IOWA OUTDOORS

JULY / AUGUST 2015

THE DNR'S MAGAZINE OF CONSERVATION AND RECREATION

IN THIS ISSUE:

ANCHORS AWEIGH

RACES PUT CREWS' METTLE TO THE TEST

Weed Razer

Tools for controlling Aquatic vegetation

The most efficient and effective tool made for removing submerged weeds.

Clears Your Lake or Pond Weeds in Minutes

Visit WeedRazers.com Today!

Using the Weed Razer is simple:

1. *Give it a toss*
2. *Let it sink*
3. *Pull it in*

Clears a path 48" wide– returns weed free!

Toll Free: 877-356-6455 • www.WeedRazers.com

BISON DAY

NEAL SMITH NATIONAL WILDLIFE REFUGE

AUGUST 1, 2015

• 10 AM - 3 PM •

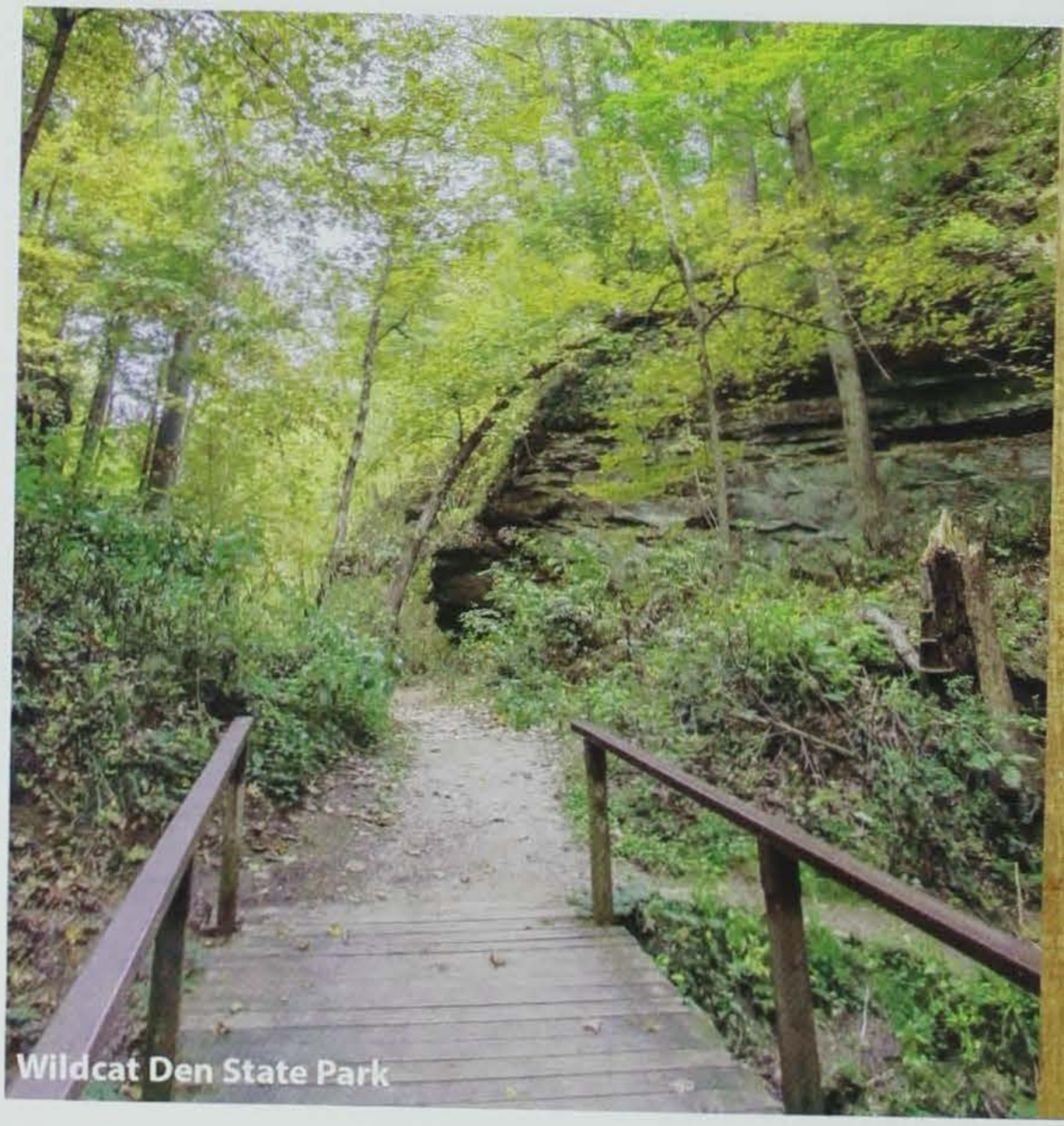
Flint knapping
Arts & crafts
Bison Chip Toss
Music & storytelling
Spinning & weaving
Ropemaking

$5 bison burger lunch

Pre-settlement displays

Neal Smith NWR
9981 Pacific St.,
Prairie City, Iowa
www.fws.gov/refuge/neal_smith
515-994-3400

FREE ADMISSION



Wildcat Den State Park

Meetings with Mother Nature are...

• MADE IN •

MUSCATINE IOWA

VISITMUSCATINE.COM

#THISISIOWA

VisitMuscatine.com

563-272-2534

Contents

JULY / AUGUST 2015

FEATURES

ABOUT THE COVER
The thought of Iowa being a popular sailing state may be surprising, given the fact there are few "big waters" here. Yet the first yacht club in Iowa started in 1877, just 31 short years after statehood, and The University of Iowa's sailing club celebrates its 50th anniversary this year. PHOTO BY *DAN WEEKS*

ABOUT THIS PHOTO
If you are struggling to fill your birding checklist based on calls rather than sightings, the song of a catbird is a no-brainer. The meow-like sound is unmistakable. Learn how to attract catbirds, and other species, on pages 34-41. PHOTO BY *BRIAN BUTTON*

Contents

JULY / AUGUST 2015

ABOUT THIS PHOTO
Whether it's a relaxing day effortlessly skitting the surface of the water, or all-hands-on-deck winner-takes-all racing, sailing has firm footing in Iowa. Regattas are scheduled most weekends during the summer, and clubs are offering lessons to learn. **PHOTO BY** ***DAN WEEKS***

DEPARTMENTS

Contributors

Native Midwesterner and freelance writer **ANDY BORBELY** now lives in New Orleans to be close to his beloved Mississippi River. He draws inspiration from music, whiskey and good company as he writes a novel and plans his next adventure. He has a degree from Yale University in environmental studies and psychology.

CANDACE ORD MANROE is a freelance writer specializing in travel, design and the outdoors. She is the author of 19 books and numerous articles for national and state magazines and major metropolitan newspapers. Among those are *Texas Highways*, *Better Homes & Gardens*, *Architectural Digest*, *The Dallas Morning News*, *Fort Worth Star-Telegram* and *The Des Moines Register*. A former editor for *Traditional Home* and *Country Home* magazines, she enjoys birding, camping and hiking.

MIKE WHYE is a Council Bluffs-based freelance writer-photographer who's created Iowa images and stories for years. His two guidebooks, *Great Iowa Weekend Adventures* and *The Great Iowa Touring Book*, are at *amazon.com*.

BRIAN GIBBS, Clayton County naturalist, has been addicted to wild places ever since his father first took him trout fishing in Yellow River State Forest. His passion for teaching others about enjoying and conserving natural beauty has led him to work in such scenic places as Glacier National Park. When not teaching, Gibbs explores the natural beauty hidden amongst the bluffs and valleys of northeast Iowa.

Des Moines writer **SANDY FLAHIVE** likes discovering the hidden gems in Iowa's many nooks and crannies and spending time at her remote cabin near Stephens State Forest in southern Iowa.

IOWA OUTDOORS

JULY / AUGUST 2015 • VOLUME 74 • ISSUE 4

Iowa Outdoors (ISSN 0021-0471) is published bimonthly by the Department of Natural Resources, 502 E. 9th St., Des Moines, IA 50319. Periodicals postage paid Des Moines, IA. **SUBSCRIPTION RATES: $15 FOR ONE YEAR, $24 FOR TWO YEARS AND $30 FOR THREE YEARS. PRICES SUBJECT TO CHANGE WITHOUT NOTICE.** Include mailing label for renewals and address changes. **POSTMASTER**: Send changes to *Iowa Outdoors*, P.O. Box 37831, Boone, IA 50037-0831.

DNR MISSION

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

EDITORIAL MISSION

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

MAKE A DIFFERENCE

DNR volunteer programs help Iowans give back to lands, waters and skies. *515-725-8261* or *iowadnr.gov/volunteer*

HOW TO DONATE

Charitable giving of land, funds, goods and services greatly enhances Iowa's outdoors. Call Kim Rasler at *515-725-8440*.

SHOW YOUR SUPPORT

Support wildlife diversity and REAP. Take your license plates and vehicle registration to your county treasurer's office to buy a pheasant, eagle, goldfinch, deer or trout natural resources plate.

SUBSCRIBER SERVICES

To subscribe, or for any subscription issues or questions, call **1.800.361.8072** Monday through Friday from 7 a.m. to 11 p.m. or weekends 8 a.m. to 6 p.m. For ease in processing, please have an issue with a mailing label available at time of call. To purchase a single copy for $5, call *515-725-8200*.

LEARN MORE

Buy licenses, reserve campsites or learn about our environment at *iowadnr.gov*. See our magazine television show at *iptv.org*.

facebook.com/iowadnr
twitter.com/iowadnr
pinterest.com/iowadnr

PRINTED WITH SOY INK

GOT A QUESTION?
SEND TO: *AskTheExperts@dnr.iowa.gov*

Myth Busters

BY BRIAN BUTTON

EATING BEFORE SWIMMING CAUSES STOMACH CRAMPS, DROWNING

Once a common parental admonishment to "wait an hour after eating before swimming," this legend still drips along in some families.

We may have the Boy Scouts to thank for floating this myth. The 1908 manual *Scouting for Boys* states, "If you bathe within an hour and a half after taking a meal, that is, before your food is digested, you are very likely to get a cramp. Cramps double you up in extreme pain so that you cannot move your arms or legs—and down you go. You may drown and it will be your own fault." Talk about making a splash. That advice still drenches the minds of kids today.

The stomach spasm rationale is that blood is needed by stomach muscles for digestion. And swimming causes blood to flow to other muscles, diminishing supplies to the tummy. The resulting oxygen deprivation in the belly would spawn severe cramps and a plunge into Neptune's Kingdom.

The advice makes no distinction for the amount of food eaten or the ease of its digestion. Drowning deaths attributed to stomach cramps are nary a drop. (Alcohol accounts for perhaps 40 percent.) Plus, has anyone documented a swimmer's stomach cramp? And shouldn't RAGBRAI cyclists engorging on pie, pork chops and bratwurst while exercising also develop stomach cramps? Not happening. Oddly enough, many swimming pools have concession stands, and coastal beaches are known for boardwalk food. Any correlation with stomach cramps? Nope. We are dousing this soggy saga as all wet.

Swimming cramps do occur however, especially in the calf and foot. Triathletes and distance swimmers are most affected from holding the foot in a rigid, pointed toe position used for kick propulsion over extended periods. Overexertion and dehydration also factor in. These cramps can be stretched, even while floating in deep water, and are not considered life threatening.

Ask THE Expert

How can a tree survive a lightning strike?

BY SHELENE CODNER

According to *Science* magazine, a bolt of lightning contains enough energy to toast approximately 100,000 slices of bread, produce a charge of 100 million volts, exceed 50,000 degrees Fahrenheit and stretch over five miles in length. That much power can pose a serious threat to people and property.

Trees are highly susceptible to lightning as they are often high points on the landscape. "There are myths that cottonwood and bur oak trees attract lightning. This is not true," says Tivon Feeley, DNR forest health program leader. "They often are the tallest trees in pastures and areas where other trees may not grow and they become easy targets. They have the same risk as all other trees."

When striking, lightning seeks the quickest path to the ground. In addition to generally being a tall object on the landscape, trees are electrical conductors due to moisture within the tree, generally located beneath the bark.

When lightning strikes, trees either remain unscathed, scar, lose bark or split—depending on where lightning hits, rainfall amounts during the storm, the heat generated by the strike and the voltage. Trees previously struck by lightning may be more susceptible to death from additional strikes as the tree may already be compromised. If rainfall is heavy, electricity may conduct over and through saturated bark with little to no tree damage. But in other cases, "When lightning strikes, sap boils, steam is generated and cells in the wood explode," says Feeley. This can force wood or bark to peel, or to even forcefully blow off the tree. Bark serves as a protective covering, and its loss makes a tree susceptible to other risks and diseases. "If a strike passes through the tree trunk and causes wood and bark to explode from more than one side, it is almost certainly fatal to the tree. However, trees that have lost only strips of bark tend to callus over and survive."

Trees undergoing rotting due to disease or other conditions are highly susceptible to death after a strike as their moisture content may be deep within their surface. Generally these trees will split or explode apart when struck. Some strikes leave no above-ground evidence. Electricity can travel down the trunk, through the root system and into the soil. "In the majority of these cases the tree's root system is dead and the leaves will start browning for no apparent reason in a matter of days."

For more information about trees and forestry health visit *iowadnr.gov* or contact Tivon Feeley, *515-725-8453, tivon.feeley@dnr.iowa.gov*.

Outdoor Skills

PHOTOS BY *JAKE ZWEIBOHMER*

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

THE Ethical Angler

- Takes only the fish he or she needs.
- Doesn't pollute or litter—properly disposes of trash and cleans up after others.
- Observes fishing and boating regulations.
- Respects other anglers and private land rights.
- Supports local and state conservation efforts.
- Doesn't release live bait or move fish species into waterways.
- Promotes the sport of angling and passes on knowledge and fishing skills to others.

UPCYCLED Handwash Station

End unnecessary trips to hydrants or restrooms by upcycling empty laundry bottles into convenient hand and dish washing stations. Choose larger bottles with auto shutoff spigots to save water. Simply fill with water for quick cleanups at camp.

Belt Hanger

Turn an old belt into a campsite hanger for fishing creels, hats, sunglasses, cooking utensils and other items. Punch extra holes to cinch around smaller diameter trees. Use S-hooks for hangers. A second belt at a lower height is a great spot for kids to hang toys, backpacks and other goodies.

PHOTO BY *ALAN FOSTER*

RUN FOR MINES OF SPAIN

RACE DETAILS

WHEN: Aug. 8, 7:30 a.m.

WHERE: Mines of Spain State Recreation Area—E.B. Lyons Interpretive Center, 8991 Bellevue Heights, Dubuque.

COST: $5 for movie viewing, $35 for half-marathon, $25 for 4-mile and 7-mile.

REGISTRATION: Search "Mines of Spain" at *ultrasignup.com*

MORE INFORMATION:
driftlessdirtblogspot.com
rwwillia5@gmail.com
willhoyer@yahoo.com

If you are a runner and the half marathon at the Mines of Spain trail races isn't on your bucket list, it should be, because it's on *Trail Runner* magazine's top 21 trail races in the United States.

"If you were plunked down in the middle of Dubuque's Mines of Spain half-marathon course, with its long, steep climbs along river bluffs, technical single-track, ski trails through prairies, creek crossings and some 2,000 feet of climbing, you'd never guess you were in Iowa. But the little pocket of the Midwest where Dubuque is located...has a distinct topography of hills, bluffs and ravines..." according to *Trail Runner*.

The event—which also offers a four-mile, seven-mile and Mini-Mines Kids trail race—is growing in popularity and is expected to sell out early. So hurry, because registration is capped at 250 runners.

The focus behind the event is as equally unique as the course itself.

"We want to make this a zero-waste event," says Rob Williams, one of four event coordinators, who notes reusable collapsible cups, compostable race bibs and organic cotton handkerchiefs and T-shirts have been featured. All marketing is electronic, with no paper products used. The first year of the race, roughly 35 pounds of garbage was produced. Last year that was cut to 15 pounds, despite more runners and spectators. Everything else is composted or recycled, he says.

Race proceeds go to the Friends of Mines of Spain. New this year is a chance to view the *Trails In Motion* international film tour that brings a collection of trail and ultra running films to passionate runners. The films will be shown Friday, Aug. 7, at 7 p.m., with proceeds benefitting Future Talk, a program targeting at-risk teens through paid summer restoration work in natural areas. (For more on Future Talk, see page 61.)

Together

ASTHMA ON THE RISE

BY *TIM LANE*

Pick your adjective—surging...soaring—they all work to describe asthma rates. According to the CDC, in 2009, the number of people with asthma was one in 12. In 2001, it was one in 14. It translates to 5 million more cases and a $56 billion price tag. Asthma is the most common disease in Iowa with more than 40,000 Iowa kids affected.

This dramatic spike is a mystery. In reviewing the literature, it is apparent we lack strong evidence to explain the increase. Evidence suggests allergies, pollution, sedentary lifestyle, lack of sunlight and other factors play a role. But there are no absolute causes. In fact, there may not be a single type of asthma.

So let me introduce a Public Health 101 concept—the precautionary principle. The idea is even when all scientific data is not in and we are not 100 percent sure what to do, certain steps are prudent. But before plotting those steps, let's focus on the problem—asthma is a respiratory disease that fosters wheezing, breathlessness, chest tightness and coughing. It has a huge impact on quality of life for sufferers.

While all are susceptible, a disproportionate number of black and Hispanics are impacted, as are children. From birth, children are at proportional disadvantages when it comes to air. A 10 to 20 percent loss of breathing capacity for an adult may be deducted from lungs that have twice the capacity of a child. Lungs are like muscles—as you grow, they become more efficient and productive with increased activity. Thus any loss of capacity in a child is amplified in its impact.

Because pollution, mold, dust mites, obesity, sedentary lifestyles and other factors complicate the lives of those dealing with the disease, let me offer some precautionary steps. But first, a historical note. As a youth Teddy Roosevelt was directed outside to "overcome" his asthma. Not one to do things in a half measure...he went west and fell in love with the great outdoors. That love and his zeal were instrumental as he set off to foster the under-resourced National Park System. In a roundabout way we have asthma to thank for our great American parks. So I strongly endorse those and state parks for sunlight (vitamin D) and aerobic fitness. Here are 10 tips. Walk your child to school, encourage daily physical education and activity, play with your kids, then encourage them to also play with other kids, foster outdoor activities like hiking and canoeing, promote clean air, replace one car trip a week with walking or cycling, clean your house, ban smoking on your property, observe burn ordinances and watch your and your children's weight.

These precautions may not be 100 percent effective but I will breathe easier if you adopt such measures. Chances are so will you. Learn more at *epa.gov/asthma* or visit *lung.org*

TIM LANE is a nationally recognized authority on public health and physical activity. He is past president of the Iowa Association for Health, Physical Education, Recreation and Dance.

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.

MARLO, AGE 9, IN LINN COUNTY ASKS:

If mosquitoes carry diseases, why don't they get sick?

Long known for spreading malaria, encephalitis, West Nile virus and other diseases among people, it's interesting that these blood-sucking insects rarely seem to fall ill to those diseases.

Keep in mind that it's just female mosquitoes that are out for blood—they need it to ramp up egg production to make more baby mosquitoes. When they bite, diseases can be transferred—but why don't the carriers get sick themselves?

They have primitive immune systems that successfully fight infections and a wide range of viruses, bacteria, fungi and parasites, despite the lack of antibodies found in the more sophisticated immune system in humans and other animals. After taking in a nice blood meal, there's a surge of special proteins that fight off malaria-carrying parasites, viruses or other pathogens. The proteins can tackle a large variety of substances or be altered in 32,000 different combinations to have a more targeted attack.

Researchers hope to learn more about this process in order to develop vaccines and treatments that will help prevent mosquitoes from spreading disease in the future. And that is important as malaria alone kills more than 800,000 people worldwide each year. Many are children.

LAKE ODESSA NIGHT BOAT TOUR

The high sun settles below the horizon and the heat of the day slowly subsides. The light breeze tailing the setting sun chases away the thick, earthy smell of the humid July afternoon.

The bullfrogs that welcomed the heat with their baritone "bbbaaarrooooook," safely ensconced under the lily pads, are silent now. The emcee for the night is the resident barred owl, who asks the 20 paddlers along for the ride during the annual Odessa Wildlife Complex full moon float, "Who-cooks-for-you, who-cooks-for-you-all?" Something brushes the bottom of the boat. Despite the illumination from the full moon, the darkness brings with it a feeling of unrest. But those fears are quickly suppressed when the float guide says, "It s probably just a carp in the shallow water that bumped your boat."

Along the way, the guide points out some of the 88 recognized constellations covering the night sky. Only some are visible due to the timing of the calendar. The Big Dipper is a no-brainer. But Scorpius is best seen in July, August and September. Found in the southern sky, the guide points out, legend has it Scorpius spent a great deal of time trying to kill Orion, the Great Hunter, despite being on opposite sides of the sky.

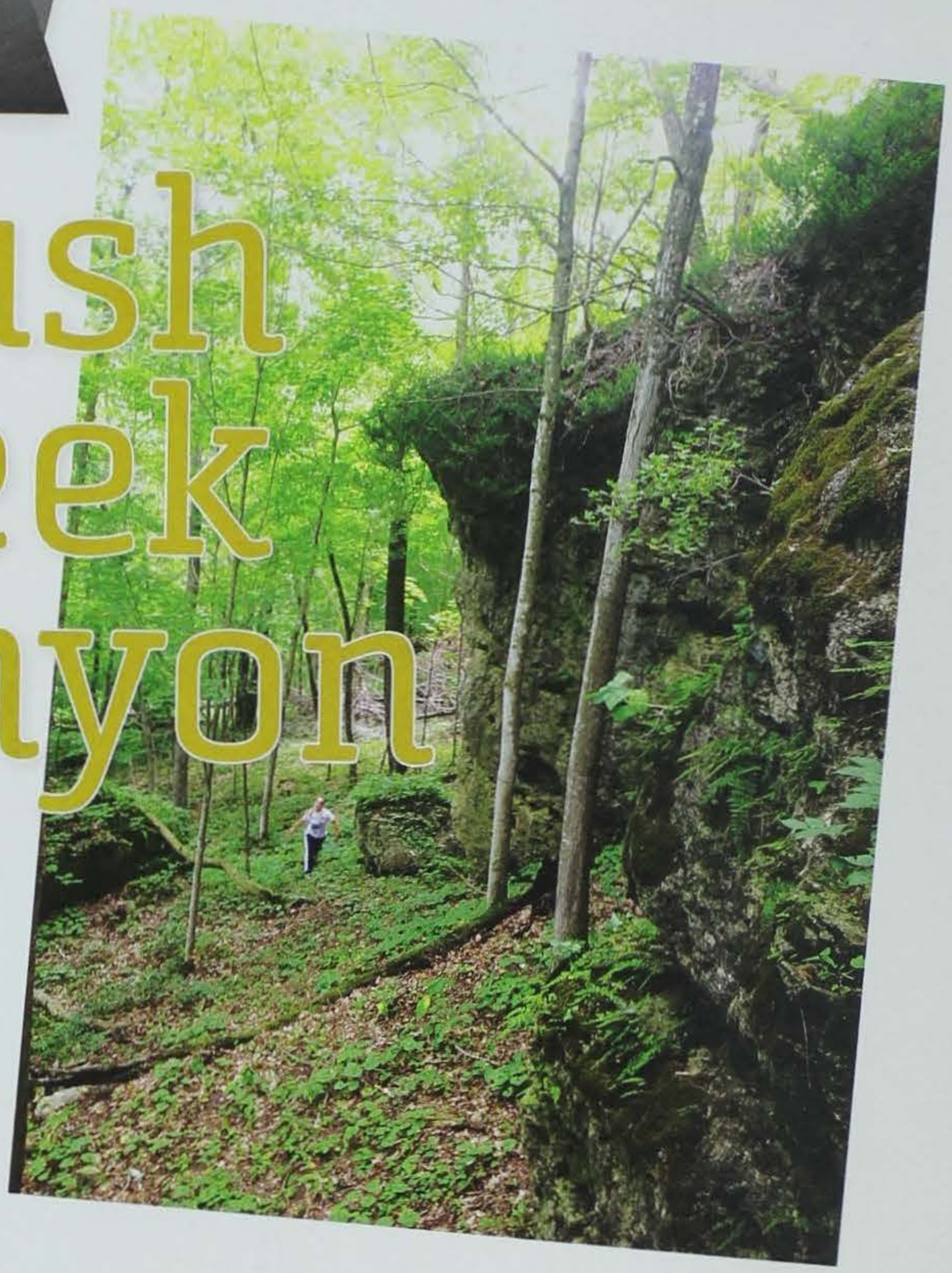
All this is covered during the two-hour float, slated for July 31. Participants should meet at the Snively Campground, 9246 County Road X61, in Wapello. Boats float at 9 p.m. Camping available at Snively on a first-come, first-served basis. Cost of the event is $5 if you BYOB (Bring Your Own Boat), $15 to rent a kayak or $20 to rent a canoe. Registration limited to the first 20 people. If you miss the boat on this trip, the annual event is usually held the first full moon in July. For more information, contact Brittney Tiller with the Louisa County Conservation Board at *319-523-8381*.

PHOTOS COURTESY LOUISA COUNTY CONSERVATION BOARD

Lost In Iowa

BY BRIAN GIBBS PHOTOS BY BRIAN GIBBS

Brush Creek Canyon



Hike down into the basement of time at Brush Creek Canyon. No matter if you want to get lost in the rocky realm of two geological time periods, or simply walk where the prairie meets the hills, this ruggedly beautiful state preserve is sure to leave you saying, "Is this Iowa?"

City of Rocks

From the preserve's parking lot, follow the mowed path to the limestone shelter house. Stay on the hillside and walk among rocks that were once part of the reef-like shallow sea that covered this area of northeast Iowa 430 million years ago. Marvel at the scenic terrain of this preserve created by the deep erosion of Brush Creek into the Silurian Escarpment, a particularly resistant rock formation that stretches as far east as Niagara Falls, N.Y.

Once you reach the end of the bluff, crawl through a maze of openings in the giant rocks called "rock cities." These rocks were subject to long periods of freezing and thawing during the Ice Age. Over time, this mechanical weathering caused large blocks of rock to collapse and separate from the main cliff face.

"Deep below ground rests a layer of soft clay-rich shale, where groundwater forms a lubricant causing the limestone above to continually slip and be pulled by gravity down the bluff slope until the rocks eventually reach the valley floor," says Jean Prior, geologist and author of the book *Landforms of Iowa*.

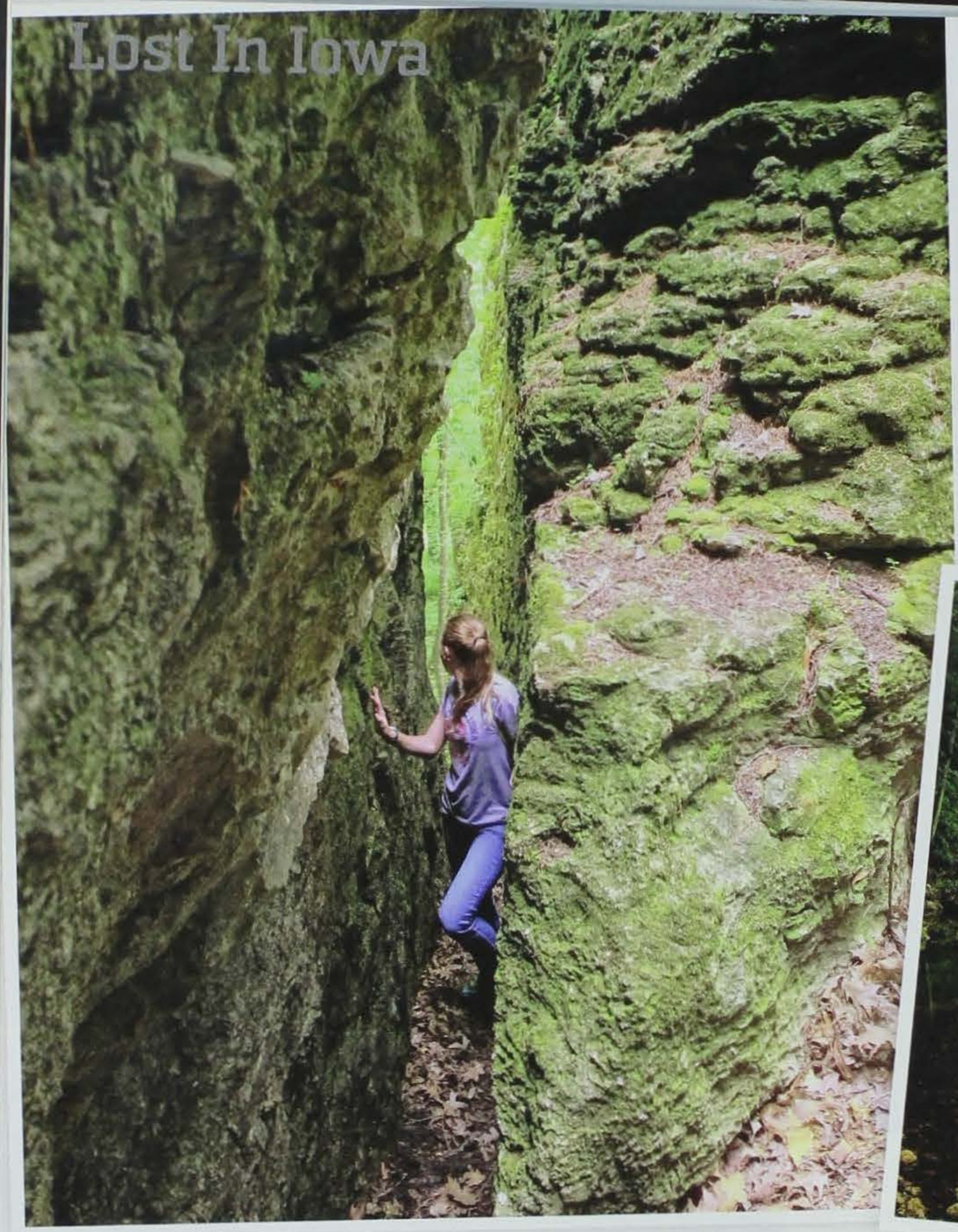
From the rock city, trace your way downhill alongside the green incandescence of fern and moss-covered boulders. Discover animal tracks under large outcroppings and food caches in the holes of these ancient rocks.

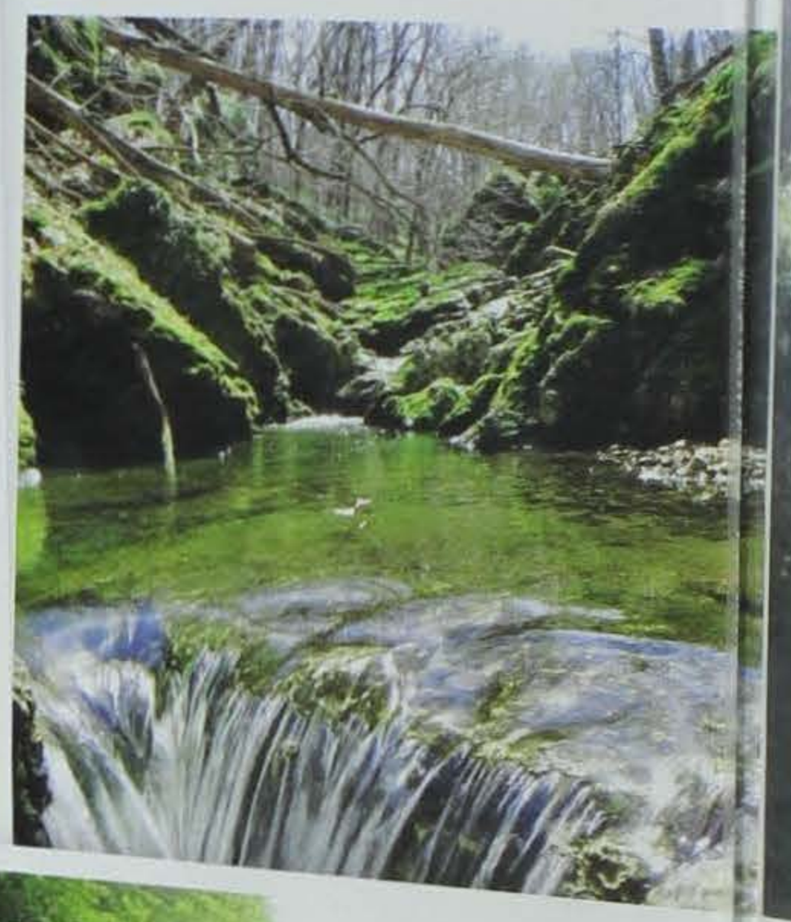
"The rugged terrain, steep rock-strewn slopes and many contrasts in moisture and shade produce a variety of habitats that support a fascinating array of native plants and animals," says Prior.

Panning for Gold

At Moine Creek, climb over van-sized boulders that produce spectacular waterfalls after a soaking rain. Keep your eyes peeled; local lore has it that pioneers once found flakes of gold

From Arlington take Highway 187 (Eisenhower Road) 2 miles, take a right on 90th St., and a left on E Avenue.





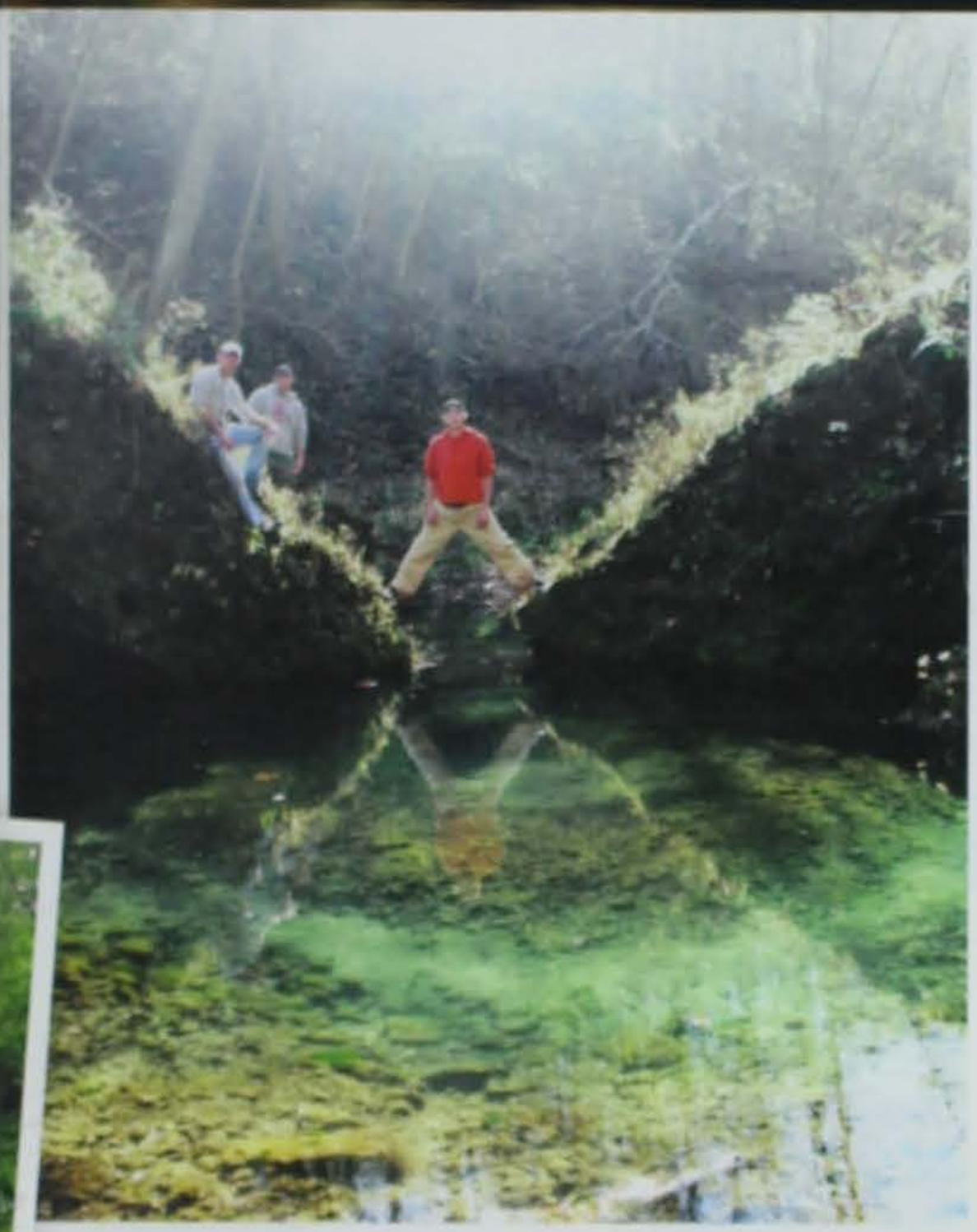
in the stream bed (you have more chance "striking it rich" in newfound friendships than finding gold). Walk a few hundred yards downstream to where the smaller Moine Creek empties into Brush Creek and discover a deep blue pool where you can cast a line into the waters of time. Fingerling brown trout are annually stocked by the DNR and can reach trophy size. If fishing isn't your strength, simply cool your weary feet in the spring-fed waters.

Watch the sunrays grow softer and the shadows grow longer on the canyon walls. Relax, unwind and let the words of Iowa native Norman Maclean flow through your senses: "Eventually all things merge into one and a river runs through it. The river was cut by the world's great flood and runs over rocks from the basement of time, on some of the rocks are timeless raindrops, under the rocks are the words."

Calls of the Canyon

To hear the hidden singers of the forest, stroll through the upland woods during an early summer evening. Sixty-seven species of birds raise their young in the preserve's dense woodlands. Pileated woodpeckers can be heard drumming on dead elm trees. The veery and wood thrush, two species listed on the Iowa Audubon's high conservation priority list, can also be heard in the preserve.

Found closer to the water, the veery's cascading song echoes in the canyon walls, while the wood thrush's melodious flute song rings through the branches of tall trees. Henry David Thoreau, inspired by the music of the wood thrush, exclaimed, "Whenever a man hears it he is young, and nature is in her spring; wherever he hears it, it is a new world and a free country."



Brush Creek Canyon's 150-foot-tall outcrops consist of 450 million-year-old dolomite. Over 400 plant species have been recorded at the preserve, mostly because the rugged terrain creates a wide variety of habitats, from shaded, humid and cool to warm and dry slopes. Ferns, forbs, shrubs and trees dominate the landscape. Numerous bird species, including neotropical migrants, call the preserve home.

A Wonderful Place of Floral Treasures

Naturalist Edwin Freese's fascination with Brush Creek Canyon dates back to the mid-1960s when his parents first took him to the preserve. "I remember walking down the steep paths in this wonderful forest with steep-sided rock walls, what a wonderful place," recalls Freese. In 2004, Freese submitted the vascular plant list of Brush Creek Canyon to the DNR. The report listed 399 species of plants, but recent trips to the preserve have included new plant discoveries, putting the list well over 400. "Even though I have spent quite a few days there exploring over the years, I still have not walked every area as some slopes are too steep or hard to get to. I've even taken binoculars with me to check plants that I could not get to on rock outcrops and those steep slopes," says Freese.

During late summer, look under the preserve's mature oak trees for the blooms of Iowa's most secretive orchid—the three-birds orchid. At only 2 to 3 inches tall, the three-birds orchid is also Iowa's smallest orchid. The plant typically blooms 48 hours after a 5-degree overnight temperature drop. The pink and white flowers resemble three birds in flight and are extremely fleeting, staying in bloom for only one day a year.

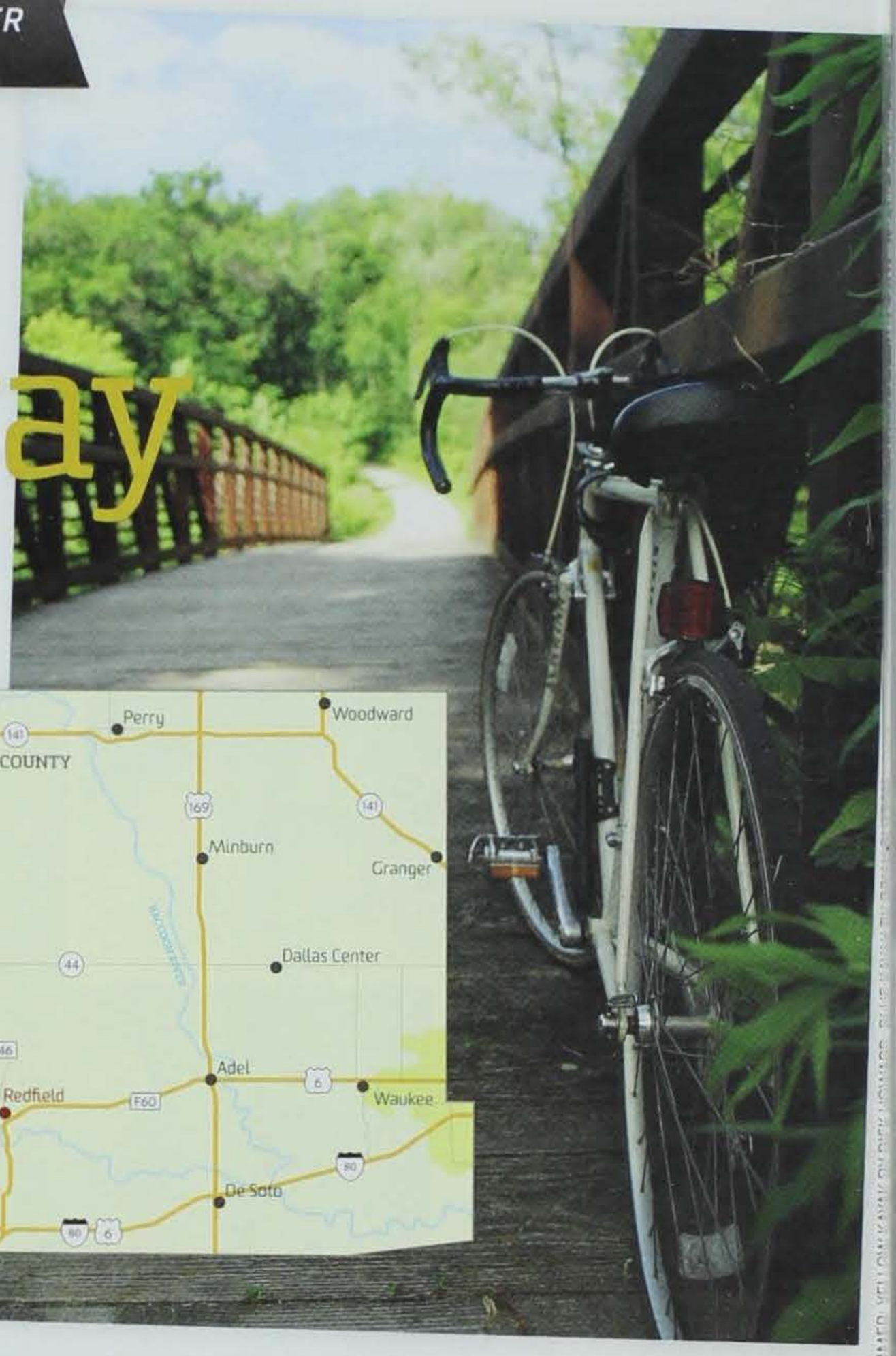
Whether you're escaping to walk through ancient rock cities, to be serenaded by the melodies of the forest or to discover elusive floral treasures, Brush Creek Canyon is an enchanting excursion to lose yourself in.

"Standing in the far northwest corner of the preserve, you get the feeling you are far from civilization, the place has many distractions as well as locations where it is relaxing to just sit and listen to the silence as compared to everyday life these days," says Freese.

BY BRIAN BUTTON

Solo Getaway

Paddle the Middle Raccoon Water Trail then Bike or Run the Raccoon River Bike Trail



We've all had those days...pent up energy to burn. When the sun is bright, the sky deep blue and water levels are perfect, the river can beckon suddenly. But what to do when your paddle buddies or spouse can't make a spontaneous outing and help shuttle cars? *Go solo* on a nature duathlon.

First, head to Redfield and lock your bike at the Middle Raccoon River access on the west side of the river above the dam in town. Then drive up to Panora to put in at the Lenon Mill Park river access on the west side of town and leave the car to paddle 16 river miles to Redfield.

While paddling, enjoy forested hillsides carpeted with wildflowers; spy eagles, hawks and owls perched on branches. Watch river otters frolic in the current. Paddle alongside the striking iridescent, ornate plumage of wood ducks. Spot belted kingfishers flying before plunging for a fish snack. Take your own snack to unwind on a sandbar.

Four to six hours later, depending on your paddling speed, water levels and length of your craft (longer canoes and kayaks are faster than their more maneuverable shorter cousins), lock the kayak or canoe at the river access above the Redfield dam. (DNR water trails have well marked river signage warning of the dam and where to safely take out at a developed access.) Then grab the bike and head a few blocks east to the Raccoon River Valley Trail to burn calories cycling 12 miles back up to Panora to retrieve your car. The half way point is Linden, which offers restrooms, water and concessions. Once in Panora, leave the bike trail to ride west across town to your car (about 1.5 miles.)

A Few Tips

Check the Levels.

Find real-time river levels at *USGS.gov* (click the water tab). Navigate to the appropriate water basin and check

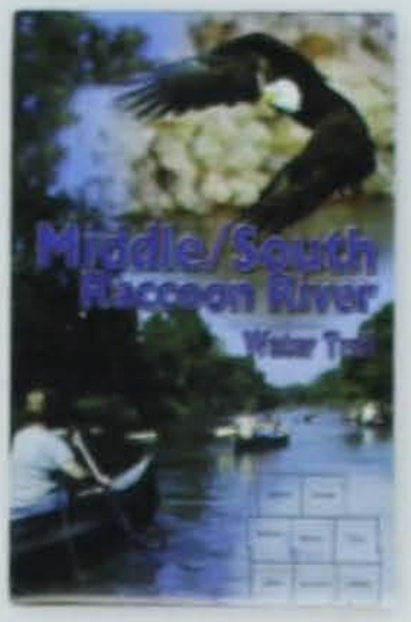
PHOTOS: BIKE ON BRIDGE BY BEN CURTIS; BIKE RACK BY JAKE ZWIEBEL

water levels. Compare current levels to averages to see if the float will take more or less time than usual. (300 to 800 cubic feet per second is ideal for most paddlers.) Very high water levels may be unsafe for many paddlers. Be realistic with your skills and safety.

Don't Leave Valuables.
Avoid leaving pricey items, such as cameras, in your stashed kayak or canoe at the dam. Use bike panniers or a cycling/runners backpack and take them while on the bike trail to get your car. *(Don't forget your keys!)*

Prescout.
If you aren't familiar with this area, use Google Maps satellite view to find the dam and nearby bike trail access in Redfield, route across Panora to Lenon Mills and to scope the river for sandbars to take a break.

Leave a Plan.
Leave a detailed plan with a friend or spouse. Include when you left, roughly when you expect to return, your route and other details.



Maps.
Download or pick up a Middle/South Raccoon River Water Trail Map. It shows gravel and blacktop roads, access points, bridges, river section distances and insights to local history, geology and wildlife along the way. (It also lists bike and canoe/kayak rental places, local amenities and services, etc.) View online at *iowadnr.gov* and search for trail brochures.

Get Inspired!

This area spawns some serious athletes. Invoke their strength when your muscles start to burn from your own duathlon.

Panora native **KIP JANVRIN** holds the world record for most career decathlon wins (41). He won the decathlon a record 15 times at the Drake Relays.

Redfield native and decathlete **REX HARVEY** received four NCAA track championship invitations while at Iowa State University. After college, he won 13 straight national decathlon championships.

Linden native **TRAVIS GEOPFERT** is a two-time Drake Relays decathlete champ and former head track and cross country coach at the University of Northern Iowa.

FIND YOUR FREEDOM. Go anytime the mood strikes with a self-shuttle paddle down the Middle Raccoon River. Then bike back to your car on the adjacent Raccoon River Bike Trail. It's all just 30 minutes west of the Des Moines metro.

Not often thought of as an Iowa tradition, sailboat regattas are a common sight on Iowa's larger lakes and reservoirs.

PHOTO BY MIKE WHYE

Iowa Sails On

Regattas Offer Venues for Racing Clubs to Put their Mettle to their Masts

BY *MIKE WHYE*
PHOTOS BY *MIKE WHYE* AND *DAN WEEKS*

When Sergio De Cesare steers his sailboat *Recess* from the dock of the Lake Manawa Sailing Association, he has Charlie Huffman as one of his crew. Although it's Huffman's fourth time on a sailboat—the previous times were taking lessons—this is his first race.

And De Cesare, 60, has me, a rookie who has never crewed and foolishly wants to learn about sailing. As De Cesare maneuvers us to the starting line, he pats the big horizontal metal beam holding down the main sail.

"They call it the boom for a reason," he says, warning that it swings back and forth very fast. "So watch your head."

Hearing the starting horn, we take off to the south, sort of. Unable to go straight into the southerly wind, De Cesare steers us on headings that crisscross the lake. With every turn, the head-hunting boom swings, and Huffman and I work the ropes to the jib sail just ahead of the main sail.

"Wind that line clockwise around the winch and pull it! Pull!" yells De Cesare as everything creaks or groans under the pressure and tension of the wind and water. "I'm not angry with you! I want to make sure you can hear me! Get that line tight!"

Whenever I'm told to slacken my line to the jib, Huffman winches his line to the jib tight. In a few moments, we reverse our roles and repeat whenever ordered. Huffman and I wish for gloves. Handling lines barehanded is no fun.

Then De Cesare tells me to lean out over the high side of the boat—a counterweight, I believe, as we heel hard to the side opposite me. I fear we'll roll over but, even as the water washes the low side of the deck, he says "don't worry." Extending below the centerline of the hull, a 500-pound keel board prevents us from rolling too far.

When we reach a buoy at the south end of the course, De Cesare circles it tightly and calls out new orders. With the wind behind us now, we swing the main sail far to the left and spread the jib to the right. As we speed on, we relax. All the sailboats are sprinting, slicing the water and making a beautiful sight. Our sails resemble angels' wings.

Completing the first of three laps, we steer south once more and again Huffman and I work the ropes to the jib sail. "You're doing fine!" De Cesare yells.

De Cesare's first time sailing was at the age of 9 in the Adriatic Sea off his home city of Brindisi, Italy. "Brindisi was the most important port in Roman times," he says. Even though he's been in the states since 1983, his words still have an Italian touch.

At one point, on a northbound leg, he tells me to hang onto the boom, so I brace myself and hold on. Then a gust of wind tears the boom from me and I nearly pitch into the waters. Somehow, I tumble off-balance into the interior of the boat. From down in the depths, I apologize for letting go of the boom.

"That's okay," he says. "The wind shifts here more than on the ocean. If you can sail Lake Manawa, you can sail anywhere."

When we finally finish, De Cesare calls out, "We're second!" Of course, only four sailboats are racing, but second place still feels nice.

After the finish, the judges ask if we all want to race again. Huffman and I look at each other and nod. De Cesare smiles. Yeah, we're ready.

Iowa Regattas

From the shore about a half-mile away, 15 or so small sailboats hover near each other at the north end of Clear Lake on a partly-cloudy afternoon, resembling a gathering of butterflies. Their white sails gleam when patches of sunlight hit them.

What looks like play from the shore is serious business on the water as the crews prepare to start a race. Because no sailboat starts a race from a still

Sailing may not be the first thing that comes to mind when discussing recreational opportunities in Iowa. Yet sailing clubs have been around in the state for more than a century. The first Iowa club—the Okoboji Yacht Club—was established in 1877. Although it folded in 1911, it was resurrected in 1933. The University of Iowa Sailing Club, one of the oldest student organizations, was established in 1965.

PHOTO, TOP RIGHT, BY DAN WEEKS; BOTTOM LEFT COURTESY OF IOWA TOURISM; REMAINING PHOTOS BY MIKE WHYE

position, the crews turn their boats round and round, jockeying to be as close to the starting line—an invisible line between a round orange buoy and the judges' boat about 50 yards away—while staying behind it and in motion. When judges Tommy and Denni Sue Erickson blast an air horn, the crews put their momentum to use, speeding past the starting line.

This scene repeats four times each weekend when the Clear Lake Yacht Club hosts regattas for its members between May and September. Sometimes just one class of sailboats races, at other times a mix of classes are on the water.

Boats of three classes are in this race: the MC, a 16-foot boat with a single triangular sail, can have a crew of one or two; the M17, a 17-foot boat, with a main sail, a smaller triangular jib sail and a third sail, the asymmetrical spinnaker, which replaces the jib during lighter winds and is crewed by two people; and the Hobie Cat, a double-hulled boat with two sails.

As boats take off, they do what boats in all regattas do—head upwind. This afternoon the wind isn't kind, not at 17 mph. If it's 3 mph faster, the judges will call off the regatta.

None of the boats head straight south—no one can sail directly into the wind. Instead, they handle the southerly wind by sailing nearly 45-degree angles to it. In this race, the sailors read the wind and head southeast, catching wind in their sails to push their boats not only east but, more importantly, south. To avoid ending up east of the buoy set out earlier by the Ericksons at the south end of the course, the crews soon turn their boats southwest and southeast again. They continue zigzagging—or tacking in sailors' parlance—through waves that are almost whitecaps and indirectly make their way to the southern buoy.

Maddie Hess, aboard one M17, handles the tiller and holds a rope controlling a series of pulleys and more ropes attached to a long horizontal bar—the boom—at the base of the main sail. Also aboard, Molly Anderson handles ropes to the spinnaker that puffs out in the wind.

Hess is a freshman at the University of Iowa and Anderson is from Gretna, Neb., but has resided at the lake many summers with her family. One summer, Anderson, now 17, was looking for something to do, so her mother enrolled her in the club's sailing school.

"Most kids start sailing school at the age of 5," Anderson says after the race. "I started late at 10. I got a boat the next summer and started competing. I was absolutely terrible in races for three years, coming in last."

Learning to read the wind was difficult, says Anderson, referring to how sailors watch what the wind is doing to the surface of the water. After starting on a basic sailing boat called the Optimist, or Opti, Molly moved onto an MC and captained that awhile.

"I didn't like being captain," she says. "Because anything that goes wrong is your fault. So I like to crew now. The crew does far more work than the skipper."

Even though Hess captains the M17, they make decisions together and work as a team. They hook their bare feet under padded straps to stabilize themselves when sitting up on one side or the other, using their weight to keep the boat as flat as possible.

On Lake Manawa south of Council Bluffs, some boats sail round a buoy on the south side of that lake too, completing the first leg of a three-lap race between it and

Currently there are sailing clubs in Davenport, Okoboji, Iowa City, Grinnell, Council Bluffs and Clear Lake, sponsoring races, or regattas. They also offer courses to teach beginning sailing.

PHOTO BY DAN WEEKS


110
43282
ELAN

the starting buoy to the north. These are big sailboats—cruisers. "This boat is 22-feet and a few inches long," says de Cesare, who is from Omaha like three-quarters of members in the Iowa-based Lake Manawa Sailing Association.

Heading downwind, each crew has an easy task—spread the main sail to one side and the jib sail to the other and speed to the northern buoy. Across the lake, a speed boat blares across the water, a sharp contrast to the silent sailboats which ride on the water with sails full of wind.

Watching from the judges' pontoon boat are club president George Rood, who lives alongside the lake, and Mike Brindisi, 57, who first sailed in 1980 and owns a sailing store in Omaha.

Rood, who has been sailing 48 years, says the club formed in 1988 although organized sailing events have taken place on Lake Manawa since the 1940s. The club has 150 member families and about 110 sailboats in its storage yard. Some of the smaller ones called Snipes were crewed by LMSA members at the Okoboji National Snipe Regatta in 2014. Other small boats belonging to LMSA are used to teach people to sail. The club participates in sailing programs for young men and women with Sea Scouts, a division of the Boy Scouts of America.

Of 221,907 boats registered in Iowa, 2,844 are sailboats and another 982 are motorized sailboats, just shy of being in the top 20 states for registered sailboats.

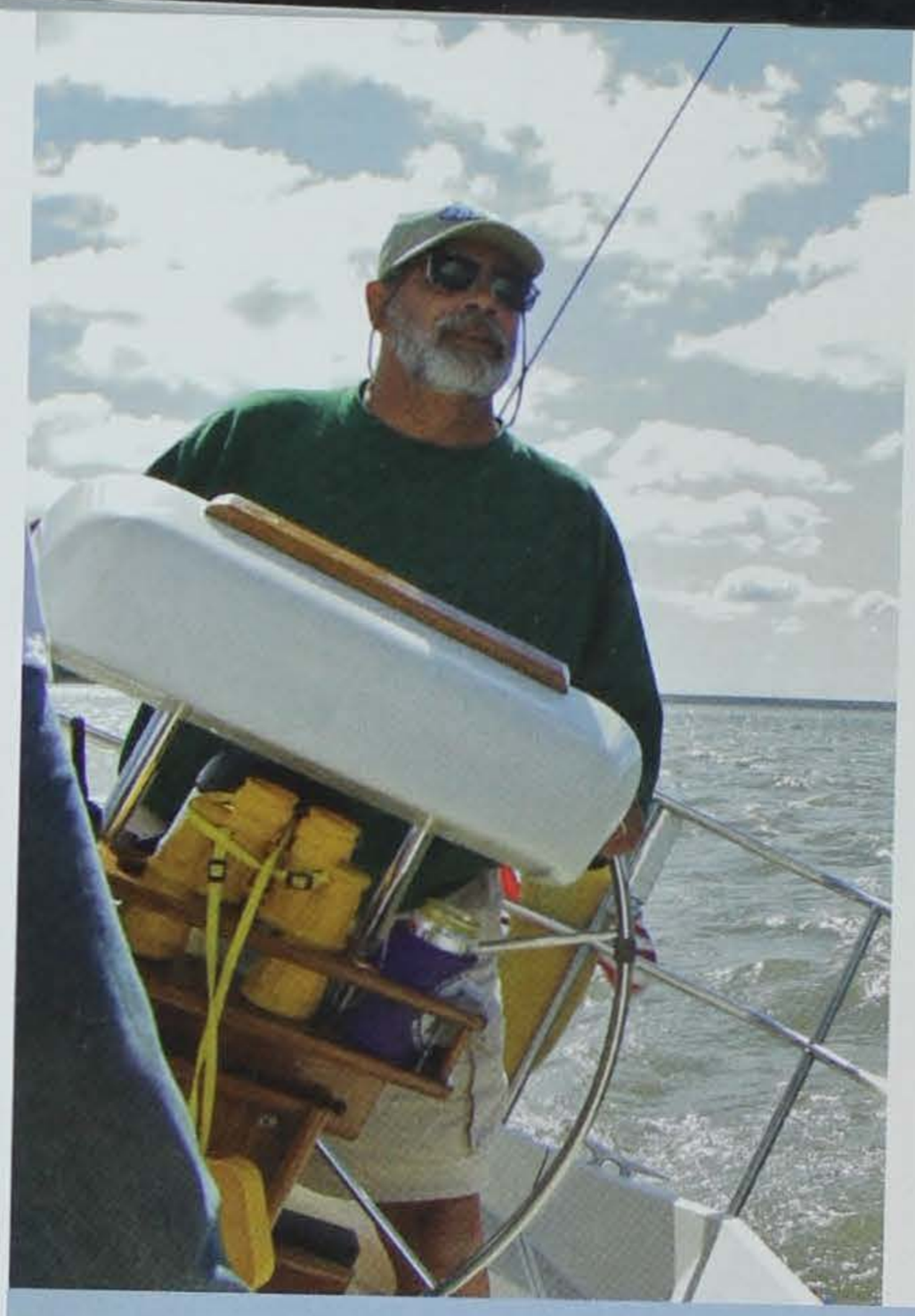
Iowa's Sailing Clubs

Six sailing clubs exist in Iowa—in Clear Lake, Davenport, Okoboji, Council Bluffs, Grinnell College and the University of Iowa. The first three belong to the Inland Lakes Sailing Association, which has 50 clubs, mainly in the Midwest. The Lake Manawa Sailing Association is part of the U.S. Sailing Association. Grinnell and the UI club belong to the Midwest Collegiate Sailing Association, which has 34 college and university members and is one of seven conferences of the Inter-Collegiate Sailing Association.

The Okoboji Yacht Club hosted the 2014 Snipe Nationals, drawing competitors from across the nation to compete in that class of 15 ½-foot boats with two sails and two crew.

The Okoboji club is the oldest in Iowa, having two earlier incarnations in 1877 and 1908, each folding within a few years. The current club began in 1933. The Lake Davenport Sailing Club began in 1935, as did the Clear Lake Yacht Club. This year, the University of Iowa Sailing Club celebrates its 50th anniversary.

Sailboats from Iowa jostle with those from five other states on the Mississippi River near the starting line of the annual Polar Bear Regatta, sponsored by the Lake Davenport Sailing Club. They sail on water pooled behind Lock and Dam 15 near downtown. "We call it the Polar Bear Regatta because we hold it at the end of our sailing season around late September or early October," says Ann Marie Campagna, who handles the club's public relations. "Sometimes the weather can be cool."



Soon after the starting horn sounds, the C and MC class boats head east this pleasant Saturday morning, but the breeze that first propels them slows down. Reading the wind, the competitors steer toward some disturbed water near the Illinois side of the river and painfully make their way upstream—battling current, dodging barges—things lake sailors don't worry about.

PHOTOS, TOP LEFT AND RIGHT, BY

Sailboats come in all shapes and sizes, however the most common in Iowa are the smaller dinghy-style boats, ranging in size from roughly 13 feet to 17 feet. However, it's not uncomon to see a few larger schooner-or sloop-style sailboats, especially on the larger reservoirs.

PHOTOS, TOP LEFT AND RIGHT, BY [illegible]

Club members and the local U.S. Coast Guard Auxiliary monitor radio communications to alert tug pilots.

Agonizingly light wind slows the first two races. A short time later, the wind gives up and the organizers cancel the third race.

Joe Terry, who has won the MC class in the regatta, says no one ever knows everything about sailing. "You learn something every single time you sail," says Terry, who normally sails on Lake DuBay in central Wisconsin.

At a Caribbean-themed party later that evening, Katie Bruder and Matt Prange reflect on their passion for sailing. "We sail in about 20 regattas each year," says Bruder, who along with Prange drove three-and-a-half hours from Okauchee Lake, Wis. "This is the 15th this year."

Bruder, who has sailed Cs for 11 years, enjoys Midwest sailing because events are family oriented.

"The hospitality here is second to none," she says. "Every place we sail in Iowa is just great. Great lakes, great places."

Prange, who was part of a team that won the C class division in ILYA's 2013 Championship at Okoboji, says it's disappointing the third race was canceled. Still, he says, "A bad day on the water is better than a good day at work."

The next day dawns equally windless on Lake Macbride, where students of the University of Iowa Sailing Club want to sail. Molly Strieker, a senior from Glen Ellyn, Ill., and club commodore, says, "This is a huge teaching club. We get people on the water to learn the fundamentals of sailing—that can be learned in about 10 hours—and then pay it forward, primarily older students teaching new ones. We're all-volunteer."

Watching a few students sail on the lake, she shakes her head at their failing attempts to catch a breeze. Because motorized boats are limited at Macbride, Strieker says it's perfect for sailing. Besides student members, others in the area may join, but only students can be officers. "We have about 15 really active students and about 100 others, including those from the community," says Strieker, who learned to sail as a freshman.

Beside having boats similar to other clubs, the UI Club has smaller boats called Lasers and easy-to-sail FJs, plus some J/24s, 24-foot-long boats with three sails.

About 65 miles west, a handful of students form a small sailing club at Grinnell College and sail on Rock Creek Lake, about six miles from campus. There, they use a 12-foot-long, one-person sailboat called Bytes which some consider perfect for training people how to sail. In 2014, the Grinnell students competed in two conference regattas.

As the UI students pack up at Macbride, Doug White and family set out for a leisurely ride on the lake in their 24-foot Hunter 240. "In my early years I used an 8-foot mono-sail, a plywood mast with a banister rail for a boom and off I'd go sailing," says White, who used to sail across a bay alongside the Mississippi River near New Boston, Ill. Now, he lives closer to Keokuk, and although close to the Mississippi, prefers to sail on Lake Macbride. To help when there is no wind, he uses a 9.9-horsepower motor to push the Hunter around.

"I've sailed four boats here over the years," he says before leaving dock. "This place was made for sailing. It's nice."

"Sailing is just one of those things you gotta do," says White who, like many others in Iowa, doesn't belong to a sailing club. "Why go fast? You're already there."

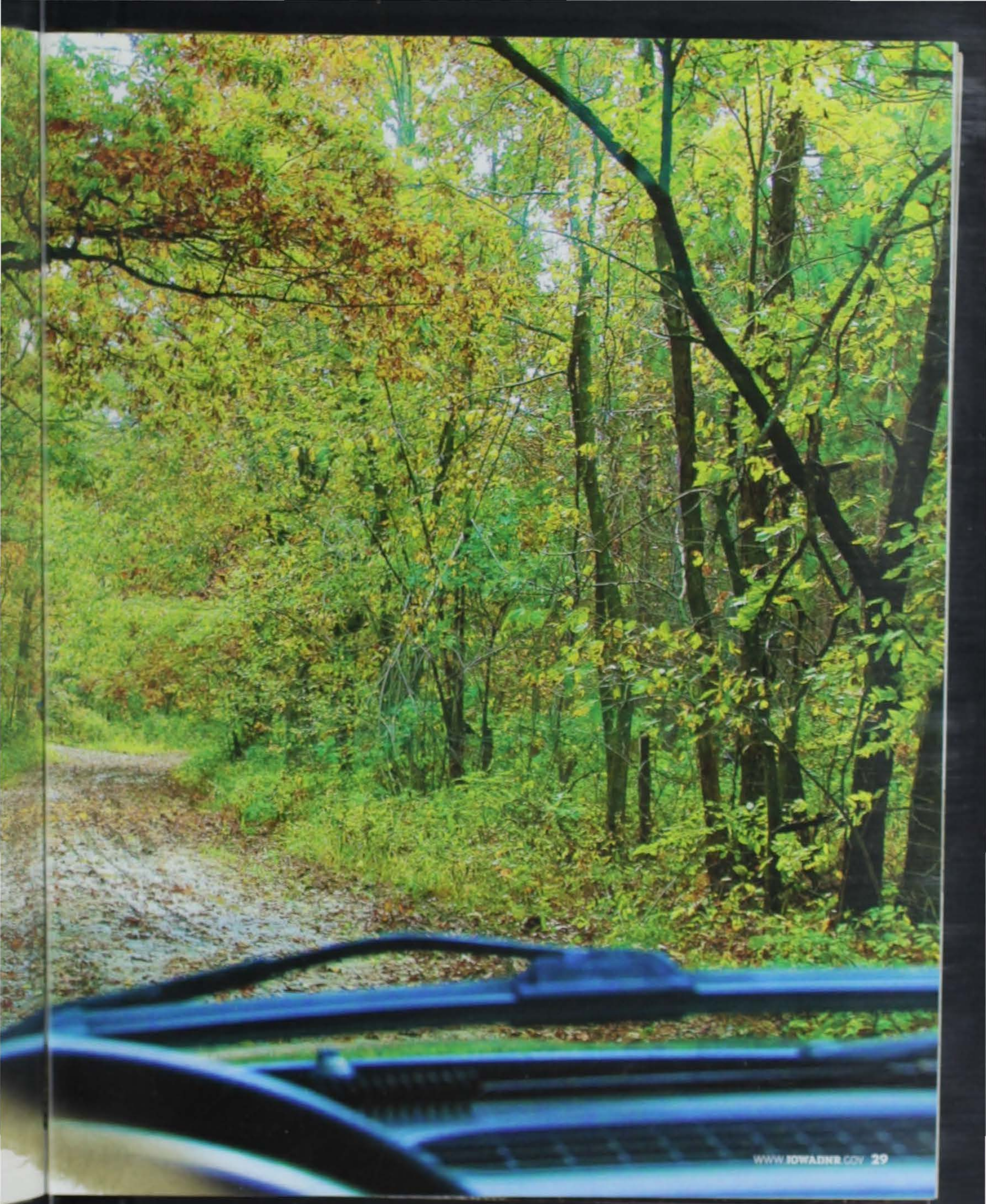
Stranded IN AN Iowa Woods

BY *SANDY FLAHIVE* · PHOTOS BY *BILL SCHAEFER*

On a summer afternoon showered in brilliance, I climbed aboard my trusty Jeep for a hasty trip to a special hideaway tucked in the heavy woods of southern Iowa. The perfection of the day was impossible to ignore. The sky was a shimmer of blue, songbirds dipped and soared through the diamond-bright air and the world was a joyful promised land.

However, the dazzling sunshine on the beckoning green hills I drove through on the 60-mile trip made promises it never would keep.

As the Jeep and I turned off a gravel road and jostled up the final stretch—a half-mile bumpy clay trail leading to my forest cabin—we left in our wake giddy spirals of dust performing dervish dances



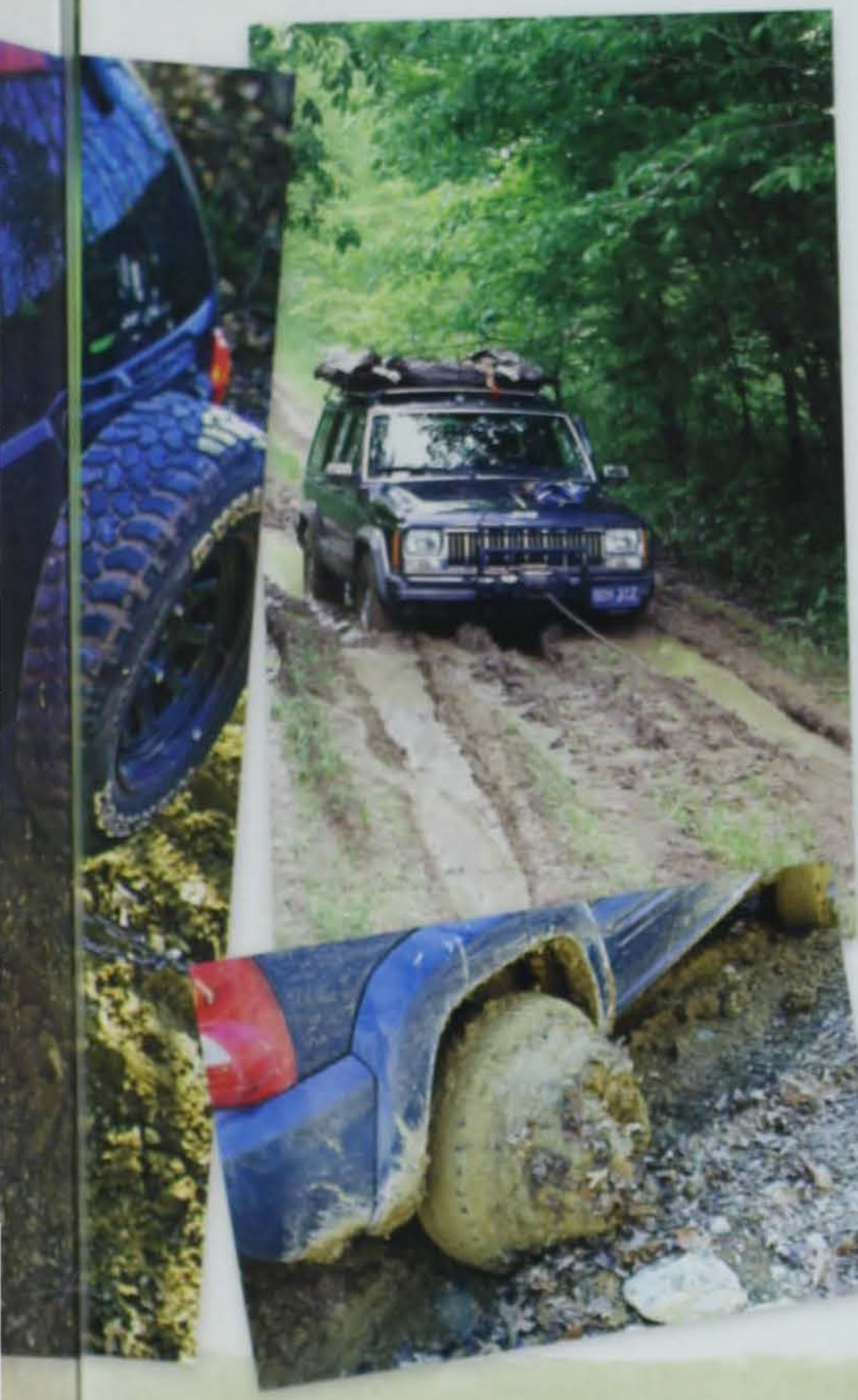
on the sun-baked pathway. But overhead all splendor had been zapped, replaced by an angry ceiling that capped the woods. Thunder bobbed along the tips of the oak and hickory canopy and plummeted through the quaking leaves. As the plucky machine creaked and lurched up a pesky incline, more rumbles somersaulted over the roof of the vehicle, muffling the clamor at the underbelly where hard-packed ruts were ripping at the oil pan.

Ferocious as these ruts are, even a spit of rain can dissolve them into something far worse: a quagmire of clammy goo capable of capturing even the most macho of rigs. Having never been a victim of the ornery pathway, unlike so many unfortunate others who defied its power, I had no intention of letting it happen this particular afternoon. My mission was to make a speedy grocery deposit, then hightail it back to town for an evening of activity.

As I unlocked the gate to my property, a snort of contempt left little doubt a deer had just issued a warning that an interloper was about. Though a slip of paper in the county courthouse may state this small bit of earth is mine, the deer, owls, turkeys, coyotes, and even the road have a far different interpretation of its ownership. I scurried on down the grassy lane and parked, wishing to be of no further bother to the woodland residents.

Stumbling toward the cabin with hands and arms full, I smacked full-face into one of summer's spectacular art works—a platter-sized, intricate spider web. Though these creative masterpieces don't deserve the bad rap they get, I'm the first to admit they are nothing but annoying when they're dangling from my nose and ears.

A thick woods doesn't readily reveal the proximity of a storm. Nasty black clouds can lurk behind the



PLOP! PLOP! PLOP!

At first the drops were
large and few.
'At first' lasted
but a millisecond.

PLOP, PLOP, PLOP-plopplop plopplop.

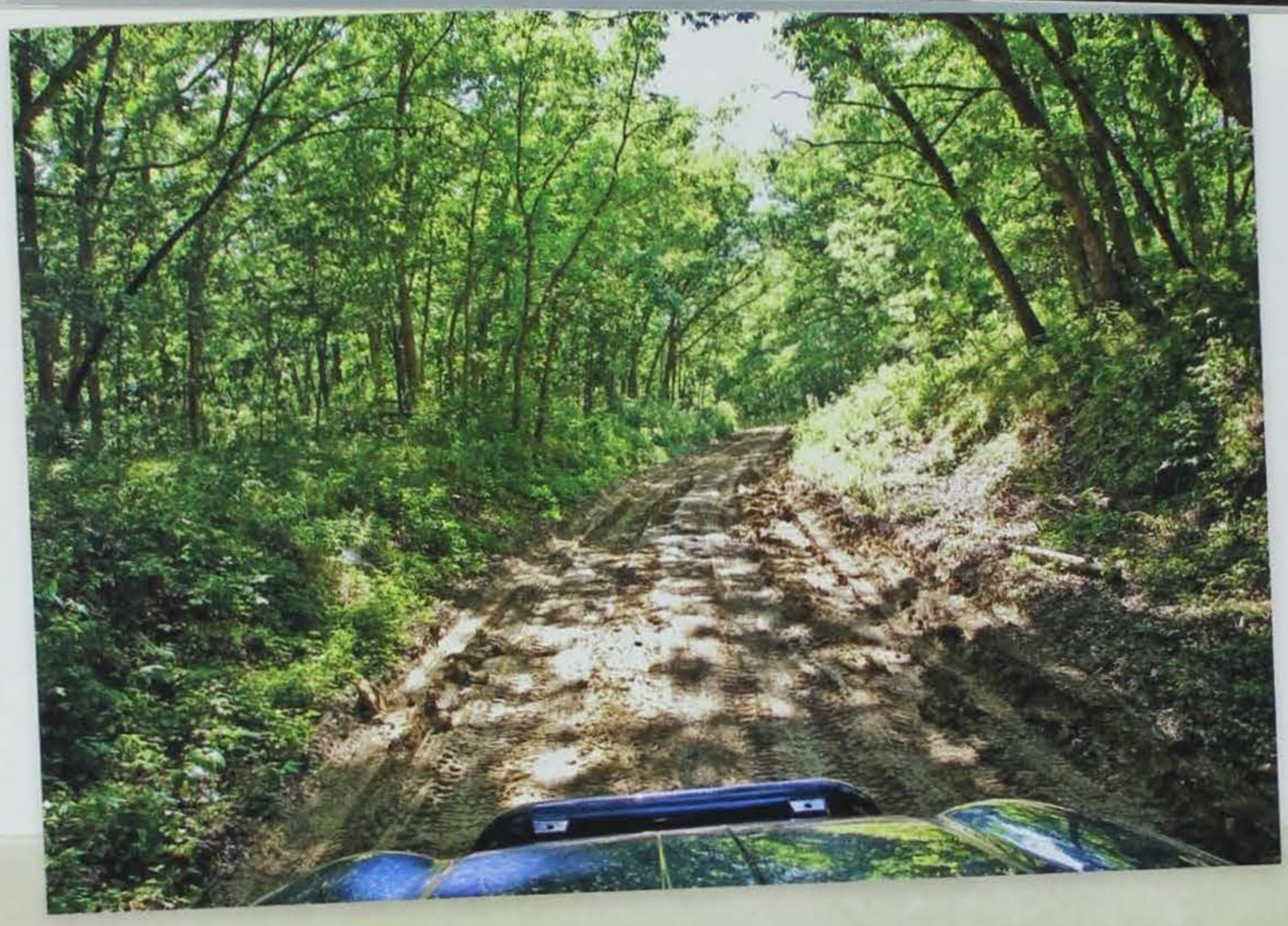
I had dallied too long.
Delivery was at hand.

lush foliage of towering trees, and sound is unreliable, sometimes making a storm seem closer than it is, sometimes just the opposite. The clearing around the cabin gave me a chance to study the sky. Directly overhead prowled a monstrous roiling cloud, bubbling and puffing in the undulating manner indicative of imminent birth. Despite its ominous threat and the persistent claps resounding from deep within its belly, I calculated I had time to unload and scramble back down the cantankerous road before the deluge.

However, by the time the groceries had been pitched into the refrigerator and stashed in the cupboard, non-stop explosions were rattling the cabin. Pausing on the porch for only a second to catch my breath, I noticed the scum on the pond's surface was finally clearing up, courtesy of the grass carp I'd purchased some time ago out of a traveling truck belonging to Farley's Fish Farm in Cash, Ark. From the looks of things, the clean-up crew had been tending to business.

Now, though, not an iota of business was going on anywhere. The pond was still. The barred owl that called out didn't receive the usual response from its colleague on the other side of the forest. Blue jays had stopped blathering, does and fawns were probably hunkered down in leafy recesses, and who knew where the other critters were…the coyotes, skunks, foxes. No cocky skittering or sassy chattering was taking place now. The timber was hushed in anticipation.

Though I ached to run up to the big meadow and watch the storm unfold over the baled hay and see the jagged lightning bolts zip into the surrounding ridges, the clattering above made it clear the only place I better run was to the Jeep.



PLOP! PLOP! PLOP! At first the drops were large and few. "At first" lasted but a millisecond. "Plop, plop, plop-plopplopplopplop." I had dallied too long. Delivery was at hand.

Those familiar with clay know before it turns to sticky goo it becomes slicker than ice. As I maneuvered carefully out the gate, the front tires were barely on the road when the sodden beast began having its way with the Jeep, grasping at it with every intention of spinning it like a top. Before it had that chance, I hurriedly reversed and struggled backward onto the grassy lane. I would be going nowhere, especially the half mile back to the gravel road. For the first time, I was stranded in the woods. There was nothing to do but take a front-row seat on the cabin porch and watch nature strut her stuff.

She did so with unbridled enthusiasm!

For a full hour, the world moaned and howled and bellowed. Rain pummeled the roof. Oak and hickory branches groped and grappled at one another in a passionate love-hate ritual. The thick reeds lining the pond danced to a furious beat until they crumbled in exhaustion, and the pond's surface shilly-shallied from dimples to froth.

Rhythmically, a willow branch dipped down, swatted the water with its long slender tendrils, retreated to do a backbend, then whirled forward to smack the surface again. In contrast, the pine tree near the cabin swayed gracefully throughout the rampage but shed endless tears.

When the sky finally emptied and granted the sun re-entry, the woods took on a serene, passive ambiance that was more celestial than earthly. Every leaf, blade of grass and spider web glimmered and glowed in surreal hues of iridescent green, rich gold and a delicate lavender created by a warming sun. On every particle of air was borne the rich, pungent smell present only in thick, wet timber.

My initial reluctance to be held prisoner was replaced by exhilaration. The cloudburst had cleansed not only the woods of dust and film—but my mind as well. The dinner in town I'd miss that evening would never have satisfied my appetite the way this summer storm had. No theatre production could begin to match the choreography and cinematography I had just witnessed. The city, the malls, the busy streets only an hour's drive away? Surely they must belong on some other planet.

I whispered a heartfelt "Thank You" to the feisty road. Though it had yet to capture me in its ugly, gummy hold, it nevertheless had bullied me into a submission of sorts...and, yet, I was having the last laugh in the bliss of my captivity. In fact, though I was confident the sun would subdue the clay monster by the following afternoon, freeing me to leave, I questioned if I would want to go. Abandon this rustic refuge in the folds of these gentle hills to have the net of daily burdens and responsibilities ensnare me the minute I returned home? It didn't seem a logical choice. But that was a decision for tomorrow. Tonight was to be relished first.

In what must have been an instinctive deference to the majesty of the storm, the entire community of creatures—even the cheeky little porch mouse—remained uncharacteristically hushed into the evening. That is until the king of bullfrogs down at the pond could stand it no longer. With a gutsy and shattering penetration of the woods' tranquility, he broke loose with one voluminous "R-R-O-O-KKKK."

That's all it took. The noise curfew was over. Instantaneously the soft babble and jabber of the evening forest began, and along with all the woodland residents, I watched in awe as the sky exploded again...this time with stars.

FROG PHOTO BY BEN CURTIS

With a gutsy and shattering penetration of the woods' tranquility, he broke loose with one voluminous

R-R-O-O-KKKK

That's all it took.
The noise curfew was over.

For the Birds

BY *CANDACE ORD MANROE*
PHOTOS BY *BRIAN BUTTON*

Mid-summer in Iowa, and this day was a jewel. The July humidity that dampens our spirits and literally makes us go soft around the edges? Gone. Nada. Instead, the air was light, golden and occasionally tingling as a bashful breeze ruffled my arm hairs, nudging me to head deeper outdoors and explore, head for the trails, rivers or lakes for adventure.

I stood on the deck pondering the possibilities at my doorstep (I live in the woods off the Bill Riley Bike Trail and Raccoon River in Des Moines, and my Townie's tires are always pumped and my birding binoculars securely tucked in the handlebar bag), but the avian adventures right there at the feeders, suspended from a wire we'd rigged between the house and a 2x4 mounted up on the deck rail, had me stalled. That, and this conspiracy of sunlight, temperature and humidity, which obviously had confabbed with other meteorological heavy-hitters like barometric pressure, and decided to make one magical day.

Perfection is powerful. This Golden Mean gift of a day commanded me to abandon any idea for active adventure and stay still. Sit. Observe. Breathe it in, with all my senses. I obeyed. I stretched out on a lounge chair and with sunglasses on, dared not move, but watched. Intently. The backyard birding that occurred over the next two-plus hours remains that summer's most serene—and even a tad mystical—experience. And I didn't have to move a single muscle. In fact, that was the only mandate for the privilege of becoming an insider allowed to observe the avian activity only a couple of feet from my own, uplifted on the lounger. For a few hours on a July afternoon, I was wallpaper.

The brilliant flame-orange contrast against solid blacks make the Baltimore oriole a backyard birder's favorite. Attract them with a container of jelly and halves of oranges. Yards with trumpet vines, crabapples and raspberries also attract orioles.

Male eastern bluebirds are a brilliant and vivid royal blue with red-brown on the breast. **BELOW LEFT:** Catbirds love insects and fruit, so plantings of native fruit-bearing trees and shrubs such as dogwood, winterberry and serviceberry can entice them to yards along with grape jelly at feeders.

BLUEBIRD PHOTO BY RON HUELSE

BACKYARD BIRDING

Getting started is easy. Head to any hardware, outdoor or big-box store (or a specialized wild bird store if your town has one) for feeders. Many grocery stores also stock a modest selection.

I deploy four varieties of feeders to attract numerous bird species which often vary according to the season and migration.

Sunflower feeder

I use two types. My favorite is a big pale blue ceramic plate with decorative clay birds at the edges—an arty farmer's market find—that hangs on our wire from four leather straps knotted at the top and bottom. I love it because it's so easy to fill, with no cap to lift off or screw back on. The plate's wide rim accommodates two or three birds with no territorial fighting. Simply pour on the seeds. Starting out, go easy. If you attract enough birds to eat your initial conservative amount, you can increase the feed the next day. Otherwise, the unconsumed seeds will attract raccoons at night. The dogs will go nuts and your sleep will be disrupted. Repeatedly. Trust me on this.

My other sunflower feeder is a copper-color metal frame top-feeder with a glass tube that releases seeds on a bottom tray. This one's a little more of a challenge for the raccoons and squirrels—in fact, they avoid it altogether, thanks to our hanging wire system.

I've used other kinds of feeders for sunflowers over the years with equal success. Look for a sturdy feeder that will last more than one season. Avoid feeders with cheap plastic parts that are likely to break. One of the most serviceable I've discovered is a wooden house with glass sides. The "roof" lifts for filling, and the seeds spill out along the bottom platform on both front and back sides. This reliable house feeder attracted birds year-round for years until the glass sides cracked one icy winter.

What you'll attract: northern cardinals and flamboyant rose-breasted grosbeaks flock to the sunflower feeders in my pocket of woods. White-breasted nuthatches and tufted titmice also are drawn here, along with both goldfinches and house finches. All species of sparrows enjoy snacking on sunflower seeds, too. The black-capped chickadee over-winters in Iowa and needs constant foraging to survive. It's not a picky eater—you'll find it at all but the hummingbird feeders. Winter brings flocks of dark-eyed juncos to the feeder, though what they really like is foraging directly on the deck on spilled seeds. In our woods, the cardinals, like the chickadees, over-winter so the filled sunflower feeder is imperative for sustaining them. Don't despair if you don't sight cardinals during the day. They tend to be dusk feeders. They float in with the gloaming.

Niger Feeder

I'm down to only one of these though obtaining a second is on my to-do list. The current feeder is a vertical glass tube with a heavy round metal top and bottom that fills from the top and releases seeds at four entry holes, replete with metal perches. TIP: Cleaning is a must. Birds will eat all the seeds but for a few at the bottom, which will grow mold quickly with moisture.

GOLDFINCH PHOTO BY RON HUELSE

which is inevitable. Unless you thoroughly clean the feeder, emptying all the old seeds, washing the feeder with dishwashing soap and allowing it to dry—completely—no amount of refilling will draw birds. Through trial and error, I've learned that leaving the feeder outdoors in the sun to bake dry for a couple of days works best.

WHAT YOU'LL ATTRACT: Our state bird, the American goldfinch, devours thistles in nature. Niger seeds in a feeder are the next best thing. Into the spring season, when the male goldfinches attain their full color, their blast of sunshine yellow and black at the feeder will stop your heart. Promise.

House finches also head for the niger feeder like crows to corn. The males bring splashes of red (more subtle and brick-hued than a cardinal's) to flesh out your backyard palette. Purple finches eat niger seeds in winter, but I've yet to observe any in our backyard.

Sparrows will also feed on niger seeds. Once you settle into backyard birding as a passion, you'll learn to identify the different species—the omnipresent house sparrow (introduced in Central Park from Europe in 1950 and a common feeder throughout Iowa), the American tree sparrow (a winter visitor), the fox sparrow (sighted during spring and fall migrations, usually picking up scrap seeds beneath the feeders) and my favorite, the small chipping sparrow with its perky crown of rust. If you live in southeastern Iowa, your feeders may attract the Eurasian tree sparrow, which is often mistaken for a house sparrow. You'll recognize it by its brown (versus gray) crown.

The tufted titmouse, an odd little pale gray bird with a distinctive frothy crest that comes to a point, considers the niger feeder its personal playing field. It aggressively fights off other contenders, in my experience. This bird is small but tough and always causes a stir that increases the tension and ups the fun of our sport.

The little chickadee also will sidle up to the niger feeder, but not if sunflowers are available.

Suet cage

Like its name, this feeder is a narrow, rectangular cage of gridded metal wire with a wooden top and bottom. The shape is narrow to ensure that the skinny block of suet is accessible to the birds.

Any and all tree-pecking birds will be drawn to your cage if they're in your area. In spring and summer, we most commonly see small downy and hairy (slightly larger than downy) woodpeckers and, of course, white-breasted nuthatches, the black-and-white birds with long beaks that quietly chortle and murmur amongst themselves like a coffee klatch of church ladies. (They're the birds you see climbing headfirst down trees.) Red-breasted nuthatches, smaller than their white-breasted kin, also are found throughout Iowa in winter, though I haven't spotted any at our feeders yet.

The state bird of Iowa, as well as New Jersey and Washington, is a granivore with a conical beak that can easily pick out seedheads. The American goldfinch's agile feet allow it to grip plant stalks while doing so. Blue jays feed primarily on nuts and seeds, but may opt for soft fruits if available.

Chickadees, especially in winter, appreciate the warmth of suet.

In winter, the suet cage also becomes a stage for more dramatic productions, with bigger stars. The large red-bellied woodpecker with the gorgeous orange head is my personal favorite (orange being my favorite color). The cage also draws the redheaded woodpecker and northern flicker, both large and lovely to behold. TIP: I fill the suet cage in spring and summer just for fun, to draw birds to my backyard. Winter is a different story. The birds need the fuel of the suet for survival in our Iowa winters, so don't be stingy. Not all suet packets are created equal. As a rule, you pay for what you get. Feed packets that are dense—heavy in your hand—and thoroughly embedded with seeds yield the most birds at your feeder.

MAKE YOUR OWN: Take pine cones and spread with peanut butter then press sunflower or other seed varieties into it. Hang with ribbon onto a low tree limb and wait for the show.

Hummingbird Feeder

Iowa's beautiful ruby-throated hummingbirds—the state's only regular species—are frenetic feeders. Insatiable. And ridiculously easy to attract.

Any grocery store feeder will do, as long as it's reasonably sturdy. That business about adding red food coloring to their feed? Myth. Take one part sugar, add four parts water, bring to a boil and cool. Ta-da. Fill the feeder and watch the hungry hummers descend.

TIP: Keep a close eye on the feeder to make sure it's full. The birds will empty it in a couple of days.

Books for Birders

My favorite is *Birds of Iowa: Field Guide* by Stan Tekiela. Its compact size makes it easy to tote in the bike, and I prefer photographs instead of illustrations for identifying species.

Iowa Birds by Ann Johnson, Jim Bangma and Gregory Kennedy is another invaluable resource with information on feeding, voice, nesting and habitat. It's color-coded to the birds like *Birds of Iowa*, is larger and features illustrations.

Iowa Birdlife by Gladys Black is informational, good for background, but not ideal for in the field.

The current Bible for birders in our part of the country is *Field Guide to Birds* **(Eastern Region)** by Donald and Lillian Stokes, packed with helpful info and close-up photographs for easy ID.

Other good references for Iowa backyard birding in my collection:

- *The Sibley Guide to Birds (National Audubon Society)*
- *The Sibley Guide to Bird Life & Behavior (National Audubon Society)*
- *National Audubon Society Field Guide to Birds (Eastern Region)*
- *National Geographic Field Guide to Birds of North America*
- *Peterson Field Guide to Birds of Eastern and Central North America*
- *The Complete Encyclopedia of North American Birds*
- *The Cornell Lab of Ornithology's The Bird Watching Answer Book*
- *National Geographic Birding Essentials*

HUMMINGBIRD PHOTO BY JODI AHRENKIEL

YELLOWTHROAT PHOTO BY RON HUELSE: HUMMINGBIRD PHOTO BY JODI AHRENKIEL

Common Yellowthroat

Suet is a surefire bird attractor all year.

2,300 miles.

74 days.

Discovering the River Elemental.

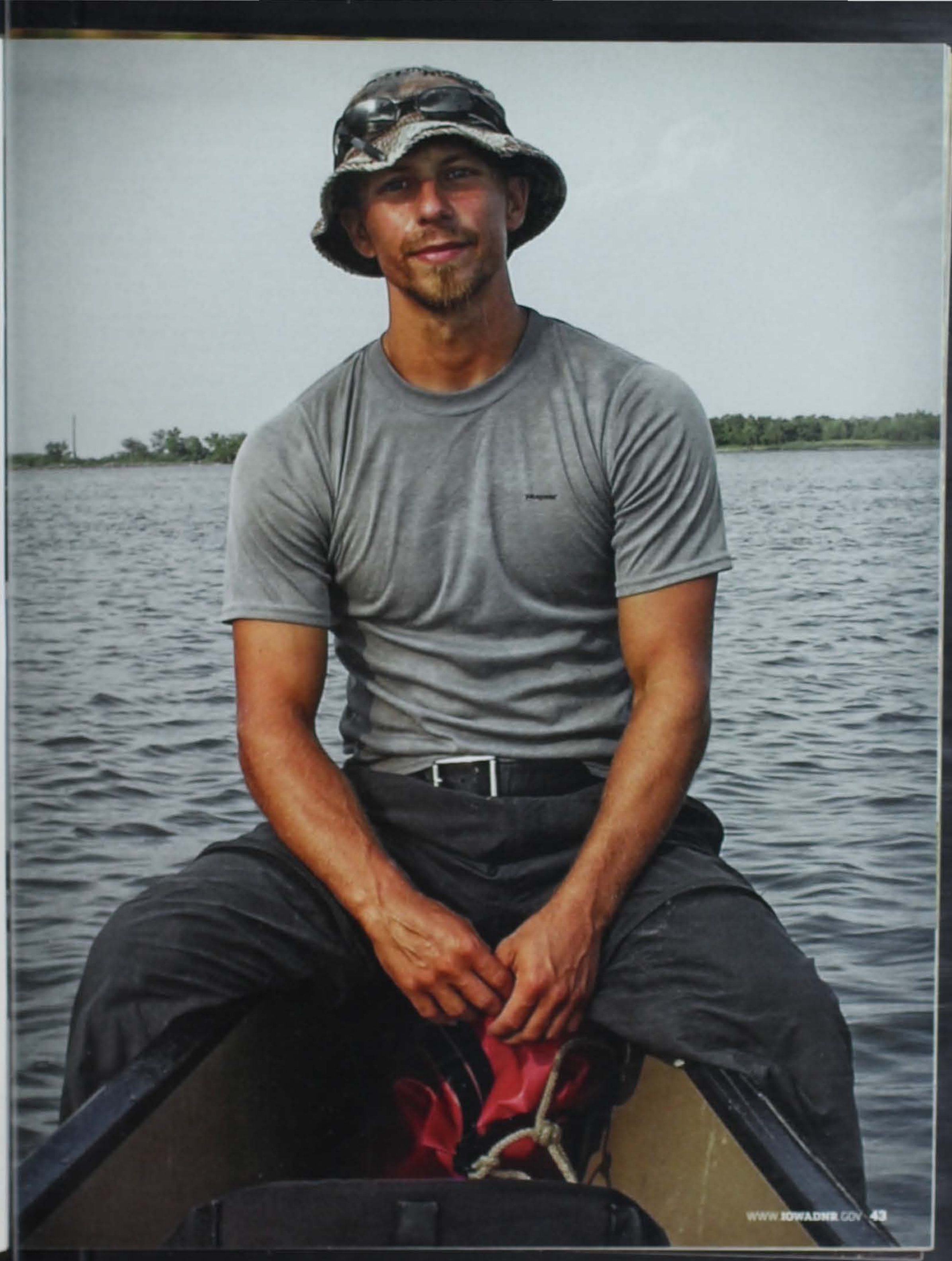
A DYSSEY ON THE BIG RIVER.

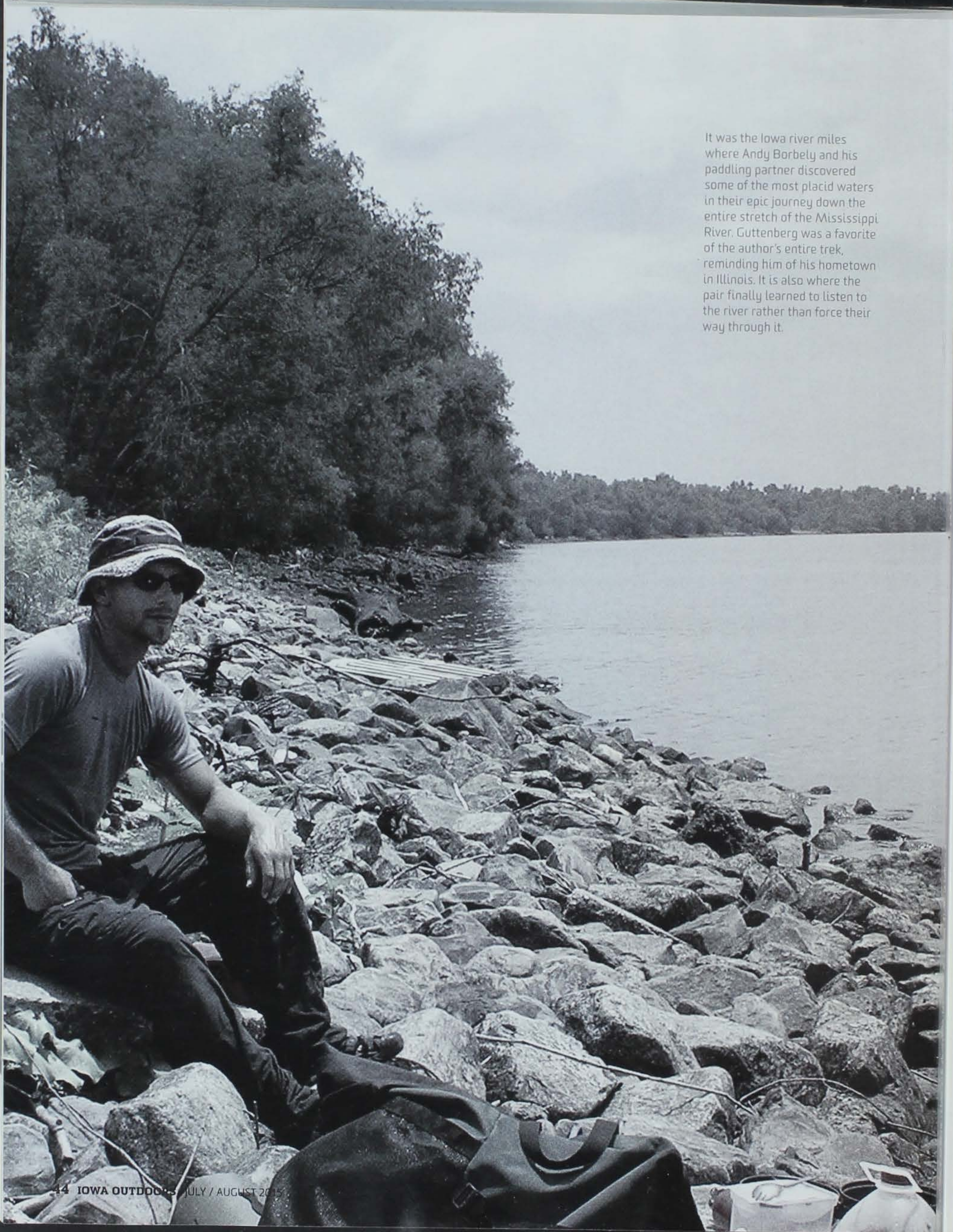
BY ANDY BORBELY.

PHOTOS COURTESY *ANDY BORBELY* ILLUSTRATIONS BY *JAKE ZWEIBOHMER*

"Twenty years from now you will be more disappointed by the things that you didn't do than by the ones you did do. So throw off the bowlines. Sail away from the safe harbor. Explore. Dream. Discover." -MARK TWAIN

Ten years ago, I carried these words with me as I canoed the entire length of the Mississippi River. It was the quintessential American road trip, something many people have told me they have mused upon but never attempted. Originally, my idea to undertake this adventure was not conjured upon the shores of Hannibal, Mo., or drummed up during a wild night in New Orleans. Inspiration arrived in a flash just outside of Des Moines as I accelerated my car up to I-80 cruising speed with Johnny Cash's "*Big River*" blaring from my speakers. My journey taught me many lessons, the very first of which was that





It was the Iowa river miles where Andy Borbely and his paddling partner discovered some of the most placid waters in their epic journey down the entire stretch of the Mississippi River. Guttenberg was a favorite of the author's entire trek, reminding him of his hometown in Illinois. It is also where the pair finally learned to listen to the river rather than force their way through it.

inspiration sometimes arrives from unexpected places.

The idea took hold quickly, considering its magnitude. My friend and coworker, Justin Hoest, and I were living in Des Moines and we were traveling to Chicago for a conference. "*Big River*" kicked off our road trip, as it was the first track on the "Live at San Quentin" album. By the time Johnny Cash finished his tale of fast-timing through St. Paul, Davenport, St. Louis, Memphis, Baton Rouge and New Orleans, I was convinced that my friend and I should have a run at our own Mississippi River adventure. I remember saying, "Before we get serious jobs, wives and kids, let's just go do something crazy. Something big. Some story to tell our grandkids so many times that they get bored with us!" He and I laughed it off, but to pass the time we half-heartedly talked about how we'd pull it off. When we passed through Davenport and saw the river beneath us, something clicked into place. We finalized our decision right then and there: we knew we were going to follow through on this daydream. We were going to canoe every inch of 2,300 Mississippi River miles...and I could practically hear myself telling my grandkids all about it.

We didn't just jump into a canoe and start paddling, however. We realized that every lofty idea requires a plan in order to make the jump into reality. Justin and I spent many hours of our free time back in Des Moines planning our river trip. I began researching the locks and dams. I studied Henry Rowe Schoolcraft's expedition to discover the source of the river. I started to shop for gear. I marveled at photos of the Keokuk lock. I listened to a lot of blues music. I read a lot of Mark Twain.

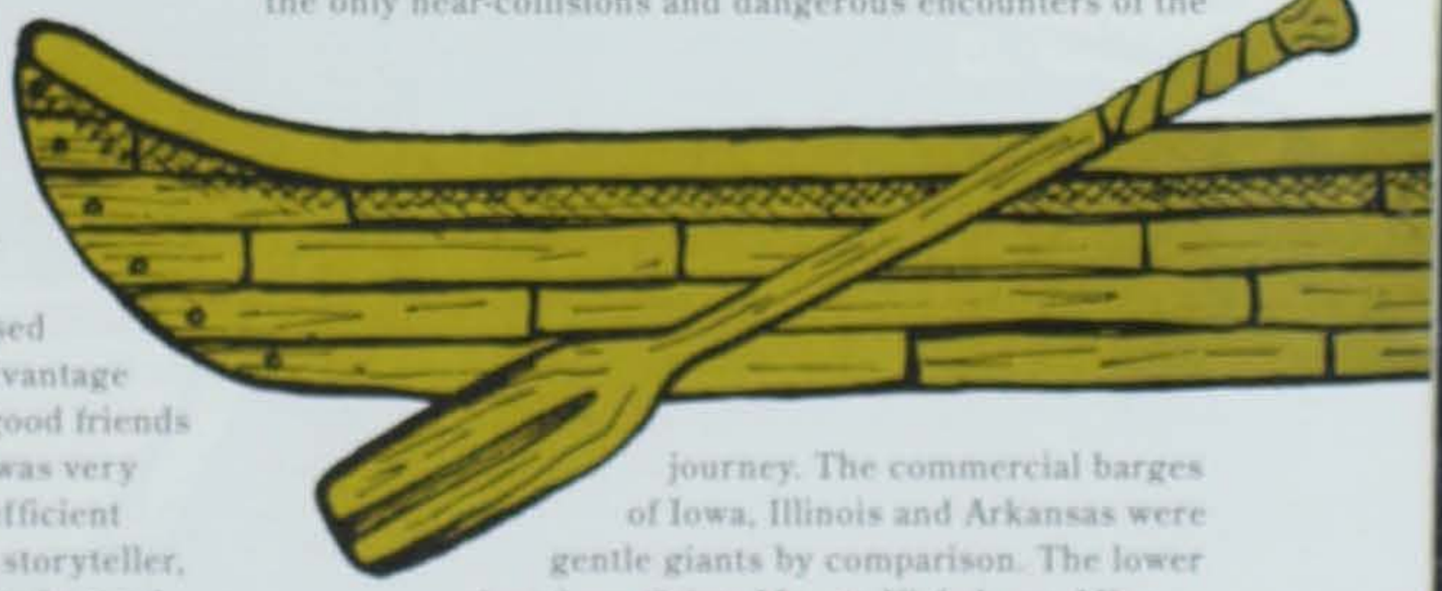
Justin and I also realized that many paddlers before us failed because they either couldn't physically complete the journey or because they couldn't tolerate each other's company under the arduous conditions. We doubled up on our workouts in Des Moines's old downtown YMCA. We learned how to encourage each other, how to push each other to work harder. We also took heed from the many stories we heard of friendships falling out during ill-advised Mississippi River trips. We knew we had an advantage with respect to this potential pitfall; we were good friends with completely different dispositions. Justin was very "type A," a list-maker, a nautical-knot-tier, an efficient packer. I was a typical "type B," a motivator, a storyteller, a cheerleader. Between the two of us, we boasted a total skill set, and we deferred to each other's strengths (it also didn't hurt that Justin possessed extensive whitewater paddling experience). By the time we shoved off from Lake Itasca, we were in peak physical condition and our minds were fixed upon our goal: it was all or nothing. We were all in from the very beginning.

The next 74 days were packed with emotion and experience. We cruised through blue-sky days when the paddling was so effortless we felt as though we were living a page straight out of Huckleberry Finn. We endured rain-soaked days when the paddling felt like a labor of Hercules. Minnesota sent us snow and near hypothermia and Mississippi dealt us a 118-degree heat index on the only day we ran out of water. We dealt with the remnants of Hurricane Dennis and we barely dodged Hurricane Katrina.

We accepted each day on its own terms, because from the very beginning we knew to expect an entire spectrum of Mississippi River obstacles. Through it all we were sustained by the pursuit of completion. To see the river from its very beginning to its very end was a perspective only a minute percentage of people had ever enjoyed (even Huck Finn only floated about half the river), and this unbroken narrative became the theme of our adventure, for better or for worse.

We learned the Mississippi River takes many forms as it makes its way from Lake Itasca to the Gulf of Mexico. In fact, at one point or another the Mississippi River is everything an American river can be, and each unique day presented us with a new phase of the river's personality. At first it was a challenge to navigate through the shallow reed-grass headwaters. (Imagine the frustration of trying to find the viable current of America's mightiest river among dozens of false channels that die out into muddy ditches).

In the northern wilderness, we were forced to portage nearly every time a tree fell across the river. We made better time once the river grew too large for beaver dams, but as the river grew we were forced to share it with more than just wildlife. In Minnesota and Wisconsin, jet skis and family boats pulling water skiers brought us the only near-collisions and dangerous encounters of the journey. The commercial barges of Iowa, Illinois and Arkansas were gentle giants by comparison. The lower river from Cairo, Mo., to Vicksburg, Miss., was surprisingly barren and proved to be even more of a drain on our water and food resources than the northern backcountry terrain. Of course the river was as industrial as can be between Baton Rouge and New Orleans, but once past the Big Easy it made a gentle transition through the delta on its path to the open sea.



The Iowa miles were some of the most placid of our entire journey. When I think of those days I remember

smooth paddles across the open lakes upriver from the locks and dams. I remember slow-current swimming holes in gentle backwater channels. I remember a river large enough to do some of the work for us but still small enough to fool us into thinking that it was ours; that by paddling its surface we had somehow struck a claim to it as though we were Lewis and Clark. It is natural for people to develop a sense of ownership during experiences like these, but I see now that it was childish to think that the river could ever really belong to us. The river forgot about us the moment our wake settled. Heraclitus was correct when he said "no man ever steps in the same river twice." Though we could not claim the river itself, we were right to claim the moments the Mississippi gave us and the insights we gained from a river-level perspective.

"I plunged deep into the muddy water and darkness surrounded me. After my initial splash subsided I expected silence, but the river was far from silent. The river clicked. It vibrated. It hummed."

In the upriver miles of Iowa we began to listen to the river instead of trying to force our way through it. In the beginning we had been ambitious about logging a minimum number of miles each day, but this goal-oriented approach did not always serve us well. Two of our daily challenges were finding campsites and dealing with mosquitoes once we did. When we floated past Lansing, it was growing dark and we made a poor decision not to stop there for the night. Daylight dwindled quickly almost as soon as we snapped a few photos of the town's picturesque bridge. I have never seen daylight disappear so rapidly. As if to highlight our bad decision, the last long rays of the sunset illuminated swarms of black mosquitoes rising from each little island where we might otherwise have taken shelter. Columns and clouds of the little blood-suckers rose against the evening sky as though each potential campsite were smoldering. We just didn't have it in us to battle the bugs, so we decided to make a break across Lake Winneshiek toward Ferryville, Wis. We paddled in darkness toward the tiny street lights off in the distance. Winds whipped up and though we struggled, we felt like we were paddling in place in the middle of the lake, aimed at a light in the blackness but getting nowhere. When we finally arrived on the opposite shore, we found a spot to put up our tent. We swatted mosquitoes inside the tent for the better part of an hour before we killed every last one, and as we did we vowed to learn from our experience: we would rise earlier each morning, log our required miles, find a campsite, and take shelter inside the tent before the mosquitoes came out.

Part of each day's agenda was deciding which locks and dams we'd pass through and which we would portage around. Most of the time locking through was just as simple as paddling up, pulling a rope on the wall, speaking with the lock master and passing through. Sometimes, however, the locks were already full and the luxury of passing came at the cost of waiting for our turn in line.

The lock master at Lock and Dam 10 in Guttenberg told us to expect a wait of about an hour, so we pulled off and ate lunch on the inside ledge of the lock. I sat on the hard concrete and wrote a letter to my parents and another to my girlfriend. I jogged into town and dropped the letters off at the post office. I remember Guttenberg as a very beautiful place that reminded me of a river-town version of my landlocked hometown in Illinois. I would have liked to spend more time in Guttenberg were it not for my enchantment with the undiscovered river miles that awaited me. Earlier in the trip, a local artist in LaCrosse, Wis., gave me three small statues with instructions to leave them in interesting places that were special to me. He liked the idea of his statues living in special places all around the world. I left one under the Crescent City Connection Bridge in New Orleans, one at the Head of Passes at the very end of the river and one on the lock in Guttenberg.

By the time we landed on the banks of Dubuque on Day 28, Justin and I were accustomed to the river and comfortable with its challenges. Our daily tasks had become routine; we packed our gear efficiently each morning, we cooked our meals quickly, we were inside our tent each night before the black swarms of mosquitoes descended upon us. We felt very well acquainted with the river when we moored our canoe and took a walk through the National Mississippi River Museum and Aquarium.

Our visit to the museum could not have come at a more perfect point in our journey. We were primed to recharge

BARGE PHOTO BY LAKE ZWEIBOHMER

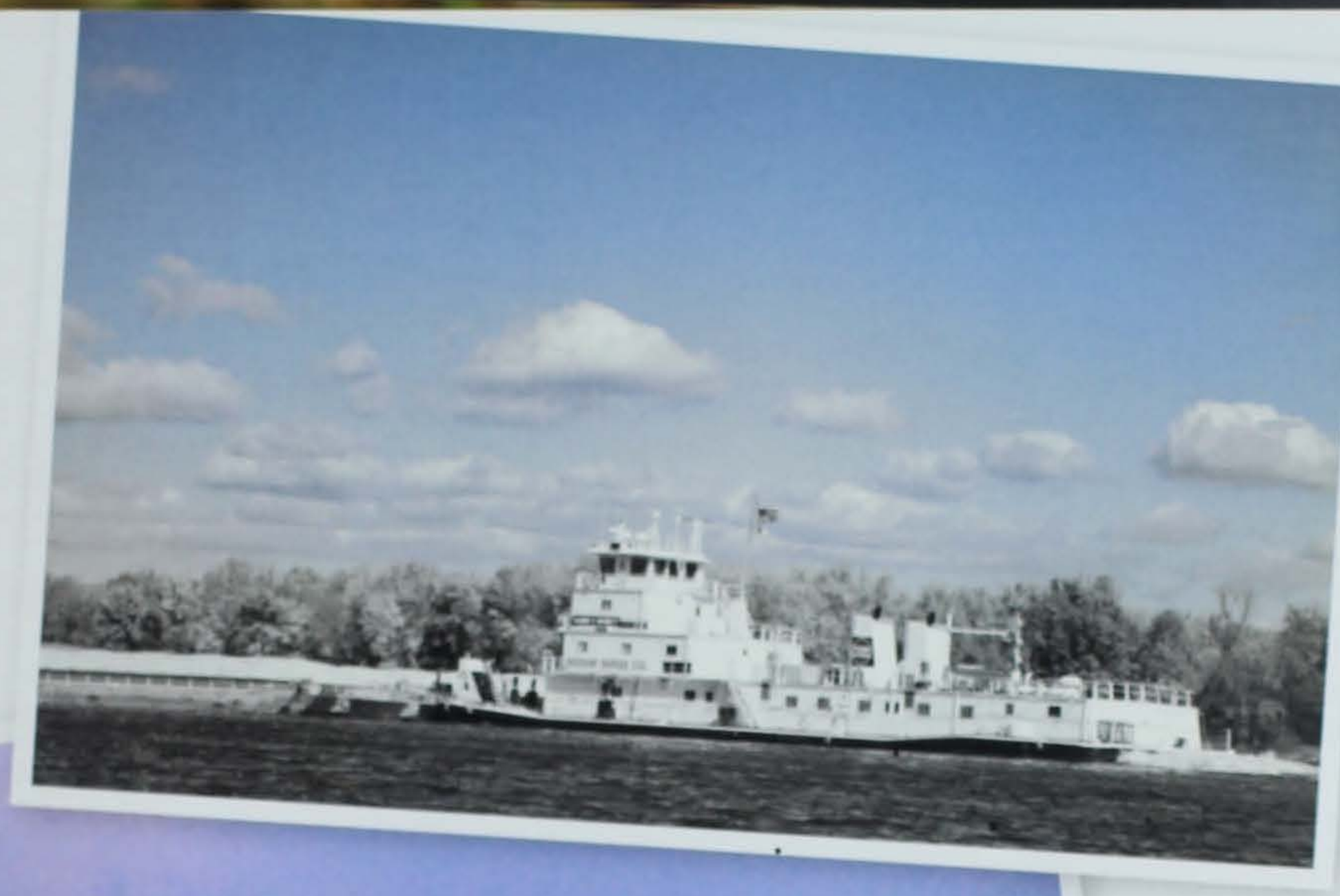


PHOTO BY IAKE ZWEIBOHMER

our education as well as our inspiration. It was a strange sensation to pull off the river and walk directly into astutely curated museum exhibits of all the nature and history and engineering that we had been paddling through for the better part of a month. I felt like a dirty river rat among the "normal" people touring the museum. I remember standing in front of a giant aquarium tank and looking at the behemoth catfish, long-nosed gar and carp whose cousins had most certainly been swimming beneath us just minutes before. Children pressed their noses against the glass and their parents pushed strollers next to me as they said things to their kids like, "Look at that, Tommy...it says here that that fish weighs over a hundred pounds. That's a big fish for a big river!" I thought but did not say out loud, "Brother...you have no idea!"

I remember an interactive display at the museum that played an aerial video shot over several prominent Mississippi River landmarks. It was strange to watch swooping fly-over video of locations we'd struggled so mightily to paddle through just days before. The memories were still quite fresh. The video showed an interesting vantage point of landmarks further downriver, too, and I watched with a keen eye because the Big River miles yet to come very much intimidated me. I took sneak peeks of the Chain of Rocks, the confluence with the Ohio, and the industrial corridor of Baton Rouge. I lost count of how many times I watched the video clip as my fellow museum-goers shuffled in and out at my side. All the while I wondered if we had what it would take to overcome the obstacles on the screen when we encountered them in person.

Justin and I were now members of the Mississippi River adventure club, but we were far from alone in our experiences. We knew that many groups attempt other varieties of Mississippi River adventures every year. In fact we caught up with another set of fellow river rats just downriver from Fort Madison. They were easy to catch and even easier to spot because they weren't in a canoe; but in a handmade river barge.

I could hardly believe my eyes when we approached their watercraft. The vessel carried three men our age, housed in a single shanty room built upon a wood-plank deck lashed to hollow plastic drums. The crew had put in at the confluence of the St. Croix and the Mississippi and they intended to float their barge all the way down to New Orleans. They were equipped with a small outboard motor "to stay out of the way of the barges and to get through the locks," but for the most part they just floated. They let the river take them at its own pace. I felt staggered by their patience. I couldn't imagine being so passive about making progress down the river. I didn't understand how these three men could incorporate such stoicism into their lives day after day. It all made sense, however, when they urged me to take a dive from their rooftop.

The roof, they explained, was sturdy enough to support one's weight for a dive. They said jumping from the roof was their favorite part of the day. It was their escape from the heat, their opportunity for a mental reset, and their excuse to get away from each other if even for a moment. I noted that the roof was about nine feet from the water. Their depth finder said the river was running about 14 feet in our location.

So I climbed. I jumped.

I plunged deep into the muddy water and darkness surrounded me. After my initial splash subsided I expected silence, but the river was far from silent. The river clicked. It vibrated. It hummed. It was as though every grain of sand shuffling along the bottom was in tune with every drop of rain falling against the surface and every river barge engine struggling against the current. Every noise above, below and in the river all merged together into one monastic "om," one noise made from all noises. This was my most private moment of the entire journey as well as my most personal discovery.

It was a reminder that the river was elemental. It was bigger than my daily struggle with sunburn and bugs and fatigue. It was bigger than the commerce that took place upon its surface. It was bigger than the cities that had grown upon its shores. It was more powerful than the locks and dams. The Mississippi River was as timeless as the sky above it.

During the following weeks and hundreds of river miles that I continued toward the Gulf, I held onto that sound. In my mind I often returned to that moment when I dove deep into the current in the gentle Iowa stretch of the Mississippi River. Today I hear that sound in the background as I reflect upon the words, "Twenty years from now you will be more disappointed by the things that you didn't do than by the ones you did do. So throw off the bowlines. Sail away from the safe harbor. Explore. Dream. Discover."

BIOBLITZ at Whiterock Conservancy

BLITZ: *A sudden, energetic overwhelming attack or effort.*

BY *KAREN GRIMES* PHOTOS BY *CLAY SMITH*

A bioblitz event is where volunteers—novices paired with experts—identify as many species of plants, animals and insects within a day. These fun learning events are astounding for what they find.

Imagine seeing and identifying more than 590 species of living things. In one 24-hour day. At one location. In Iowa, not Costa Rica, Arizona or Big Bend National Park.

You can do it if you take part in a bioblitz, a snapshot event where teams race to identify as many species as possible. Your role as spotter (amateur or experienced) helps each team discover more diversity. But you don't have to be an expert, because a professional identifier—plant, mammal, bird, moth, fungi, reptile—you get the idea—leads each team.

And that's exactly what participants do at Whiterock Conservancy near Coon Rapids each July. With 5,500 acres, two major landforms and five dominant plant communities, there is much to explore, including species most have never seen.

The birdwatching team is standard. The leader is Doug Harr, president of the Iowa Audubon Society and retired DNR diversity biologist.

The birders' team walks south along the Middle Raccoon River, which divides the Des Moines Lobe and the Southern Iowa Drift Plain, last glaciated about 500,000 years ago. The river gurgles, swirls and murmurs on the right as insects skim the surface. Harr hands out an Iowa bird checklist and offers binoculars.

Before any take a step, Harr identifies an Acadian flycatcher. It may have been the explosive "peet-sah" of its song, the prominent white wingbars and eye ring or

the knowledge that Acadian flycatchers live in deciduous trees along streams. Whatever the clue, Harr is 100 percent sure of the bird that we barely glimpse.

Next we see a common yellowthroat, skulking in tall weeds. A small warbler with a prominent yellow throat and breast, it's distinctive and unmistakable with a black eye mask. This bird's call is a unique witchety-witchety-witchety, a sound we hear continuously along the river.

We've barely covered 50 yards when a flash of brilliant blue alerts us to an indigo bunting. A mere 5 inches long and weighing less than an ounce, the indigo prefers weedy and brushy areas on edges of fields or woods. Look for males singing from the highest treetop.

Another blue bird crosses our path. This one looks like a small robin with its red breast, but exchanging the drab brown head, back and wing for royal blue. It's an eastern bluebird. Walking southeast towards a meadow, Harr points out four bluebirds crisscrossing the path; a male, a female and two young of the year.

"That's a warbling vireo," he says as we move into an open area. He knows it by sound, although most of us never see this gray-backed bird with white breast.

"Listen. There's a rose-breasted grosbeak," Harr says as he points across the river.

If seen, the grosbeak is hard to mistake. The male sports a black head and back, black wings marked by white patches and a white breast punctuated by a rosy red bib. In profile he resembles a broad-chested, short-necked robin wearing a tuxedo with a rose cravat. And he sounds like a particularly melodic robin. Females are brown and white with streaked breasts. Both like the forest edge and thrive on seeds, fruits and insects, using their heavy stout bills dexterously.

Someone points to the sky where a turkey vulture rides the thermals searching for carrion.

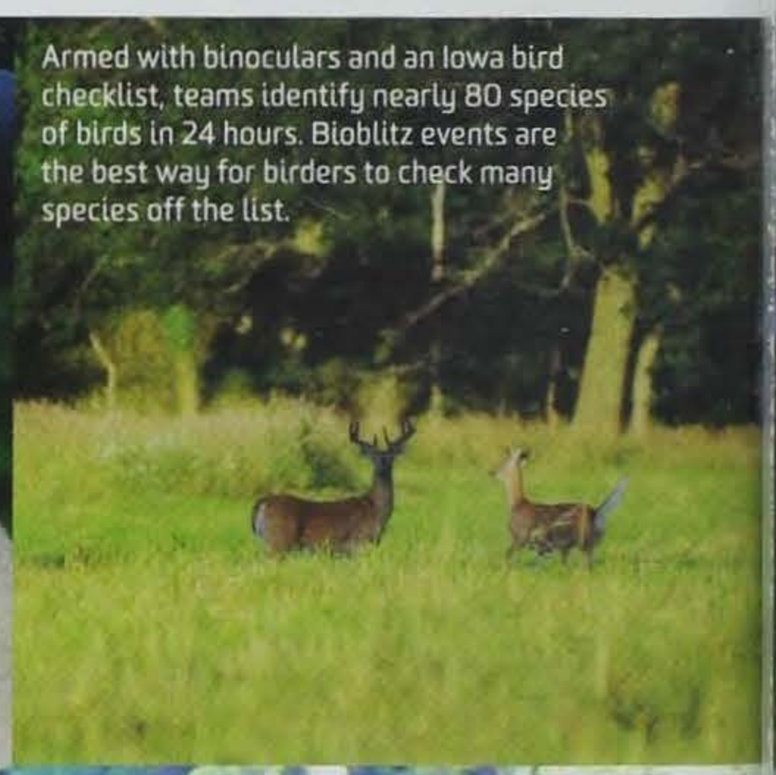
"Doug, why are turkey vultures more plentiful now?"

"Back in '72 when I first started working in northwest Iowa, it was six years before I saw one," Harr says. "Their range has definitely expanded. I'm guessing there are several factors involved. They are no longer hunted. There's plentiful food. And the warming trend is allowing them to move north."

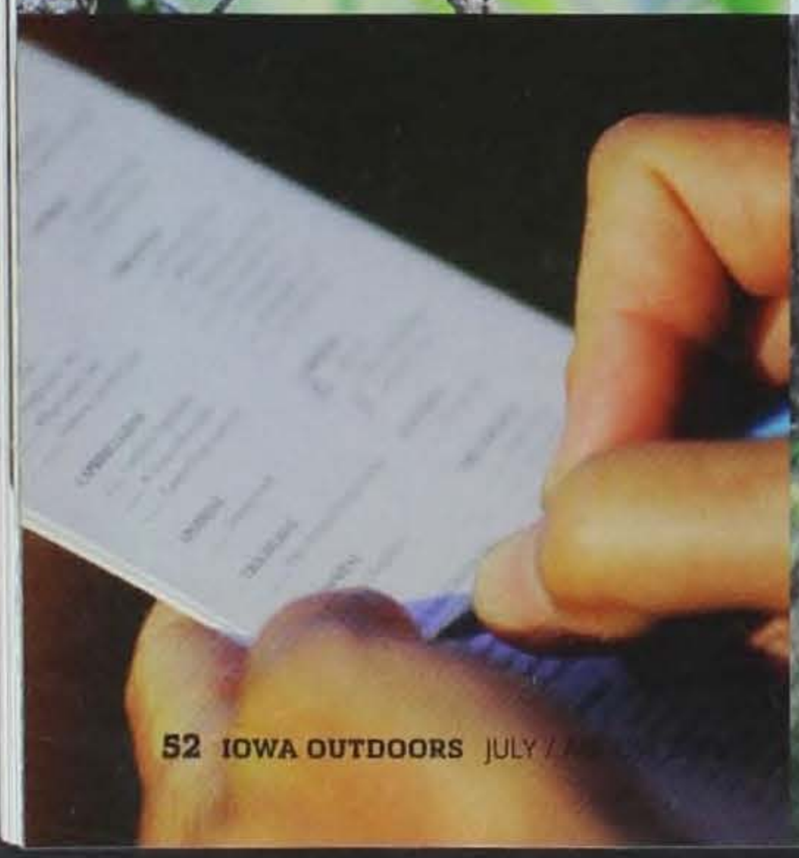
We're distracted when we hear what sounds like another robin, only this one's song is punctuated by short pauses. Sing dah-dah. Pause. Sing dah-dah-dah. Pause.

"That's a red-eyed vireo," Harr says. No wonder I am confused. That's three birds that sound like robins. And only one of them is a robin.

Bird expert Doug Harr



Armed with binoculars and an Iowa bird checklist, teams identify nearly 80 species of birds in 24 hours. Bioblitz events are the best way for birders to check many species off the list.



We never do see the red-eyed vireo, even though it's one of the most common birds in eastern forests. If we had, this small olive-green bird is rather dull in appearance. Only the black eye stripe surrounded by white stripes and white belly set it off from other small grey birds. That and its dark red eyes.

Further south, trees open up into oak savanna—an open area of grass, dotted with widely separated oaks. An American goldfinch flits by. His brilliant yellow feathers, black cap, squeaky voice and up-and-down flight pattern make identification a breeze.

In the same tree sits a northern flicker.

"Didn't they used to call these yellow-shafted or red-shafted flickers?"

"They used to distinguish between the two subspecies, so this would be the yellow-shafted here in the eastern United States," Harr says. We're enchanted as we watch a pair move from perch to perch on branches around the tree.

"I think they have a nest in there," says one of the women. Our eyes strain, trying to find one of them flying into a hole in the tree trunk. But the foliage is too thick. We can only speculate.

Working our way past the large tree, we hear a red-bellied woodpecker, a misnomer for sure, as its head is red-capped, not its belly. But don't call it a red-headed woodpecker. They must have run out of names, because this bird's most distinguishing features are the red cap and the black-and-white barred back.

"Freep." The next bird heard is the great crested flycatcher. Large for a flycatcher, it's still tough to see this mostly gray bird with a pale yellow belly because it's a treetop denizen. The trees flushed with verdant green summer foliage make the bird invisible.

"You'll always find it high up in a tree," Harr says.

One benefit of going out with experienced birders is you can double or triple your bird list since they rely mostly on sound for identification.

"I have a really good app," says Laura Lake of Coon Rapids. "It's I-bird plus" and aids in identifying bird sounds.

Harr is a quiet, calm leader. But don't let his laid-back manner and gentle humor mislead you. This man is competitive. He's determined to beat last year's record of 78 species counted for the bioblitz. He and a friend have canvassed the conservancy and by evening's end he has racked up some 60 species of birds, about a dozen or so short of last year's count. And there's still tomorrow morning's bird walk.

Birding alongside experts teaches novices tricks for identification. Experts identify many species simply by sound—a useful skill in heavy forest, shrub and grasslands.

Bioblitz Events 2015

Whiterock Conservancy, Coon Rapids
July 24 - 25 *712-684-2697*
whiterockconservancy.org

Jackson County Conservation Board, Maquoketa
July 10-11, Sept. 11-12 *563-652-3783*
jacksonccb.com/bioblitz

Search Iowa Prairie Network, Iowa Natural Heritage Foundation and county conservation board websites for future opportunities.

Tracking Down Wild Edibles

The first thing you notice about Barbara Tagami is her beautiful smile. White teeth flashing, she shares her abundant enthusiasm for wild edibles. While others go to the supermarket, within minutes it's clear the whole outdoors is Tagami's grocery. A retired naturalist from the Dickinson County Conservation Board, she's here to identify, gather and prepare food plants.

Some of us expect to pick a few mulberries or raspberries, but Tagami takes her team of 14 well beyond berries. Her mantra: know your plants, really know them. Cross-reference plants with several good plant guides. Learn local poisonous plants and avoid the *Solonaceae* or deadly nightshade family. And beware. Some edible plants have poisonous parts or are poisonous when not fully ripe. Avoid sprayed and heavily trafficked areas. Leave enough behind to ensure future growth and never collect rare or protected plants. Common sense, really.

Before leaving the campground, it's clear you could set Tagami down anywhere and she could make dinner out of a wide variety of great-tasting plants.

"Common burdock," she pulls up a wide-leafed plant with wrinkly leaves. The wedge-shaped leaves are white or light green and feel fuzzy on their soft underside. "I make a great dish with carrots, celery, burdock, a little soy sauce, broth and sugar."

As we edge west following the hillside, someone points to a juniper and asks if the berries are edible. "Yes, I use it for flavoring in meat, particularly wild game."

Next she spies a linden tree or basswood. It's unmistakable with its asymmetrical heart-shaped leaves and leaf-like bracts sporting a spray of little white berries. In early spring, the leaf buds make a great snack. Dried flowers are good for tea.

Stopping at an ash tree, Tagami grabs a handful of "helicopter blade" seed pods. "You can crack the wings open and eat these in the fall."

The foraging group needs no introduction to ripe black raspberries. "We'll gather more for breakfast tomorrow," Tagami says. Then she reminds everyone how to tell the

A few of Tagami's Favorite Books

Medicinal Wild Plants of the Prairie an Ethnobotanical Guide by Kelly Kindscher. 1992. University Press of Kansas. From hyperactivity to arthritis, syphilis to worms, this book illustrates how Plains Indians used 203 prairie plants medicinally. *kansaspress.ku.edu/kinmed.html*

The Forager's Harvest: A Guide to Identifying, Harvesting, and Preparing Wild Plants by Samuel Thayer. 2006. Foragers Harvest Press. A guide to find, identify, collect and prepare wild edibles. Includes a harvest calendar and great color photos. *foragersharvest.com*

Wild Seasons: Gathering and Cooking Wild Plants of the Great Plains by Kay Young. 1993. University of Nebraska Press. Find easy-to-follow directions for identifying, collecting and cooking about four dozen wild plants. Try wild violet salad or cattail pollen pancakes among nearly 250 recipes.

On the hunt for a diverse species: Whiterock Conservancy is ideal with its 5,500 acre mix of managed habitats—wetlands, savanna, riparian (waterways), woodland, prairie and ag fields. It also straddles two geologic regions—the more recently glaciated, flat Des Moines Lobe, and the Southern Iowa Drift Plain with its hills and valleys.

three-part leaf of poison ivy from three leaflets on the raspberry. "Wild raspberries are rich in B vitamins and good at preventing morning sickness in pregnant women."

As we walk, she talks about her addiction: buying plant books. "My favorite is *Medicinal Wild Plants of the Prairie*. But I like them all. I collect edible plant books and I keep buying them. If there was a fire in my house, I would save some of these books and my microscope."

When we reach the main house, Tagami covers a picnic table with her books. "This is another favorite, *The Forager's Harvest* by Samuel Thayer."

She holds up *Wild Seasons: Gathering and Cooking Wild Plants of the Great Plains* by Kay Young, another must-have. One of the participants, Glenn Pollock, a prairie advocate from Nebraska, says, "Kay Young knew Chief Black Elk of *Black Elk Speaks*." The book was the collaborative work of a Sioux holy man and John Neihardt, a Nebraska poet and writer. "Through Neihardt, Young met many older Native American medicine men," Pollock adds.

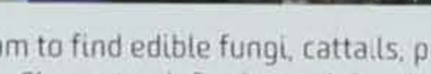
And, that's the key. Much of what Tagami knows was gained from Native American people who knew edible plants and their medicinal properties.

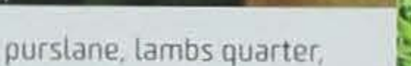
Stopping at a low-lying cattail bed, Tagami says it's a highly nutritious, fun vegetable. All parts are edible, if harvested at the right time. She leads a delegation into the bed. Jake Slings, former AmeriCorps volunteer, is not afraid to get wet and dirty. Muscles flex and strain as they pull tall plants out of damp muck. In minutes, Slings enthusiastically collects several armfuls of cattails.

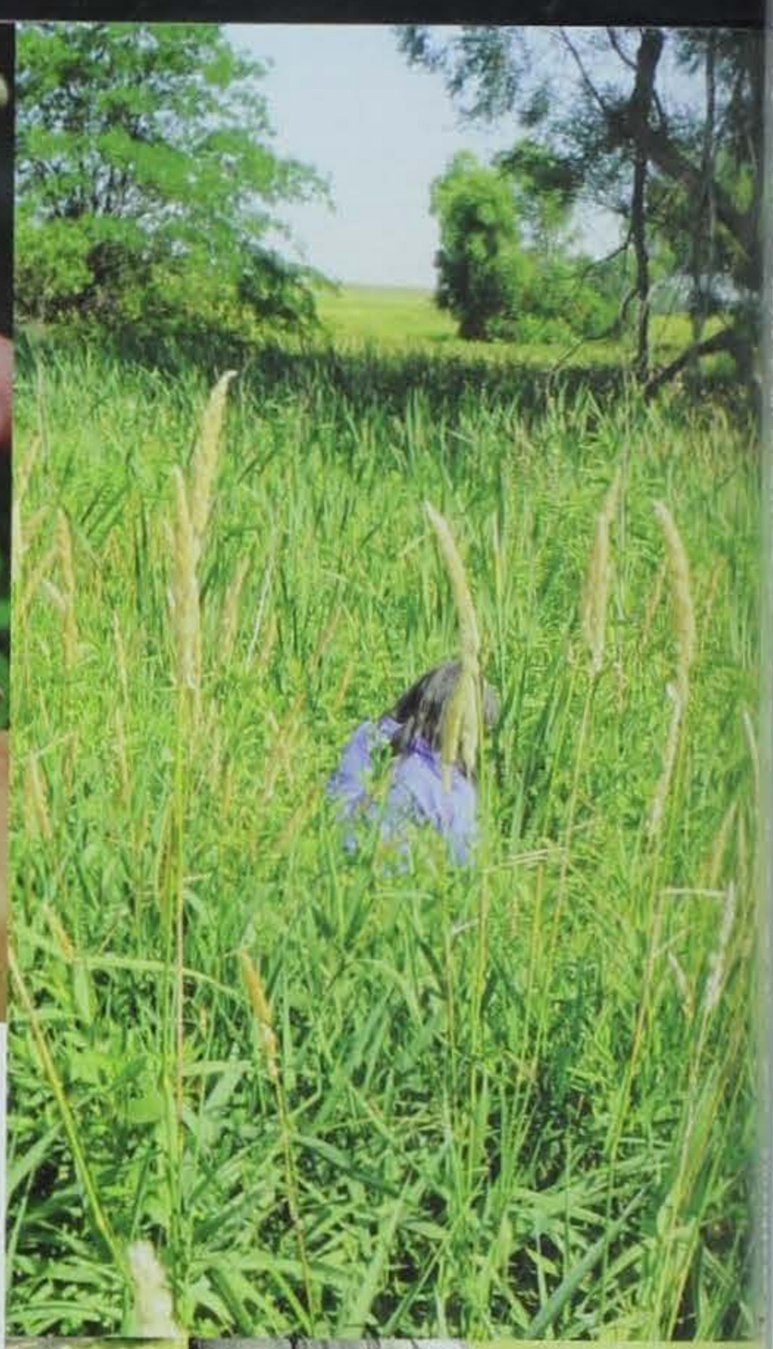
"Now I'm going to have you tear these apart and see how we process them," Tagami holds up some plants. "In a cattail, the female part is on the bottom and then there's a space, with the male part on top. The male part is the edible, more palatable part."

As Tagami shakes the top end of the cattail, the male part or stamens, covers her palm with a fine yellow powder which she shakes into a bag. "I use the pollen instead of sugar to make sugar cookies." Later, she boils the male part in salt water.

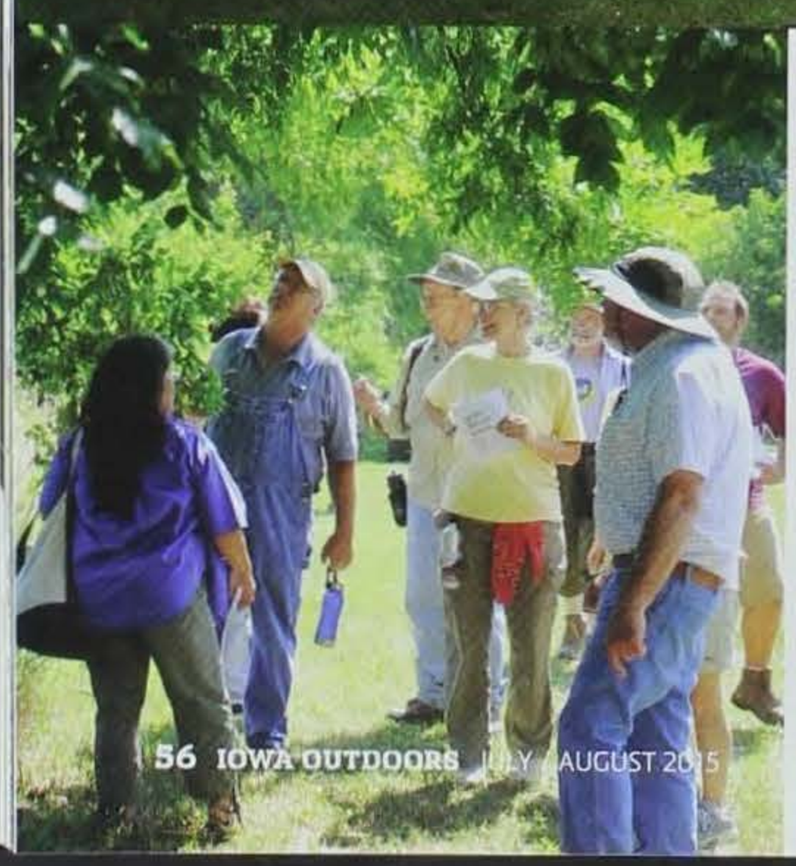
Wild foods expert Barb Tagami

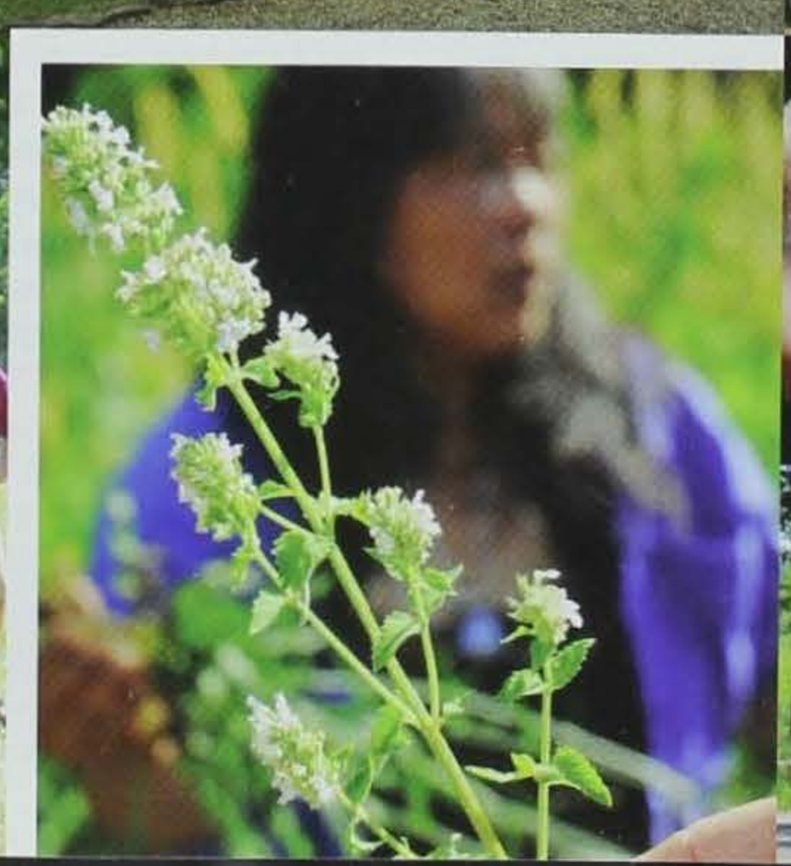






Wild food expert Barb Tagami leads her team to find edible fungi, cattails, purslane, lambs quarter, curly dock, sumac and dozens more species. Shown top left, she explains that daylily buds and flowers are edible. She makes sugar cookies using the sweet yellow pollen of cattails (below right corner.) To the right she pulls cattail shoots. After several hours of foraging and learning, the team's knowledge coalesces as they prepare wild salad and sumac lemonade for dinner. While enjoying the meal,each team leader reports their findings and experiences from the day.





The male part disappears as summer progresses. "The female part is where all the seeds grow," she says. It's also the brown hot dog-shaped part used in ornamental decorations and fall bouquets.

"The indigenous people used the fluff from the female cattails for disposable diapers and insulation. The rhizomes are high in starch and good roasted or boiled, and the tender shoots make a great salad and are good for pickling."

Native people wove the long, narrow leaves into mats, making cool summer housing, or baskets. No part was wasted.

Past generations "did not have grocery stores or drug stores. The women's days consisted of gathering," says Tagami. "Here's mullein leaf. Although not native, it was used for respiratory problems. It's also nature's toilet paper, firewood and shoe liner.

"Here we have stinging nettles. You have to be careful as you gather them to avoid a rash. But I love cream of stinging nettle and potato soup. Sauté the nettles in butter, then add them to the potato soup." The cooking breaks down the sting. The plant contains a bonus, gluten, which thickens the soup.

Daylily buds and flowers are edible. Elderberry flowers and milkweed buds make a nice sauce to add to a frittata.

Tagami asks us to collect sumac berries. "You pick these after they get this nice, nice red color; put them in boiling water to make sumac tea. The foliage turns a brilliant crimson red in the fall."

Native yarrow is known for its medicinal qualities. It's in the daisy family, she says.

"Look for the compass plant, standing tall above all others," Tagami says. "It's in the daisy family, too. Its leaves are just beautiful, kind of leathery. Indigenous people would score the stem and chew it, like chewing gum."

In a disturbed area, Tagami points to many wild edibles, most brought by settlers to the Americas. "Dandelion, purslane, plantain, lambs quarter, curly dock. They're delicious greens you can eat." Hmm. One might find these familiar weeds in an untidy suburban lawn.

Eric Elliott who works at Whiterock, recognizes chicory, an introduced plant with a blue aster-like flower. "We used to take the roots and grind them up," he says. The roasted root has been used as a coffee substitute or additive since the Civil War.

"There is so much here." Tagami points to wild parsnip. "If you get the oil on you and are out in the sun, you will get blisters on your skin." But the fleshy taproots can be eaten raw, sautéed or boiled.

"The health of the land is in its diversity," Tagami says. "Using Roundup Ready seeds produces more. But we wipe out insects that animals depend upon. We don't know the ramifications on us because we haven't had enough time yet to evaluate it.

"The more diverse the system, the healthier it is. A monoculture is not healthy," she says. Looking out to a crop field, "There used to be hundreds of plants here."

A tall man in a red hat, Allen E. Anderson, speaks up. "We're losing our rattlesnake population because everyone is pulling and selling the limestone near Winterset for landscaping." From Norwalk, he has been studying snakes for years. As the limestone disappears, the hibernaculum for other snakes disappears, too. "I've been going down there since the mid-1970s. I've seen worm snakes, red milk snake, black rat snakes," Anderson says.

In her sometimes subtle way, Tagami ties diversity to the web of life. Looking at native thistles which have a white underside, she tells us we can eat early foliage raw or cooked, but remove the spines from some species. Why should we care about this species? "It doesn't bloom until July. The state bird, the eastern goldfinch, lines its nest with thistle down, waiting until the thistles bloom," she says. "That makes it one of the last birds to nest."

She makes her point. The intricacies of life, the dependency of one species upon another are clearly illustrated here on the prairie at Whiterock.

She points to a common milkweed. "You can eat it fresh, the green flower heads or when just opened, you can eat the shoots and pod. But don't eat it when the seeds turn brown, it's poisonous." One woman shares her youthful memory of chickadees lining their nests with milkweed fluff.

"We wonder why monarch numbers are low. This is the host plant for the caterpillar," she adds. As milkweed numbers drop, so do monarch numbers.

In two and one-half hours, with Tagami's expert guidance, we've found 31 edible plants. We break to prepare sumac tea and salad for dinner.

As we rub the red sumac to release and discard the seeds, Slings reminisces about his grandmother. "She can no longer forage, so I go out and pick berries for her," he says. Then he reaps the benefits in pies that she makes.

We munch on cattail pollen sugar cookies as we learn to peel the cattail stalk back and find the tender shoots—not necessarily easy or quick, but great in an acorn pasta salad mixed with purslane and Italian dressing.

After dark, we head to the star gazing field to catch and identify night-flying moths. Some 1,500 moths are found in Iowa. We're here to attract as many as possible with a simple white sheet stretched on a frame, UV and fluorescent lights doing the attracting.

More an exercise in patience (as we wait for moths to land on the sheet), the evening pays off as participants have the chance to look closely at these night flyers. Past years have attracted more than 200 moth species. Up close, they are incredibly beautiful.

But, if plants and bugs aren't your thing, there are plenty of eco-adventures to try: plants, fish, mussels, mammals, bats, reptiles, aquatic invertebrates, amphibians, bryophytes (mosses and liverworts) and butterflies.

PHOTOS BY *BRIAN BUTTON*

BACKYARD BIRD BUFFET

Backyard bird feeding isn't just a winter activity. Our avian visitors could use our help as they breed, raise young and fuel up for the long migration south. Make sure to set the table for maximum benefit and diversity of species.

KEEP IT FRESH

Birdbaths should be cleaned regularly with hot water and a scrub brush. To prevent or slow algae, change water frequently, or buy an aerator that will also help attract birds. Hummingbird feeders need attention too, as the high-octane birds supplement their nectar-rich diet with sugars at feeders. Thoroughly clean hummingbird feeders and replace sugar water before it ferments—usually within three to seven days depending on heat and sun.

DON'T PLAY CAT AND MOUSE

Roaming housecats are among the top three causes of declining bird populations, killing between 1.4 billion and 3.7 billion birds per year. Loose domestic and feral dogs are also known to have a negative impact on nesting birds.

BUILD A BIRD-FRIENDLY BACKYARD

Consider letting some of your property go "wild," especially if you live on an acreage, or garden with native plants. Even small wild areas are food and shelter sources. Avoid or minimize tree trimming to prevent disturbance of nesting birds. Avoid mowing grass in large fields and roadsides until after July to enable ground-nesting birds to fledge.

BE A GOOD LANDLORD You may view that bird nest over your porch as an unsightly nuisance, but its inhabitants may be responsible for eating hundreds of insects every day. Leave them be until the young fledge. If you have active nest boxes, clean them after the young are gone. Old nesting material attracts parasites and can be a source of disease.

DON'T SPRAY Stay away from pesticides. Pesticides, even those labeled "safe," can have negative consequences on birds. Some products include neonicotinoids—found to be deadly to both bees and birds in even minute amounts. Pesticides kill insects some birds rely on to survive.

TURN THE OUTDOOR LIGHTS OUT

Excessive outside lighting can disturb night-flying birds (as well as waste energy). Bright artificial lights can disorient migrating birds and make collisions with windows, buildings and other structures more likely. Consider blue and green LED lights that are less distracting to night-migrating birds.

BE A BIRD-FRIENDLY BOATER Boats operated in proximity to nesting birds can cause behavioral changes, even leading to nest abandonment and failure. And in many cases, it's illegal. If you notice congregating birds, steer clear to enable them to spend their energy gathering food and raising their young.

GONE FISHING? Pack out your trash, especially discarded fishing line and plastic six-pack rings. Entanglement, especially with line, is a common yet preventable source of bird mortality. When buying tackle, consider looking for those made of steel instead of lead.

TURN THE DINNER TABLE UPSIDE DOWN

While black oil sunflower and niger seeds are preferred choices for

attracting the widest range of bird species, don't forget a sweet treat for your feathered friends. No, we're not talking chocolate, which is toxic to birds. Orioles, cardinals, catbirds, summer tanagers and others love a chunk of apple, banana or orange half once in awhile. Jelly, especially grape and apple, can attract woodpeckers, robins, catbirds and orioles. Consider putting out mealworms when adults are aggressively feeding nestlings.

Feeding Fundamentals

Bird seed can spoil in Iowa's summer heat, humidity and rain. Make sure feeders are operating correctly and seed is accessible. Put out only enough food consumable in one to two days. Check often for mildew, clumps or spoilage and clean regularly to prevent spreading disease or parasites. Position feeders away from windows to minimize collisions. Decrease the use of millet and cracked corn, a favorite of less desirable birds like house sparrows and starlings.

GROUND FLOOR OR BALCONY SEATING?

Many birds eat at more than one level, but some species have preferences. Mourning doves, sparrows, towhees and juncos prefer to eat at ground level. At table height is where you'll find cardinals, finches and jays. Titmice, goldfinches and chickadees flock to the hanging feeders, while woodpeckers, nuthatches and wrens gravitate to those on tree trunks.

Summer Readers

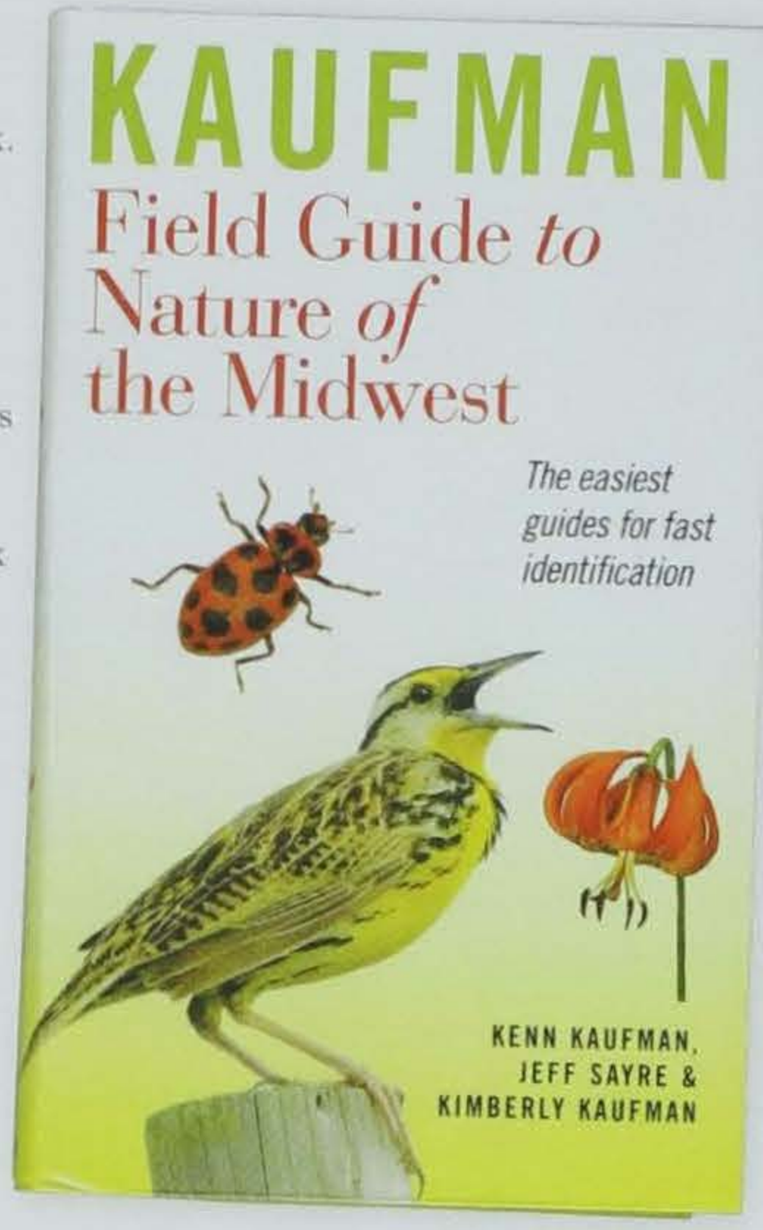
BY BRIAN BUTTON

One-Stop Nature Guidebook

One guidebook that covers many topics helps lighten the daypack. The newly released *KAUFMAN FIELD GUIDE TO NATURE OF THE MIDWEST* is a broad coverage, nontechnical and easy to use field guide that spans geology, the night sky, plants, trees, butterflies, fungi, fish, birds, mammals and invertebrates such as butterflies, grasshoppers, beetles and more.

While it isn't a definitive guidebook for all of these subjects, its niche is that it covers so many topics, making it a great all around guide for youth, novices or experts in a particular field, but lacking the same skill set in other fields. And it beats carrying around a dozen guidebooks.

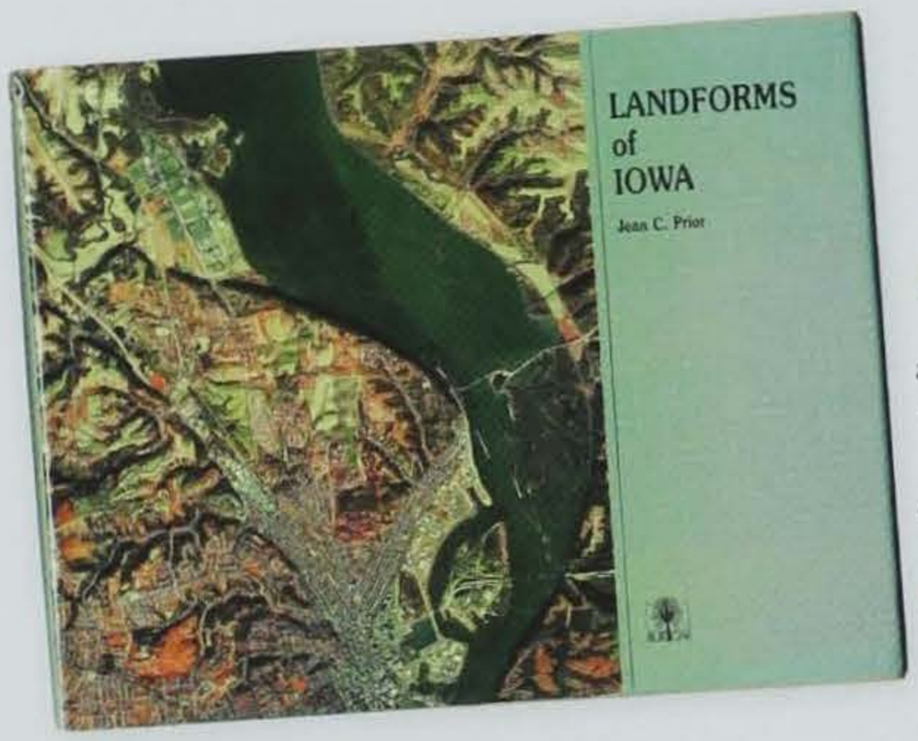
"We want it to be useful for anyone who is curious about nature, so we aimed to make it user-friendly, clear and easy to understand. But it's not just for beginners; even someone who is an expert in one area of natural history may know less about other aspects. So for example, an expert birder wouldn't need this guide for birds, but they might carry it so they can look up that interesting flower, turtle or insect," says author Kenn Kaufman, who along with wife and co-author Kimberly, made special trips to Iowa to increase their familiarity with the creatures and plants found here.



"We want people to realize that nature in the Midwest is abundant and varied and wonderful, and that exploring nature is exciting and fun.

Color-coded tabs allow quick in-field location of items of interest. Each major section is subdivided to aid in finding a match. Its compact size allows for storage in a glove box or pack.

Kaufman Field Guide to Nature of the Midwest; published April 21, 2015. Over 2,000 color photos and 416 pages. ISBN: 978-0-618-45694-9. Houghton Mifflin Harcourt Publishers. Price: $20



Landforms of Iowa

First published in 1991, the classic book, *LANDFORMS OF IOWA*, endures. With the exception of the rugged limestone bluffs in the northeast or the loess hills to the west, the untrained eye may overlook our seven distinct geological regions, let alone the complex processes and deposits unfolding over awe-inspiring geologic time that shaped our land.

Author and research geologist Jean Prior wrote the book for the DNR as well as *IOWA: PORTRAIT OF THE LAND*.

Educated by her clearly presented text and inspired by the book's superb full-color photos and maps, any visitor can thoroughly understand and deeply enjoy with new wonder the 155 scenic public areas she uses to illustrate the state's topographical features.

Each region is explored by its typical landscape, underlying earth materials and geologic origins: the Des Moines Lobe, the most recently glaciated terrain in Iowa; the Loess Hills dramatic deposits of windblown silt; the Southern Iowa Drift Plain, glacial plains carved in to rolling hills and valleys; the Iowan Surface, lands scoured by intense erosion during glacial cold; the Northwest Plains, seasoned landscapes of older and younger glacial deposits, the Paleozoic Plateau, bold, bedrock-dominated terrain; and the Alluvial Plains, corridor landscapes resulting from river action.

University of Iowa Press, 1991. Pages: 168 pages; 46 color photos; 25 color maps. ISBN 0-87745-347-0 $22.50 hardback (plus $5 S&H). *uiowapress.org 1-800-621-2736*

Find a volunteer project or post your own event at *www.iowadnr.gov/volunteer* or call *515-725-8261*

Admiration & Legacy

BY *MICK KLEMESRUD* AND *JESSIE ROLPH BROWN*

A BRIGHTER FUTURE

FUTURE TALK, DUBUQUE

Program helps local teens gain work experience while learning about nature

Work ethic. Land ethic. Service ethic. These three tenets lie at the heart of Future Talk, a program that works with Dubuque teens, helping them find a love of nature and place in their community while preparing for the working world. "Kids just aren't getting outside," says Dana Livingston, a Loras College Spanish professor and outdoors enthusiast who serves as Future Talk director. He started the program to address high teen unemployment, introduce kids to nature and strengthen the community. "It's based on the needs of young people in our community—work, learning and service. It's really about living in a community you feel a part of, that you're responsible for." The program accepts 20 participants each summer, to spend eight weeks working in local parks and neighborhoods—and each Friday is for community service projects. Many teens come from underserved neighborhoods or the foster child program. There are also plenty of opportunities to educate. "We learn everything we can about nature to understand how everything comes together," Livingston says. The teens receive a work stipend and must complete 28 hours of service to graduate from the program. For many students, this is their first job. They pull invasive species and help maintain parks, work with recycling programs, clean up riverbanks and neighborhoods, work in the community garden and do fundraising. "Most of the kids have never been to an area like Mines of Spain," says Wayne Buchholtz, ranger at the park. "The kids have helped a lot with the natural resources here and at county parks and city parks. They understand the importance of the parks and why they are here." Hikes, geocaching and more add to the kids' nature education, while they also receive info on financial literacy, tutoring, preparing for college and more from the Multicultural Family Center, which hosts the program. "I've seen a lot of transformation in the youth," says Sheila Glover, with the center. "They're participating in things they would have never thought of before." Following the program, grades go up, kids stay out of trouble and they gain job experience and develop leadership skills. "The kids are no longer scared of nature," Livingston says. "The kids we best reach are starting to feel this is their community and that they're a part of that."

WETLANDS PROJECT SINKS HOLE-IN-ONE

IOWA GREAT LAKES, DICKINSON COUNTY

Partnership works together to make improvements to benefit water quality in Iowa's Great Lakes

The cackle of pheasants has returned along the north and west sides of Okoboji View Golf Course after a major watershed improvement project converted 350 acres from row crops into wetlands and native prairie. "This was a targeted project in a targeted watershed and we knew collectively there were serious issues here," says Chris LaRue, DNR wildlife biologist. The 1,700 acres of land that drain through the project site were sending about 480 tons of silt to West Okoboji Lake with each 2-inch rain. Beginning in 2009, crews moved more than 30,000 cubic yards of dirt and thousands of feet of tile to transform the former row crop land into a series of wetlands and native prairie capable of slowing, catching and holding water from this large watershed. The wetlands allow for manipulation of water levels, enhancing aquatic plant life, which removes nutrients from runoff before it enters West Okoboji Lake. Capable of holding 100 acres of water during extremely wet periods, these wetlands lessen downstream flooding and sediment and phosphorus delivery to the lake. With most construction done in 2013, the final pieces were finished just in time for heavy June 2014 rains. The work performed well, capturing this big rainfall and slowing down the water. The area became attractive to wildlife almost immediately. Wetlands planted in rye provided food and cover for ducks, and the native prairie is home to pheasants, doves and many nongame bird species. This was a very complex project, LaRue says. It involved a series of acquisitions and easements, plus design and construction, while working in and around a popular golf course—all while coordinating with multiple partners to secure funding. Curt Schnell owns Okoboji View Golf Course with his brothers Dan and Steve. The Milford natives grew up hunting and fishing the area and have been playing or working at the golf course since high school. When approached about the project, Curt says the decision to help improve water quality in West Okoboji Lake was easy. Part of the project included restoring two critical wetlands on the golf course. One eliminated a golf course area that was a bit of an eyesore and often too wet. How has Schnell's clientele reacted? "I can't recall any negative comments, other than one or two holes are more difficult," Schnell says. "It's been real positive."

Wild Cuisine *KITCHENSIDE*

BY *ALAN FOSTER* PHOTOS BY *KATI BAINTER*

Duck, Rabbit Go Upscale

"The best meals begin with the best ingredients," says HoQ owner and head chef Suman Hoque, where menus evolve daily and showcase the finest Iowa ingredients. The slow food movement—what Hoque describes as farm to table, promotes sustainable foods, local small business and a move away from globalized agricultural products—is on prominent display here. Approximately 90 percent of the ingredients served at HoQ comes from local farms. The beef and lamb are grass-fed, and chickens and ducks are pasture-raised. They're all hormone-, antibiotic- and steroid-free. Cream and butter is made from grass-fed cows, and only local organic or chemical-free produce is used. Seafood is sourced from responsible fishing communities. And like many other independently-owned restaurants, gluten-free and vegetarian dishes are making their way to the menu. "It's not the easiest or cheapest way to operate, but we think it's the right thing to do," Hoque says. "We are passionate about creating healthy seasonal dishes with flavors from around the world." Iowans are blessed with a wealth of wild, free-range and hormone-free food choices available for little more than the cost of a hunting license and habitat fee. Rabbits, a species many a young hunter cut their teeth on growing up, are plentiful. Recent changes in seasons and zones are providing more opportunities to put wild duck on the dinner table. This fall, buy a hunting license and hop on the slow food movement for a healthier version of your own "field to table" experience. HoQ is open Monday through Friday 11 a.m. to 10 p.m.; Saturday noon to close. Private parties available and special events planned. Located in the downtown Des Moines' East Village, 303 E. Fifth St. *515-244-1213. hoqtable.com.*

DUCK AND MOROCCAN BARLEY

1 duck breast
2 tablespoons olive oil
3 tablespoons butter
1 cup barley
1 teaspoon Moroccan spice (typically a blend of nutmeg, cumin, turmeric, coriander, ginger, cinnamon and paprika)
1 ounce raisins
2 cups chopped Swiss chard
salt and pepper to taste

Boil barley until soft. Heat frying pan with two tablespoons olive oil to medium heat. Sear duck breast skin-side down until crispy. Flip and cook an additional two minutes over low heat. Remove from pan and let rest two to three minutes. Heat second pan. Add barley and remaining ingredients and cook until chard is wilted. Slice duck breast. Salt and pepper to taste.

RABBIT WINGS WITH SRIRACHA AIOLI

6 front rabbit legs
1 cup bread crumbs
Two cups (combined) chopped celery, carrots and onions
Two sprigs fresh thyme
1 cup plain yogurt
2 cups chopped cabbage
¼ cup mayonnaise
1 tablespoon Sriracha sauce

Braise rabbit legs with thyme, celery, onion and carrots until soft. Allow to cool. Combine Sriracha sauce, mayonnaise and salt and pepper to taste. Heat oil to 350 degrees. Rub rabbit with yogurt then cover with bread crumbs. Deep fry until golden brown. Serve with cabbage and Sriracha aioli.

Warden's Diary

BY *ERIKA BILLERBECK*

Graffiti

Traffic across the bridge has slowed and construction workers dangle from the top of what will soon be the new Mehaffey Bridge over Coralville Reservoir. Soon the old bridge will no longer be visible, taking away years of graffiti and leaving in its place a tempting clean slate. It won't take long before someone will want to leave their mark on the new bridge. Whether it will be a proclamation of love or hate is yet to be determined. But, like a clean chalkboard left to a roomful of mischievous students, it will only be a matter of time before it's all marked up.

When the water was high last year, our patrol boat slid under the bridge with just a couple inches to spare. High water is a delight to boaters inclined to autograph the bridge on its upper most reaches. So it came as no surprise when, as the new water patrol officers and I sat in the patrol boat downstream of the bridge late one evening, we noticed a cabin cruiser parked under the bridge for an unusually long time. Through the inky darkness, we thought we could see people standing on the deck of the cruiser.

By the time we snuck close enough to make out the passengers more clearly, they were seated again and the boat, with expired registration decals, was speeding up as it left the no wake zone away from the bridge. I decided to try to find evidence of fresh paint on the bridge, then track the cabin cruiser back down to talk to the driver.

When we got to the bridge, I thought I detected a slight odor of spray paint. We searched the graffiti for something fresh. There was so much paint on the bridge that it was hard to know where to begin. But, from what we could tell, none of the paint was wet. However, I couldn't ignore the odor or the expired registration, so I decided to stop the boat.

The boat contained a family of five. There were two young boys, the older of which appeared to be about 10 years old, and the younger around 6. There was also a young girl who looked to be about 12 years old. The dad was at the helm, and the mom was in the passenger seat.

After explaining the problems with the registration, I asked them what they had been doing under the bridge for so long. The father explained they had been trying to determine if their boat fit under the bridge. This explanation was partially plausible, for if your boat barely fits under the bridge, you need to take it slow. But the cruiser was considerably lower than our patrol boat, and we fit under the bridge without too much trouble. When I told the father that I suspected that they had been painting the bridge, he denied it.

"So, if I were to search your boat would I find any cans of spray paint?" I asked the father.

"I've got cans of adhesive to glue the carpet down, but no cans of spray paint," he casually told me.

I'm not sure why I was hoping for a better answer. After 13 years as a conservation officer, I should know by now that guilty people don't usually spit out the truth on the first try. But, on the other hand, it left my mind with a seed of doubt, since I had not in fact witnessed them paint anything. When all else fails, I've found it's always best

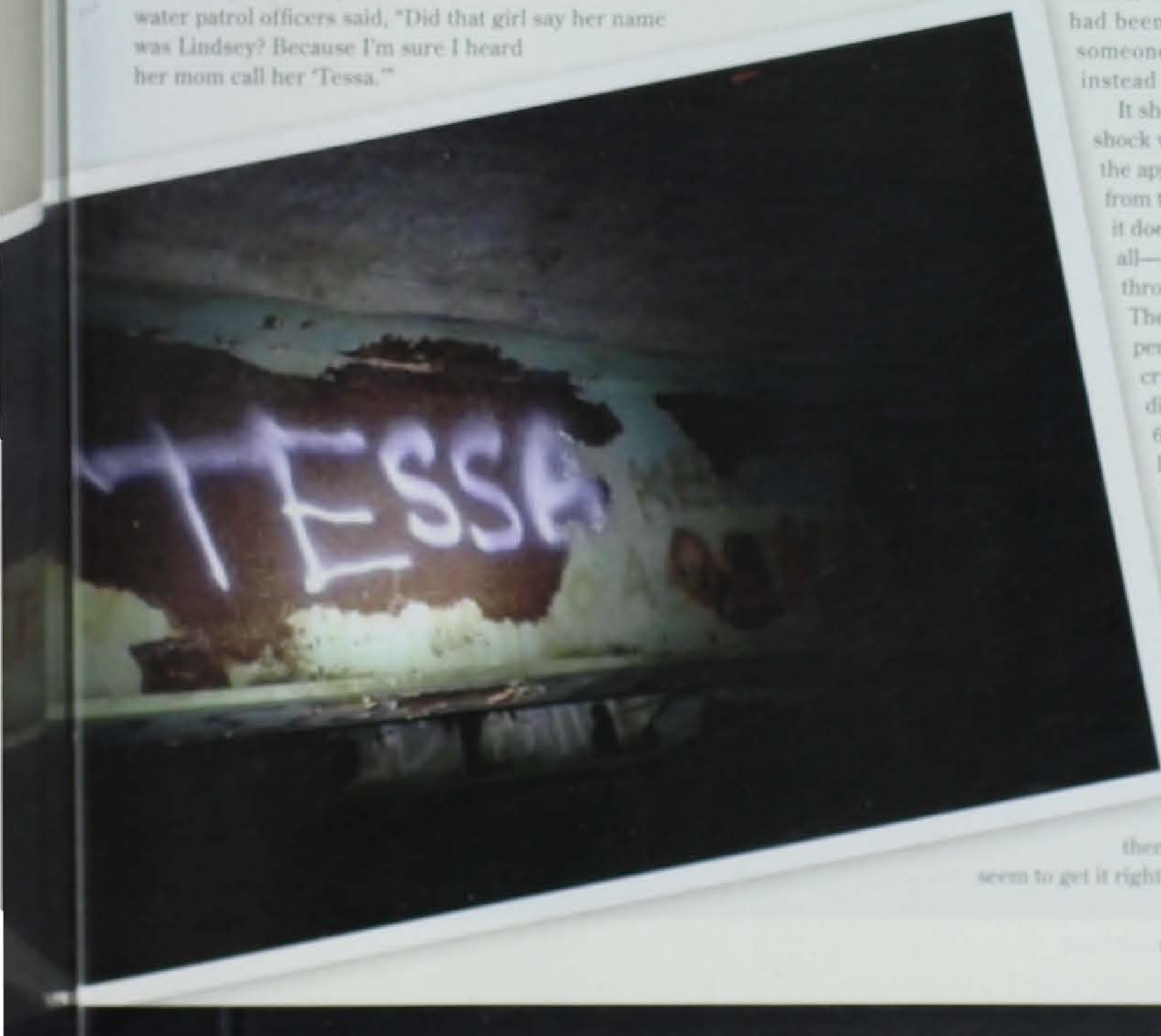
to stall. It seemed like a good time for the water patrol officers to practice performing a safety check for the required boating equipment.

As one of the water patrol officers ran through the safety check with the father, I casually asked the kids what their names were. After hesitating, the girl told me her name was Lindsey. The younger boy merely stared at me. I asked him again. This time the boy looked toward his mother questioningly. I realize that some kids are shy—I was and still am—but even the quietest of us can usually spit out a name without help. Finally his mom told him that it was okay to tell me that his name was Caleb. The older boy told me that his name was Ben.

While I had been attempting to gather the kids' names, the father had gone out of my sight into the cuddy to search for a Type 4 PFD. After a lengthy search with a few shouts for help to "B," as he referred to the older boy, the father eventually came back up with the PFD in hand.

By the time the safety check was done, I still felt like something wasn't quite right. However, I wasn't confident enough to delay them any further.

As we pulled away from the cabin cruiser, one of the new water patrol officers said, "Did that girl say her name was Lindsey? Because I'm sure I heard her mom call her 'Tessa.'"



We raced back to the bridge and eventually found the names, Tessa, Caleb and Brian all painted in a row in bright white paint. We snapped a few photos and tracked the cabin cruiser down again. I told the driver what I had found, as well as the inconsistencies with his family members' names. The father barked his disapproval at my implied accusation. How could I accuse him of making his kids lie?

"If you have nothing to hide, will you let me search your boat?" I asked. He consented.

I searched the cuddy, and after several minutes of digging, came up with a can of partially used white spray paint. We found further evidence in the form of spattered white paint on the hands of each kid. The father's denials suddenly became less caustic. He knew the jig was up.

It wasn't the crime of the century. It wasn't even the crime of the month—we all knew the bridge was going to be torn down soon. But it was the principle of it—so often it comes down to that. Sure, it wasn't good to encourage and help a kid destroy public property, but more importantly, I didn't think it was cool that the kids had been taught to lie to someone they should have instead been taught to trust.

It shouldn't always be a shock when it seems that the apple doesn't fall far from the tree. Sometimes it doesn't really fall at all—rather, it's "forcefully thrown" by the tree itself. There was only one person on the cabin cruiser that night that didn't lie to me—the 6-year-old boy, who looked to his mother because his instinct was likely telling him that it was wrong to lie. As adults, maybe rather than trying to lead our children by example, sometimes we might want to think about learning from them instead. They just seem to get it right more often.

Flora & Fauna

BY *BRIAN BUTTON*

World's Toughest Animal

Perhaps no other life on Earth is capable of more extreme survival feats than the tartigrade, which resembles a chubby, microscopic bear. Less than a millimeter long with four pairs of legs and a sharp mouth, this slow-moving, seemingly unbreakable critter loves nothing more than slowly sucking juices from moss or lichens. Its extraterrestrial-like feats of survivability allow the 900 different species to survive everywhere from the arctic, deserts and ocean bottoms to Himalayan heights. They are likely close by in a mossy pond or found even in your rain gutters whether wet or dusty dry.

UNEARTHLY COLD AND HEAT

Tartigrades have been frozen to minus 328°F for nearly two years. They've been immersed in liquid nitrogen at minus 423°F for 26 hours, even liquid helium at minus 457°F for eight hours (at such severe temperatures atoms are at a near standstill) and survived. While some fish make antifreeze proteins, tartigrades don't. They can survive ice forming in their cells, which normally rips DNA apart. They either protect from such damage or repair damage upon thaw. They also survive extreme heat such as 304°F for 15 minutes or being boiled in alcohol. How they survive extreme heat is unknown.

DNA SELF-REPAIR

Temperature extremes, radiation and radical pressures damage DNA and cells. Tartigrades make antioxidants and repair damaged DNA. How they do this is poorly understood, but perhaps mysterious protectants are used. What is known is, at the beginning of the drying process, they ramp up antioxidant production to ward off reactants that harm cells. If dried out for a long time, DNA damage occurs. Somehow, upon awakening from the deathlike state of cryptobiosis, they can quickly repair any damage.

DEATHLIKE SUSPENDED ANIMATION

Tartigrades live in tiny parcels of water on moss and lichens which can often dry out. To survive, they dry too, suspending metabolism to a truly deathlike state, known as cryptobiosis. Metabolism lowers to 0.01 percent of normal or is entirely undetectable, and bodily water decreases to less than 1 percent. They shrink to a third of their original size. This trick allows them to survive for decades to reanimate in minutes when water returns.

THE VACUUM OF SPACE AND COSMIC RAYS

Sent into orbit in 2007 for 12 days and exposed to the elements, they survived the vacuum of ambient pressure. (For humans, our blood would boil, we'd expand like balloons and air would suck out of our lungs. Ionizing radiation would rip apart our DNA.) In two experiments, those shielded from cosmic rays but exposed to heavy levels of ultraviolet radiation, were revived after being rehydrated upon return to Earth. Many went on to lay eggs that successfully hatched—some even laid eggs in space. Of those subjected to cosmic ray exposure plus ultraviolet, many died, but not all. Life forms that can handle the ravages of space will be important sources of knowledge for human space colonies. Discovering what molecular mechanisms are behind these remarkable achievements will be key.

UNDER PRESSURE

Tartigrades can survive extreme pressures capable of not only crushing most animals, but tearing apart proteins, DNA and turning fat into solids. They can survive pressure beyond those found in nature. The deepest area of ocean is 36,069 feet where pressure from nearly seven miles of the water column above pummel down 14,503 pounds per square inch. Tartigrades have *survived six times* that pressure in laboratories.

RADIATION & GASSING

Tartigrades have survived excessively lethal doses of x-rays, alpha and gamma rays and ultraviolet radiation. The x-ray dosage was 1,000 times greater than that lethal to humans. They've also been exposed to suffocating gasses such as carbon monoxide, carbon dioxide, nitrogen and sulfur dioxide—yet survived.

Pick a trail and Go

Whiterock Conservancy is a 5,500 acre non-profit land trust open to the public every day. Whatever your interest in the outdoors, come find an adventure at Whiterock.

Spend a day hiking, canoeing, fishing, birdwatching, mountain biking or trail riding through the beautiful oak savanna, prairie and river valley, or spend a night stargazing at the darkest skies in the state.

Overnight accommodations include three campgrounds, cottages, a guest house and a rustic cabin.

35 miles of new rails are opening this year. Come celebrate the grand opening August 7-9 or explore on your own anytime:

16 miles of singletrack mountain bike trail
6 miles of horseback trail
22 miles of multi-use trail
8 miles of river trail

Whiterock
CONSERVANCY

www.whiterockconservancy.org
712-684-2697
guestinfo@whiterockconservancy.org
1436 Highway 141, Coon Rapids, IA 50058