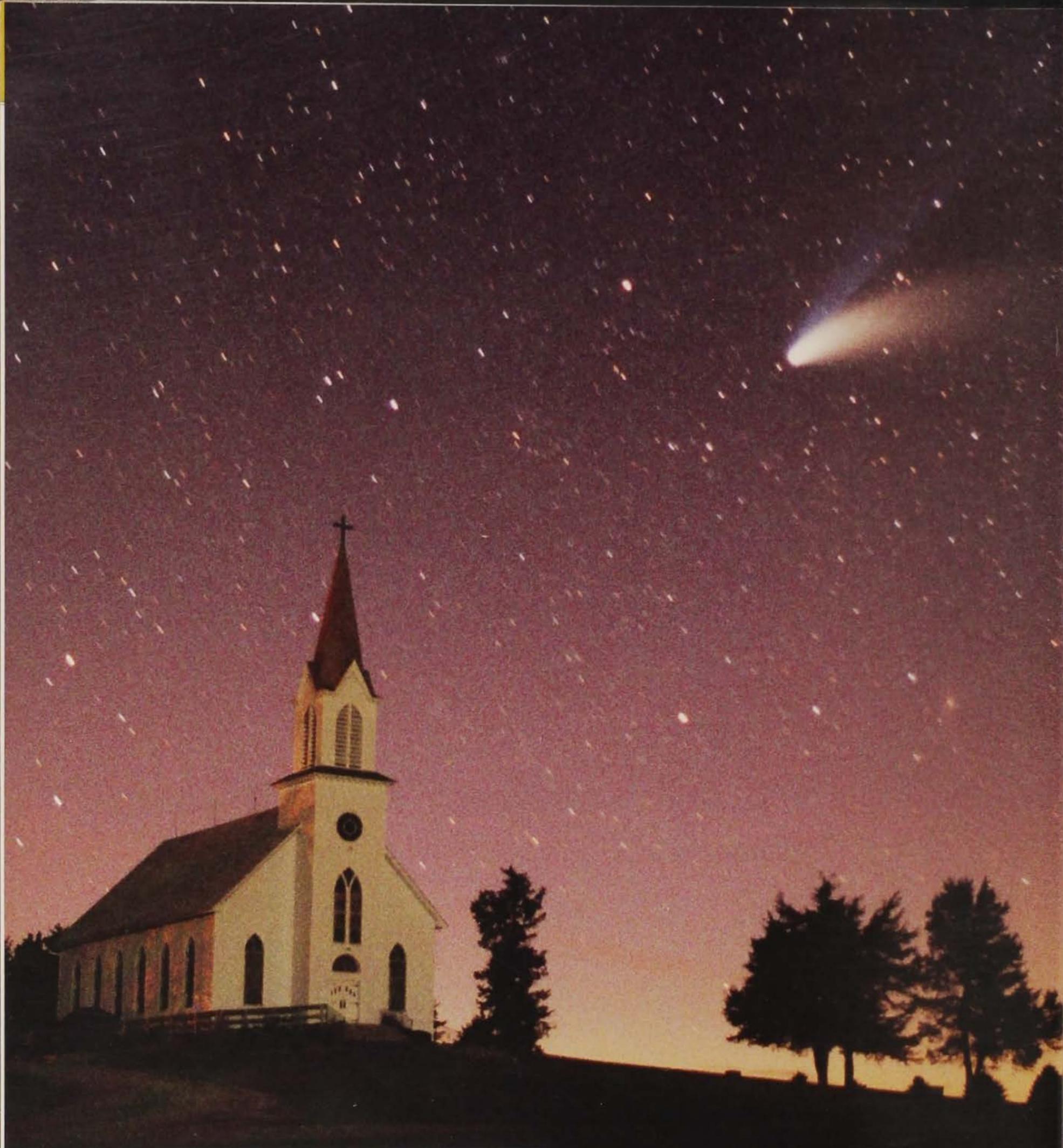
office. Eight years old, and an outgoing ball of fire, he was going to enter some wheelchair events. John Mertz, the officer who organizes our part in the Torch Run every year, told us about Jack. Our bureau chief had bought one of the Torch Run T-shirts that are given to every runner. Before the run, each officer autographed the T-shirt, some with a word of encouragement added, to give to Jack after the Torch Run.

I heard about Jack and knew I had to get out there on the road with my comrades. Aches or pains? No complaints. I gave it three miles with some of the men and women giving much more.

After the run was over, the autographed shirt was given to Jack. I'm told he was so excited he wore it in the opening ceremonies. In fact, he went on to medal. A gold medal in the 30 meter wheelchair slalom race! Not bad for his first Olympics!

I wish you knew my co-workers like I know them. You know them as state employees. But I know them as people who work hard; people who get involved in boards and organizations; people who go to their churches; people who give of themselves and their time.

And, yes, people who, like everyone else, at any given time, are going through something. 🐾



State Library Of Iowa  
State Documents Center  
Miller Building  
Des Moines, Iowa

**Hale-Bopp comet** over St. Paul's Church, 10 miles northeast of Boone, on Easter Sunday 1997. The church, built in 1898, sits on a knoll of glacial deposits left 13,500 years earlier.

As boulders of ice, comets partially melt as they near the sun, leaving debris trails. Meteor showers occur as the Earth passes through the debris. This summer's Perseid meteor showers are linked to the comet, **Swift-Tuttle**.