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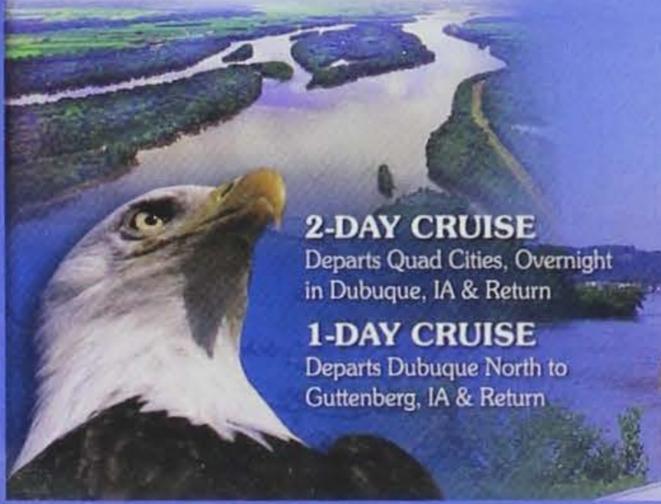
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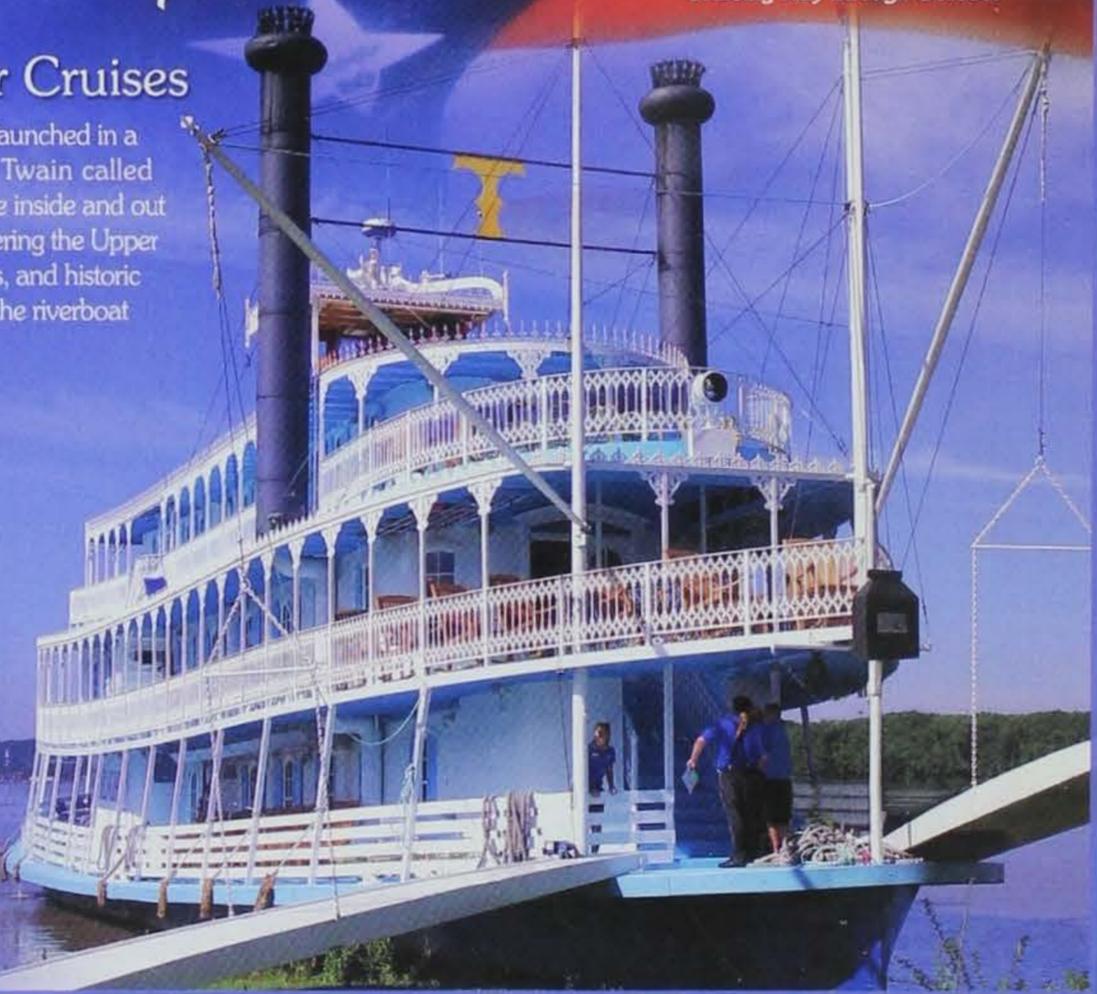
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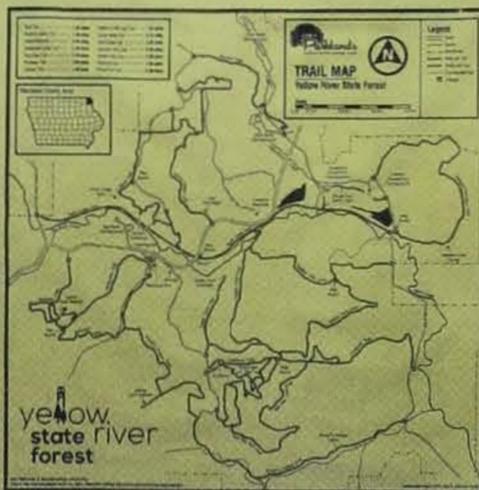


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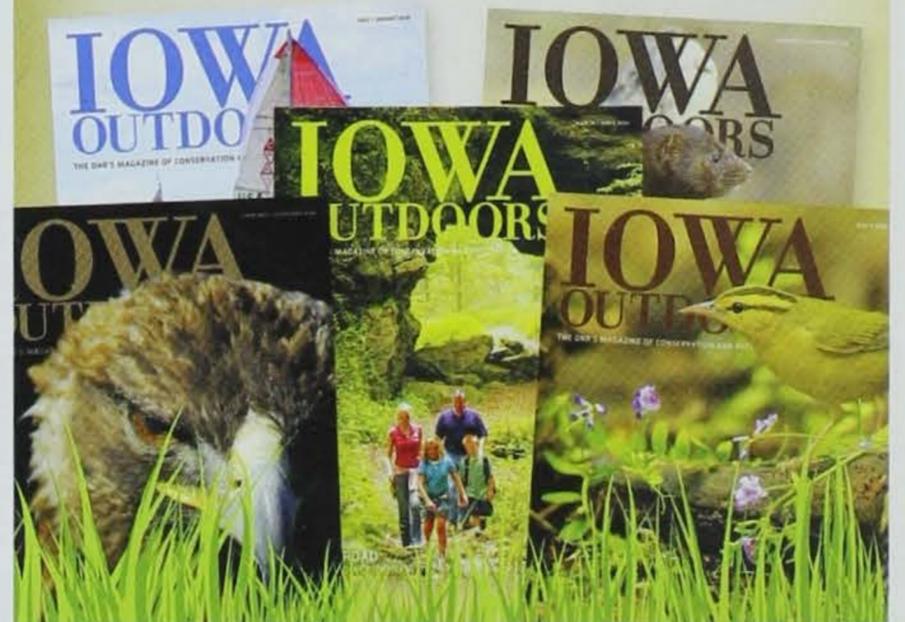
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DNR MISSION

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

EDITORIAL MISSION

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

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

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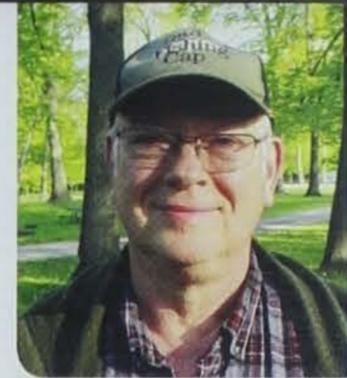
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JERRY MELLEME

lives near Cedar Rapids and works at the Duane Arnold Energy Center, Iowa's only nuclear energy plant. Five generations of their family camp at Backbone every year including his wife, Debbie, their adult son and daughter and grandkids. He enjoys camping, fishing and gardening.



DAN MAGNESON

grew up in the southwest Iowa towns of Red Oak, Shenandoah and Clarinda, and today works as a fisheries biologist for the U.S. Fish and Wildlife Service on Washington state's Olympic Peninsula. He believes the 1950s and 1960s were the absolute golden era of being a kid, and that nowhere on earth was this more true than in Iowa.



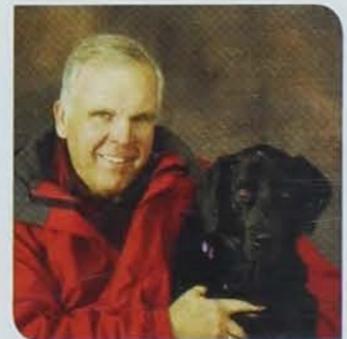
CANDACE ORD MANROE

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.



RON HUELSE

of Knoxville has spent seven years photographing wildlife, insects and birds near Lake Red Rock when not cycling, hiking or volunteering. An avid paddler, he also helps find sponsors to reintroduce osprey locally and raises awareness of siltation issues at the reservoir. He's a recent retiree with "more hobbies than I have time for."



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COMPILED BY JULIE TACK

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One family's tradition lives on at Backbone State Park, with more than five decades of camping memories made and new ones forged through five generations.

BY JERRY MELLEM

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As the sun sets on the horizon, a familiar farm pond morphs into a whole new fishing world, sending senses to their apex.

BY DAN MAGNESON PHOTOS BY CLAY SMITH

ABOUT THE COVER

A bumblebee feeds on the nectar of smooth blue aster (*Symphotrichum laeve*, formerly *Aster laevis*) at Lake Macbride State Park near Solon. Animals and insects, like hummingbirds, bats, birds, bees and beetles, pollinate roughly 75 percent of flowering plants, including crops. It's estimated pollinators impact one out of every three bites of food we eat. Declines in the health and population of pollinators pose a significant threat to biodiversity, global food webs and human health. See pages 58-59 to find out what you can do to help. PHOTO BY JAKE ZWEIBOHMER

ABOUT THIS PHOTO

Lake Macbride State Park, at 2,180 acres, is an outdoor enthusiast's dream. Seven boat ramps provide ample lake access. Campers can choose non-modern facilities, or enjoy the amenities of a full hook-up site. Hike trails, swim, picnic or rent a boat or kayak to cruise the 812-acre lake. To keep a peaceful, quiet experience, boats cannot exceed 5 mph. A 10-horsepower limit runs the Friday before Memorial Day through Labor Day.

PHOTO BY JAKE ZWEIBOHMER

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Stroll the trails and hills of Lake Macbride State Park and you will likely encounter new life—fledged birds, newborn animals and 900 oak saplings.

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66 Flora & Fauna

Meet this native wildflower that supports pollinators and was once a cure for maladies ranging from infections to...ahem, flatulence.

ABOUT THIS PHOTO

Multiuse trails wind for miles around Lake Macbride, providing the sights and sounds of Iowa at its best. Birdwatchers thrill at glimpses of nearly every songbird native to the region. Come winter, cross-country skiing and snowmobiling take over the trails.

PHOTO BY JAKE ZWEIBOHMER



CLOSE TO HOME

LINDA KASTNER, BAGLEY

Parks retiree continues service

She may be retired, but there's no way she's slowing down. Linda Kastner, 71, hikes and kayaks around Springbrook State Park nearly every day and cares for the park while she's there—picking up fallen limbs, collecting debris, tidying facilities and generally volunteering with a smile.

"If I see something that needs doing and I can do it, I do," Kastner says. "The whole place is like my backyard since I only live two miles away... and I like to take care of it."

After an already successful career at the Woodward State Hospital and School, Kastner started working at the Springbrook Conservation Education Center in the late '90s.

"I had been a lifeguard during the summers at the park, and I told the ranger, David Hebrank, if you ever have a full-time position available, let me know," Kastner says. "So one day he showed up at my back doorstep and I got the job as head housekeeper for the center."

The center itself is a hands-on learning facility where students and community members can learn about the outdoors, wildlife, conservation and through educational presentations and activities. Kastner continued working there until her retirement in 2010, and has donated countless hours of her own time since.

"Linda is always ready to stay involved and make a positive contribution," says A. Jay Winter, training specialist at the education center.

EXTREME MAKEOVER: LAKE EDITION

INDIANOLA

Ahquabi gets special treatment from skilled volunteers

Last summer, more than 60 volunteers from the Union Sportsmen's Alliance participated in a service project called Work Boots on the Ground to spruce up an Iowa park. Volunteers representing 19 skilled trades contributed in excess of 800 cumulative hours to fix up the handicapped-accessible lodge, fishing shelter, beach and pier at Lake Ahquabi State Park. These volunteers were primarily skilled and licensed experts donating services like rewiring electrical, staining the pier, laying concrete, fixing roofs and putting in new windows. The cost of the donated labor alone was valued at more than \$50,000, and materials for the renovation were largely purchased with funds from the annual Iowa Conservation Dinner, but another \$4,000 were donated from the volunteers themselves, including wood stain and concrete.

"There's a sense of pride in giving back," says Bob Gilmore, who helped lead the volunteers. "We couldn't have picked a better project, and it's one we know will be appreciated for years to come."

For more information about the Union Sportsmen's Alliance, visit unionsportsmen.org. The organization is open to men and women passionate about the outdoors, conservation, education and service.

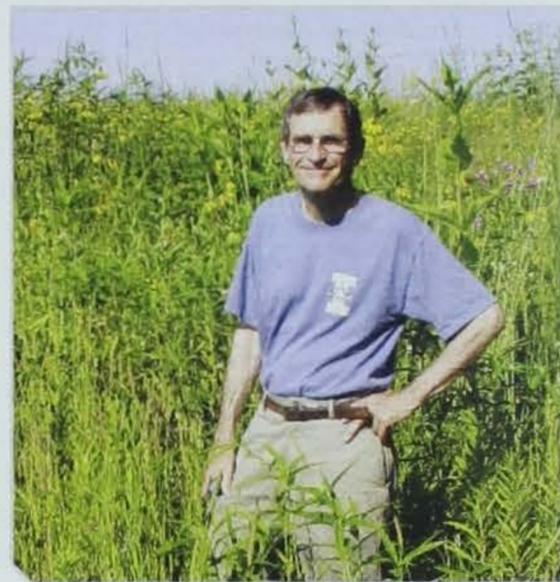
BELOW: Volunteers from Central Iowa Building and Construction Trades Council completed a large-scale restoration of a handicap-accessible fishing pier and fishing house at Lake Ahquabi State Park near Indianola.



IF YOU WANT IT DONE RIGHT, DO IT YOURSELF

RICHARD BAKER, ATALISSA

Retired professor continues working for the future



Iowa landscapes are not the easiest to manage. Prairies and oak savannas need burning, invasive species take continual work to remove and small wetlands need care to avoid being filled with sediment or pollutants. Yet, retired University of Iowa professor Richard "Dick" Baker continues to care for and improve about 130 acres in eastern Iowa.

Baker originally purchased the land from a friend in the geology department, Bill Furnish. Although an avid outdoorsman, Furnish was not an ecologist and wanted to pass the property on to Baker in the hopes of seeing it cared for and improved.

"Eventually I plan to do the same thing—find somebody trustworthy who I know is going to take care of the land long after I can," says Baker.

By Baker's inventory, the land now hosts nearly 400 plant species, more than a hundred bird species, a handful of frogs, butterflies and plenty of other animals. He also involves other people in his projects, like making invasive garlic mustard pesto for friends, recruiting a group from the community to help with controlled burns and hopefully borrowing a neighbor's goats for prescribed grazing later this year. Some of those involved are current University of Iowa students, whom Baker said he's excited to host and show around.

"You can never get too many people to care about what we have here," Baker says. "I always want to involve more students."

WHEN NATURE STRIKES

FLASHY FACTS, TIPS AND ODDITIES OF LIGHTNING

With about 45 to 65 thunderstorms a year in Iowa, lightning produces a showy spectacle with jaw-dropping bolts and rolling peals of house-shaking thunder. According to the National Severe Storms Laboratory, lightning strikes 25 million times a year in the U.S., but an individual's chance of being struck is 1 in 240,000. However, there were 26 fatal lightning strikes in 2015, including two Iowans.

Meet Sparky—A Bison Lucky to Be Alive

In rare cases, an animal can survive a lightning strike, like a bison struck in 2013 at the Neal Smith National Wildlife Refuge near Prairie City. This bison earned his new nickname "Sparky" the hard way.

Karen Viste-Sparkman, a U.S. Fish & Wildlife Service wildlife biologist, was first to notice Sparky's injury.

"I noticed the wound from a distance and thought he'd been gored while fighting other bulls" during mating season, she says. After a closer look at his hump and leg, she realized it was a burn. "It was so bad and he was so thin I didn't think he was going to make it."

Viste-Sparkman knew what caused the burn as she'd seen a refuge elk with a more extensive burn a few years earlier. After that animal died, a necropsy at Iowa State determined the cause to be lightning. Fortunately for 11-year-old Sparky, his injuries weren't as severe.

"At this point I don't think Sparky's hair will ever entirely grow back, but he's going strong and getting around like any other bison even though he's a little skinny," she says. "We'll see if he fathered any calves this year when we get our genetic testing results back."

On the open prairie, bison and elk are often the tallest things around, making them prone to strikes.

You can drive through the Neal Smith Refuge and look for Sparky (and about 50 other bison) any day of the week (fws.gov for more information).



What Causes Lightning?

Lightning requires energy, which starts with at least one cumulonimbus cloud. Their classic anvil shape is created by strong updrafts that lift warm, moist air, with cloud peaks typically reaching 20,000 to 75,000 feet. That high in the cold atmosphere, water vapor condenses into droplets or freezes into tiny crystals.

As gravity causes these particles to fall, they generate a separation of charge—the upper edge of the cloud is positively charged and the bottom is negatively charged.

Lightning is a massive spark to equalize the imbalance. And lightning can occur between clouds or by striking the ground.

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Blasting Sand into Weird Shapes

Lightning can melt sand or clay together to form oddly shaped forms called fulgurites. While the exact size of the fulgurite depends on the intensity of the lightning bolt, most formations are fragile and less than an inch in diameter.

Iowa fulgurites are rare because there's not a lot of exposed sand on our landscapes. But sometimes



"These trees grow to be very large and often they're the ones out in the middle of a pasture—a location that makes them an easier target than any single tree in the middle of a forest."

Occasionally birds roosting in trees are electrocuted. "Every once and a while I'll get a strange call from

someone reporting a large number of house sparrows dead in their yard, and lightning is really the only explanation," says DNR biologist Bruce Ehresman.

Flashy Fish

When lightning strikes water, it doesn't penetrate deeply, but fans out along the surface in a phenomenon called "the skin effect." In marine environments, salty water is more conductive than the animals swimming in it. Thus deaths and injuries

are limited to the area immediately surrounding a strike. In freshwater, the animals are more conductive than the water, and may be shocked or killed from a greater distance, with estimates starting at 30 yards and up. Thus swimming in a thunderstorm is inadvisable.

Humans and Man-Made Structures

Approximately six of every seven humans hit by lightning survive, usually because the full charge of the lightning strike does not pass through their bodies. Usually there's something taller or more conductive around, and a person will only be shocked by a portion of the bolt that jumps off, called a side flash. Still, a side flash can be deadly or cause lasting injuries. A person inside a building or vehicle is best protected from lightning as electrical charges pass through and over the more conductive metals on its way to the ground.

Outdoor Risk Reduction Tips

From the National Weather Service there is no safe place outdoors and anyone who can hear thunder should get indoors or into a vehicle as soon as possible. If you are caught outside with no shelter nearby, the following may reduce your risk:

- Avoid elevated areas such as hills and ridges
- Stay on the ground. Squat as low as possible with feet together
- Do not stand under an isolated tree
- Do not seek shelter under a fallen tree or power line
- Do not touch metal objects and stay away from ponds, lakes and other bodies of water
- Do not touch objects that conduct electricity (barbed wire fences, power lines,

- Get away from tall objects

For more information on lightning science and safety, see www.lightningsafety.noaa.gov.

survive the trauma of being struck. DNR forest health expert Tivon Feeley said

Ask THE Expert

BY MARIAH GRIFFITH

Got a question?
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Iowa fulgurites are rare because there's not a lot of exposed sand on our landscapes. But sometimes they form in soil.

"I had a call from a guy who found a crater in his freshly sprouted corn field. After investigating, I determined it was a lightning strike that flashed the wet soil to steam, creating the crater. Multiple pencil-size tubes extended into the soil, and were lined with a white substance that I would call fulgurite. I couldn't recover any because it was so thin and fragile..." says retired DNR geologist Raymond Anderson.

Kaboom! That's A Lot of Juice!

The electrical current of a typical bolt of lightning is perhaps 30,000 amps. Most houses have 100 or 200 amp service panels. All that energy coming from a lightning bolt rapidly heats the surrounding air, producing a shock wave that results in thunder.

Trees, Birds and Lightning

Trees are an easy lightning target due to their height, and they don't always survive the trauma of being struck. DNR forest health expert Tivon Feeley said



a tree's survival varies. If more than a third of the cambium—the tree's living layer that transports sugar, water and nutrients—is damaged, it's unlikely the tree will survive. But if new buds grow in the spring, an arborist can trim away damaged bark to help speed recovery.

"There's also a myth cottonwoods and bur oaks are more susceptible or better 'lightning magnets' than other trees, and that's not true," Feeley said.

"These trees grow to be very large and often they're the ones out in the middle of a pasture—a location that makes them an easier target than any single tree in the middle of a forest."

Occasionally birds roosting in trees are electrocuted. "Every once and a while I'll get a strange call from

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Last Resort Outdoor Risk Reduction Tips

According to the National Weather Service there is no safe place outdoors in a thunderstorm, and anyone who can hear thunder should get indoors or in a metal-topped vehicle as soon as possible. If you are caught outside with no safe shelter anywhere nearby, the following may reduce your risk:

- Immediately get off elevated areas such as hills and ridges
- Never lie flat on the ground. Squat as low as possible with feet together
- Never shelter under an isolated tree
- Never use a cliff or overhang for shelter
- Immediately get out and away from ponds, lakes and other bodies of water
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For more information on lightning science and safety, see www.lightningsafety.noaa.gov.

BLUE WATER: MYTH OR FACT?

For nearly a century a myth has circulated that West Okoboji is one of only three blue water lakes in the world, the others being Lake Geneva in Switzerland and Lake Louise in Canada. Articles stating various versions of this information as fact have appeared in newspapers as recently as 2009, and in numerous publications and websites. One could argue until they are blue in the face, but this claim is all wet. Legend has it *National Geographic* first gave that moniker to West Okoboji, but no record of such an article can be found. Others ponder whether a scientific study done in the early 20th century comparing West Okoboji and one of the most famous lakes in the world—Lake Geneva—sprouted the claim. Theories suggest local leaders played on

that comparison to attract more visitors. The clear truth is, “blue water lake” is not a scientific term, and in fact, carries no real definition. The term blue water has, however, been associated with areas that enjoy exceptional water quality, because when sunlight penetrates these pure waters, other wavelengths (colors) are absorbed more strongly than blue. Most natural waters contain dissolved organic matter that selectively absorbs blue wavelengths. Although there is no scientific basis that West Okoboji is a blue lake, scientists and non-scientists alike agree the lake has exceptional water quality and color, and is one of only a handful of waterbodies included on the DNR’s Outstanding Iowa Waters list.



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

Save \$21 WITH DNR Camping Coupons



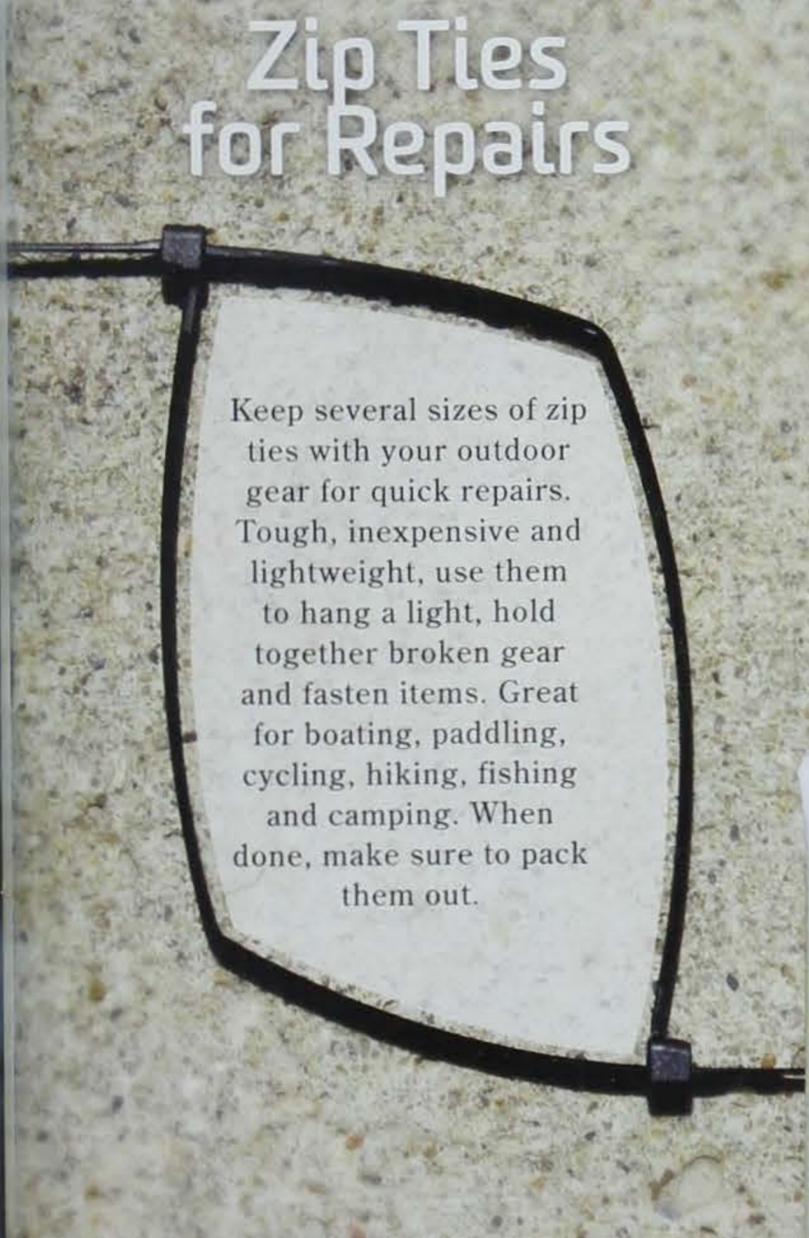
Save money on your next camping trip by purchasing a book of seven camping coupons for \$91. Coupons are used instead of cash or check and are valid one year from date of purchase.

Coupon use saves \$3 per night at electrical sites in modern campgrounds during peak season. Be sure to check camping fees for your site to ensure there is a savings. Coupon use at sites with fees less than the coupon value will not result in a refund or credit.

Coupons do not cover extra fees such as water and sewer hook-up, cable, equestrian or reservation fees. Valid for first come/first serve campsites.

Purchase at park offices or order at [515-725-8200](tel:515-725-8200) or mail a check to DNR Central Office, Wallace State Office Building, 502 East Ninth St., Des Moines, Iowa 50319-0034.

Zip Ties for Repairs



Keep several sizes of zip ties with your outdoor gear for quick repairs. Tough, inexpensive and lightweight, use them to hang a light, hold together broken gear and fasten items. Great for boating, paddling, cycling, hiking, fishing and camping. When done, make sure to pack them out.

DIY Single Use Packs



Single-use packets of antibiotics, lotions and seasonings are the rave of backpackers and campers who need to pack light. However, they can be pricey and sometimes contain more product than needed for single use. These DIY single use packets remedy those issues. Squeeze desired amount of product in end of straw—about of quarter inch of antibiotic cream will do. If needed, use fingers to squeeze straw and move product further up straw. Pinch one end with needle nose pliers (make sure part of the straw extends past pliers). Heat with lighter to melt. Pinch melted end with pliers to seal. Cut excess straw on opposing end and seal. For runnier liquids or granular products, seal one end first. Great for antibiotics, personal grooming products, drink mixes, condiments, seasonings and more. Use different size and color straws for different products. Stuff straws with petroleum jelly-coated cotton or drier lint for a quick firestarter. Cut open to remove cotton and add to tinder (do not burn plastic). Pack out used straw segments.

ACTIVITIES, TIPS AND EVENTS FOR THE WHOLE FAMILY

New Wave Of Stormchasers

Join the largest provider of daily precipitation observations in the U.S., recording critical weather data in a timely manner. *The Iowa Department of Agriculture and Land Stewardship's Climatology Office* and the *National Weather Service* are recruiting volunteer precipitation monitors to join the **COMMUNITY COLLABORATIVE Rain, Hail and Snow (CoCoRaHS) team**.

Easy as One, Two, Three

Participation is simple. Purchase a 4-inch diameter rain gauge. Set it in a suitable location. Post your data online. Online tutorials explain how to get started, how to properly measure rain, snow, ice, hail and water content of snow by weight, when to report and how to input data. Data recorded is available free immediately online and is used for flood forecasting, drought assessment, news stories, scientific research and general weather interest. Measuring and reporting takes only minutes a day, but must be done daily even if no precipitation event occurs. Data should be collected between the hours of 5 and 9 a.m., preferably closest to 7 a.m.

Iowa joined the network in 2007 and now boasts more than 300 registered observers across the state. However, more are needed to better document the amount and variability of rain and snow. Weather observers are needed everywhere, but the greatest need is in Adams, Allamakee, Audubon, Calhoun, Carroll, Cedar, Davis, Decatur, Greene, Keokuk, Louisa, Monroe, Osceola, Palo Alto, Pocahontas, Shelby, Van Buren, Worth and Wright counties.

As the team grows, State Climatologist Harry Hillaker expects "Whatever weather comes our way this year, the observations obtained by this network can help obtain a clearer picture of Iowa's weather."

Driving Force

CoCoRaHS (pronounced KO-ko-rozz)

is a grassroots volunteer network of backyard weather observers of all ages and backgrounds working together to measure and map precipitation (rain, hail and snow) in their local communities. Through low-cost measurement tools, stressing training and education and using an interactive website, the aim is to provide the highest quality data for natural resource, education and research applications. CoCoRaHS now spans all 50 states, most Canadian provinces, Puerto Rico, the U.S. Virgin Islands and the Bahamas.

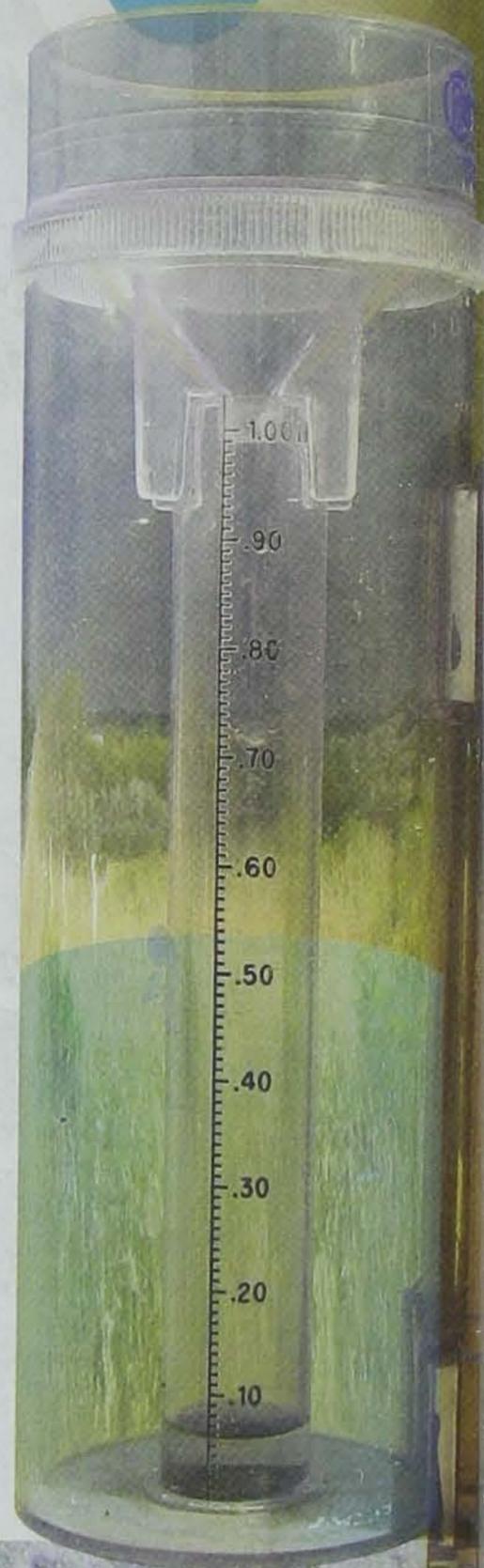
Who Uses CoCoRaHS

A wide variety of organizations and individuals analyze the data and apply it to daily activities. Emergency managers track precipitation to measure the severity and impact of weather. Meteorologists use it to report rain and snowfall amounts. Insurance adjusters use it in investigations. Farmers value knowing how much moisture crops have received. City utilities, like water supply, water conservation and storm water, make operating decisions based on the data. CoCoRaHS provides resources to classrooms of all grades. Students can collect and submit real scientific data while meeting state and national standards in science. Recreationalists plan outdoor activities, like kayaking, fishing, hunting and foraging, based on the data.

Who Can Do It

Anyone. This low-impact activity is suitable for young and old alike. All that is required is an enthusiasm for watching and reporting weather conditions, a desire to learn more about weather and the impact it has on our lives and the satisfaction of helping others.

FOR DETAILS, visit cocorahs.org, or contact State Climatologist Harry Hillaker at 515-281-8981, or harry.hillaker@iowaagriculture.gov.



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.

ETHAN, 12, FROM JOHNSTON, ASKS:

My science teacher says we need to do a better job conserving water and protecting its source. What can I do?

Water is often taken for granted until something serious changes our outlook, like drought or contaminated water supplies. There are things we can do in the home, outside and online to help.

AT HOME, run washing machines and dishwashers only when full. Install water-saving or low-flow showerheads. Keep a timer in the bathroom to help take shorter showers. Turn off the faucet while brushing teeth. Use biodegradable cleaning products, as the water that goes down your drain eventually flows into rivers and streams. Go fishing. Eat fresh fish at least once a week (it takes about 460 gallons of water to produce a hamburger, according to the U.S. Geological Survey).

OUTSIDE, plant a tree. Trees keep soil in place and out of our rivers, slow water flow and allow more rainwater to soak into groundwater supplies. If you choose to water your lawn, do so in the morning or evening when evaporation is slower. Sweep patios and decks instead of hosing them off. Limit pesticide and fertilizer use—they can be carried to freshwater supplies. Volunteer for Project AWARE (see pages 18-19) or other stream cleanups. Take someone on a hike near a river or lake, fishing or on a paddle. People protect things they care about.

ONLINE, use social media to spread the word about water conservation and protection. Find out where your water comes from. Ask favorite brand companies what they are doing to protect water sources. Donate to community projects that protect water.



DROWNING MACHINES

BY TIM LANE

Charles City whitewater park

With the summer Olympics just around the corner, water quality is a huge issue in Rio. There is the quality of the water our athletes will compete in, the standing water that contributes to the spread of the Zika virus and the hot water the Brazilian president, Dilma Rousseff, finds herself in. A corrupt congress has voted to impeach her on the eve of Brazil's big gig. I am sure our athletes will excel, but I am not sure Brazil will.

Back here in Iowa there are some very positive steps being taken to address water safety. Currently, we have 162 low-head dams in 57 counties. Since 1900 they have claimed the lives of 163 individuals. Through the years, such dams were used to power mills, generate electricity, mitigate flooding and contribute to recreational opportunities.

As these structures age, they pose additional hazards for failure, on top of the constant threat of drowning. The backwashes they create often look benign but are in fact deadly. Over the last decade Iowa has experienced nearly two deaths a year, earning dams the title of "drowning machines." Currently, such risks are being converted into assets across Iowa, from the Klondike Mill Dam on the Big Sioux to the Duck Creek dams in Scott County. There are now whitewater parks popping up and providing even more recreational options for Iowans as we develop water trails to match our land trails. Dam removals also allow fish to migrate up and down stream.

Growing up in Waterloo, water was always a mixed blessing. We waded, swam, skipped rocks and built dams in small stream beds. Eleven out of 12 months the Cedar River was our friend. We also face issues beyond flooding with ongoing water quality concerns. I would like to believe that in the future, we have water that is safer to recreate in and drink than when I was a boy. Back then I never thought about water quality...I just dove in. Growing up in Waterloo I had access to what I assumed was an infinite amount of quality drinking water right at my tap.

Maybe, just maybe, Iowans will find a way to preserve not just a luxury, but a necessity. I have two wishes here. Make it better. Make it more fun. I know in Des Moines, the future of two dams is a very hot topic, and we seem well on our way to emulating the success stories in Charles City, Boone, Manchester and Elkader with plans for a long wet playground in the heart of the Capitol.

From Brazil to Flint, Mich., there are immense reservoirs of bad examples of water management. Here's hoping Iowa and Iowans can find a way of managing our water for work, recreation and consumption.

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.



Together HALF DAY ON \$50

BY BRIAN BUTTON PHOTO BY RON HUELSE



HEAD OUT ON AN EGRET EXPEDITION

Make it an adventure exploring watery habitats in search of the dazzling and elegant great egret. Pack a lunch, take binoculars and a camera to observe and take photographs.

Flourishing on a high protein diet of fish, frogs and other aquatic critters, these long legged waders are often found hunting in timbered waterways, river backwaters or shallow marshes.

These showy, large birds always draw the eye of nature enthusiasts, and summer and early fall are when they are most abundant—perfect times to seek them out. “Late summer we get a big push of birds moving north after the breeding season in the South,” says Aaron Brees with the Iowa Ornithological Union and a staff attorney for the DNR. Breeding can occur in Iowa, but not as common as southern states.

Although great blue and green herons are a common summer nester, great egrets remain comparatively rare. Less than a dozen active nesting areas (called rookeries) are known across the state, and most egret nests are associated with active colonies of great blue herons.

And depending on summer rainfall, some areas of the state may have ponds, marshes and shallow potholes drying up, which congregates fish, frogs and aquatic life into smaller pools. The graceful and well-designed wading birds are quick to take advantage of the buffet.

Watching these spear-beaked hunters is enthralling. They typically stand still and watch for unsuspecting prey to pass by. Then, with unanticipated and overwhelming speed, the egret strikes with a jab of its long neck and bill. It is

a sight to be appreciated, as during the late 1800s, America nearly lost these magnificent birds as plume hunters decimated nesting colonies in search of feathers. Used to adorn turn-of-the-century women’s clothing, the showy white plumes of nesting egrets fetched peak market values, which, ounce for ounce, sold for twice the price of gold.

Although the commercial feather trade was outlawed during the early 1900s, wading birds were dealt a second lethal blow as aquatic hunting grounds became contaminated by DDT pesticides.

Where to Look

They’ve been spotted in all 99 counties, but congregate in counties with the most suitable habitat. Think shallow water areas such as marshes, river bottom lands and river corridors, backwaters



and prairie potholes.

“While not as abundant as the great blue heron, I’ve seen hundreds in some marshes,” says DNR nongame biologist Bruce Ehresman. He suggests looking at the following hotspots for these well-dressed waders.

In eastern Iowa, Ehresman suggests backwaters along the Mississippi River, especially river bottoms in Allamakee and Clayton counties. Sometimes the birds will have a rookery near Mines of Spain State Park outside of Dubuque.

In central Iowa, try the Skunk River and Chichaqua Bottoms in eastern Polk County and the Maskunkya Marsh in Mahaska County. Check around Lake Red Rock. Explore the Rathbun Lake area, including the Sedan Bottoms of the

Chariton River in Appanoose County, and the Colyn Wildlife Management Area and Rathbun Wildlife Area, both in Lucas County. They hit Saylorville in Polk County occasionally, he says.

In western Iowa, look in the Forney Lake area in Fremont County and along other marsh and wildlife areas along the Missouri River.

In northern Iowa, check prairie potholes. In Emmet County, look in the Ingham-High Wetland Complex and other marsh areas across the area.

Did You Know?

Here are a few interesting facts about great egrets from the The Cornell Lab of Ornithology.

- The great egret is the symbol of the National Audubon Society. Audubon was founded in 1905 to

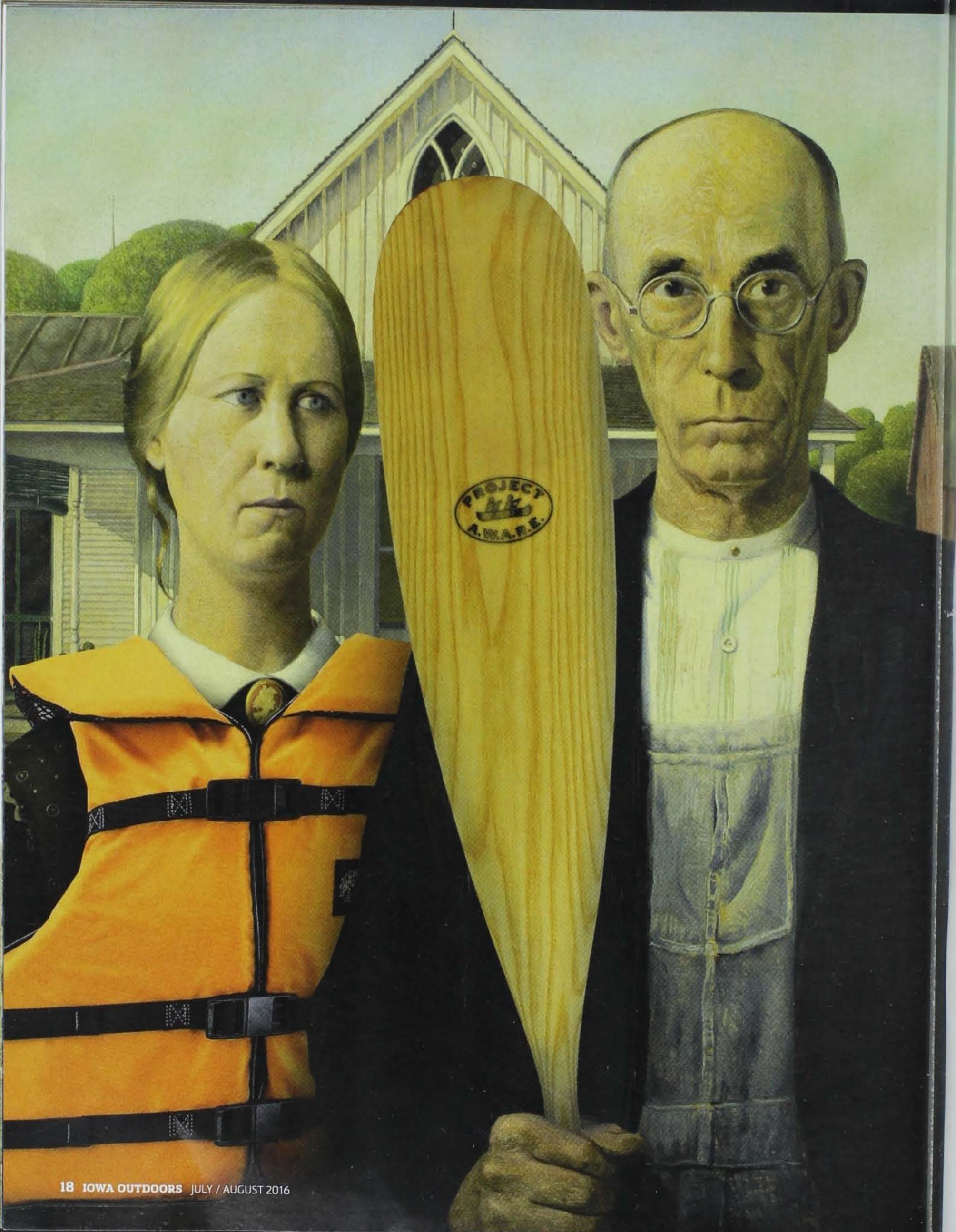
protect birds from being killed for their feathers.

- The pristine white great egret gets even more dressed up for the breeding season. A patch of skin on its face turns neon green, and long plumes grow from its back. Called aigrettes, those plumes were the bane of egrets in the late 19th century, when such adornments were prized for ladies’ hats.

- The oldest known great egret was 22 years, 10 months old.

- Great egrets fly slowly but powerfully: with just two wingbeats per second their cruising speed is around 25 miles an hour.

- In mixed-species colonies, great egrets are often first to arrive, and their presence may induce nesting among others such as cormorants and herons.



See you on the river!

GET INSPIRED ON THE "MEGA-MONDAY" LAUNCH OF

PROJECT AWARE!



BY BRIAN BUTTON ILLUSTRATION BY JAKE ZWEIBOHMER

Tour the famous American Gothic house, learn about the state's largest Ioway village archeological site, meet book author and Ioway tribal member Lance Foster and help dedicate Iowa's newest water trail—happening July 11 to launch the 14th annual Project AWARE.

Project AWARE is a volunteer river cleanup, with hundreds of paddlers participating. This year targets the lower Des Moines River July 11-15 from Eldon in Wapello County to the Turkey Run Access in Lee County, removing tons of trash and debris enroute. Registered participants can paddle for a day, overnight or the entire duration, but regardless, each afternoon and night offers informative and entertaining events. (Anyone may attend those events without registering for the cleanup.)

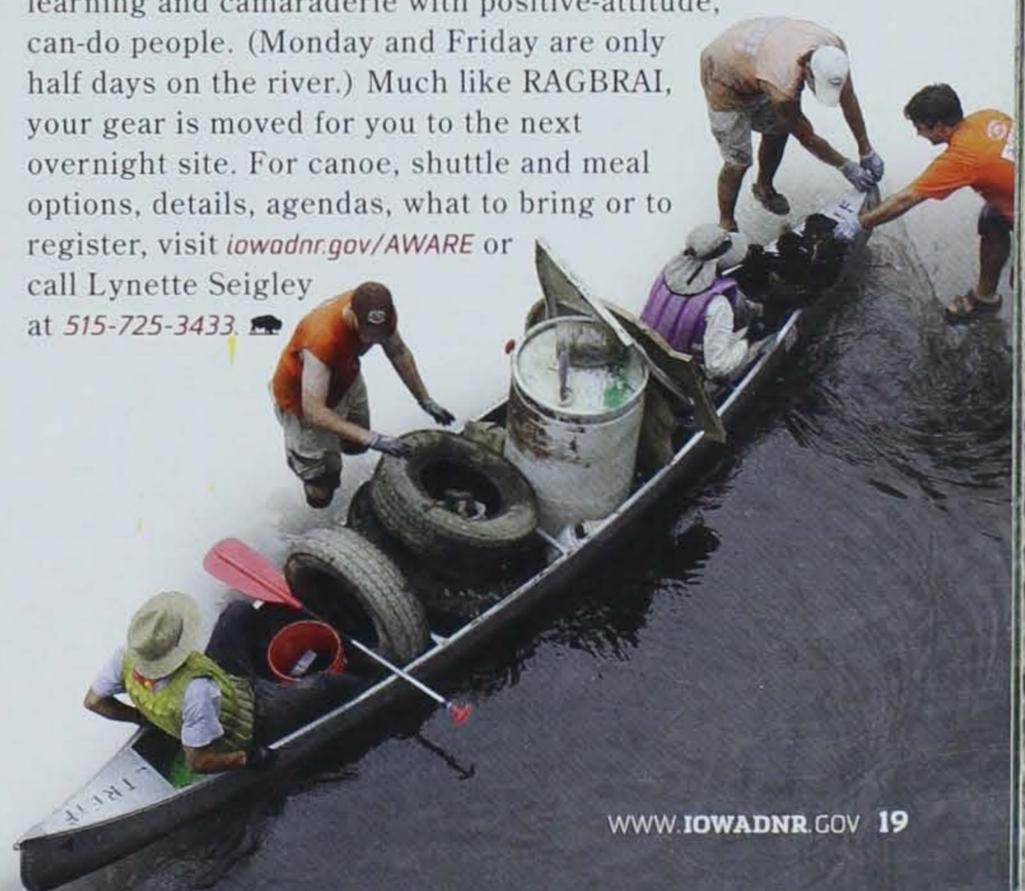
The first day dedicates nearly five new miles of water trail from Eldon to Selma, adding to the upper end of 38 miles of existing trail on the Des Moines River Water Trail through Van Buren County. Later that day, learn of the historical limestone Lockkeeper's House, built in 1845, as part of a failed plan to build river navigation locks. Tour the world-famous American Gothic House and learn the intricacies of the painting and about Grant Wood's time in Eldon. Go from art to archaeology, with a talk about a riverside Ioway village site inhabited from 1770 to 1824. Hear about recent archeological work from those who conducted excavation efforts in 2010, including non-invasive surveys of 19 acres by the National Park Service. Later, learn more about the Ioway people from speaker and author Foster as he discusses their cultural presence.

Find out about 10,000 years of history on these waters from artifacts and hands on fun with prehistoric

technologies, toys and games. Presentations will hit the astounding natural history of Lacey-Keosauqua State Park—from its botany to geology, management and history. Tour an 1876 pottery factory on the banks of the river as part of an area rich in gypsum, limestone and clay that attracted as many as 108 potteries along the river from 1840 to the end of the century. Other programs will cover the area's historical coal stripmining and restoration, a Civil War skirmish, wild edibles and more. View agenda at iowadnr.gov/AWARE.

Register by June 24 for Project AWARE held July 11-15, 2016—Lower Des Moines River

Enjoy five days and four nights of river cleaning, fun, learning and camaraderie with positive-attitude, can-do people. (Monday and Friday are only half days on the river.) Much like RAGBRAI, your gear is moved for you to the next overnight site. For canoe, shuttle and meal options, details, agendas, what to bring or to register, visit iowadnr.gov/AWARE or call Lynette Seigley at 515-725-3433. 🐾



Lost In Iowa

BY CANDACE MANROE PHOTOS BY JAKE ZWEIBOHMER

Lake Macbride

*The Big and
the Small of It*

Lake Macbride is truly an angler's dream. Good access for both shoreline anglers and boaters targeting plentiful walleyes, catfish, crappies and muskies. If you want to check the Kentucky spotted bass off your bucket list, Lake Macbride is one of the few places in Iowa to go.



Like other nature lovers, I go wobbly at the knees for new life. Downy barred owlets, whitetail fawns spotted with innocence, a romp of river otters—makes no difference. The smaller and newer to this earth, the harder I crush. Yet on this sunny day at central Iowa's Lake Macbride State Park, nature's diminutive newborns weren't on my mind. Spring was long gone, and summer was gasping its last warm breaths. All I wanted was to hike the trails at our largest state park under clear blue skies before the change of seasons. With 2,180 sprawling acres, Macbride offered plenty of interesting terrain to explore—and good odds against having to contend with a crush of hikers jockeying for trail space. I'd found the perfect outdoors go-to for some head-clearing solitude under one of the state's most venerable tree canopies: the park's majestic white oaks include many trees 150 years old and up. But then something happened. Before it began, my hike was ambushed by babies.

Before choosing a trailhead, I'd driven through the park to sightsee and size up my options. The minute I veered onto a less-traveled extension of Sailboat Road, I knew the hike was off. The "babies" that hijacked it weren't the furred or feathered varieties. These youngsters were flora—nine hundred seedlings, rising bravely towards the sun through their light-color plastic tree tubes. They stopped me in my tracks. Adorableness, turns out, isn't species-specific.

Five hundred of the seedlings were planted in 2014, the other 400 in 2015, as part of a Forest Stewardship Plan developed for the park by foresters Joe Herring, David Bridges and Mark Vitosh. The feistiest of the seedlings had pushed through the tops of their protective cylindrical tubes. I snapped away with my iPhone, documenting enough reminders of leafy new life to get me through the bleakest days of our next Iowa winter. Progress of the less robust trees could only be determined up close, by peering down the tubes. Or, if the sun hit just right, their silhouettes could be detected against their pale backdrops. I'm not literally a tree hugger, but I admit choking back the impulse to cheer on these 900 newbies—bur oak, red oak, white oak, black walnut and swamp white oak—growing on the 8-acre mixed hardwood plantation.

"When we started the project, the site was a mixture of elm, eastern red cedar and invasives," says Vitosh, the DNR's District 12 forester. "But we knew from the soil type that it originally had been a hardwood forest. We cleared the land and planted the seedlings in an effort to reestablish mixed hardwoods and especially oak."

Financed by a grant from the USDA Forest Service, the stewardship plan goes beyond fostering the growth

Lost In Iowa



of seedlings. Its scope is comprehensive, addressing all the ways to best manage the park's forest cover. One of the key conservation tools recommended in the plan is the systematic burning of the "understory" (growth beneath the tall tree canopy) every few years in the spring or fall in some of the park's woodland stands.

"We use prescribed fire to help maintain open woodland habitat and to potentially regenerate oaks, which can't grow in shaded and dense understory," Vitosh explains. "Fires also help reduce regrowth of invasives like honeysuckle, autumn olive, multi-flora rose and barberry."

Vitosh graciously gave up his afternoon to walk me through the park. He showed me where understory removal had occurred near the park entrance and again over 87 more acres to allow new oaks an opportunity to grow. "Young oaks can't grow under the shade of big oaks," he says. "So to sustain oak woodlands into the future, we have to clear everything in the understory." This activity, he explains, mimics the effect that naturally occurring fires had on the ecosystem before the first settlers arrived. Going back to nature—or at least emulating its ways—turns out to be the secret to conservation.

"If left alone, the future forest in the park would be mostly shade-tolerant species such as hackberry, elm, ironwood, sugar maple and basswood," he warns. Even more sobering, he notes there currently is only 1 percent new oak growth in the entire park. "So without some management to promote oak, future generations of park visitors will not have a similar opportunity to enjoy the benefits of an oak forest that we've had—and maybe taken for granted—for the last 50 years. Our goal is to maintain oak forest on approximately 250 acres, or roughly 25 percent of the park's wooded area," Vitosh explains.



The management team inventoried 933 acres of the park's woodland, walking every acre and describing the existing forest cover. Then they divided the land into 102 compartments or stands. A minimum stand spans one acre. The largest covers 39 acres, and the average size is 9.1 acres. "After walking the whole park, we divided it into stands so we could tailor our recommendations to the specific stand conditions," says Vitosh. "We looked at the species make-up of a stand, and the size and density of its trees."

One beauty of the grant that facilitated the forest plan is that it not only benefits the park but also some woodland owners in Johnson and Linn counties, who previously may not have even considered themselves forest owners. "Most people don't think of five acres of private woodland as anything other than some trees in their backyard," acknowledges Vitosh. "But a significant percentage of the private woodlands in these two counties adjacent the park are 10 acres or less in size, and their



Multi-use trails wind for miles around the lake, including a popular five-mile scenic route that connects the park with Solon. It's hard not to notice 900 oak and black walnut seedlings scrambling to get a foothold in a forest that was once dominated by elm, eastern red cedars and invasives. Actively managing for oak is important to forest health since the sun-loving tree can get forced out by other species. Prescribed burns help keep understory at bay while oaks grow. Oaks are the keystone species for wildlife and are valued for their wood products.

conservation is essential.”

The DNR partnered with Trees Forever, a local non-profit, to educate small woodland owners on how to manage their stands for optimum growth and habitat. “No matter the size, all woodlands are very important to the conservation effort,” says Vitosh, explaining Iowa’s absence of large forests means smaller pockets of woodland provide critical habitat and all other environmental benefits of forest.

A Trail for Every Whim

For park visitors like me, who prefer hiking under shade, the plan ensures the best canopy possible—large, mature trees, especially at the park’s west end. But the park’s trails aren’t just for tree lovers. They orbit the lake, and nothing beats a hike along the water for meditative time outdoors. One of the most popular trails is the North Shore, a 5-mile crushed limestone path stable enough for

bicycles, strollers and wheelchairs. It links the closest town, Solon, to the lake, offering a best-of-both-worlds adventure—lunch at a restaurant in town, followed by a hike or bike ride to burn off the calories.

“Another popular trail is the Beach to Dam, which also is crushed limestone,” says Ron Puettmann, the DNR park manager since 1996. In all, some 17 miles of multi-use trails (those used for both hiking and cross-country skiing) vein out around Macbride’s 812-acre lake. In addition, three trails are specially designated for snowmobiles.

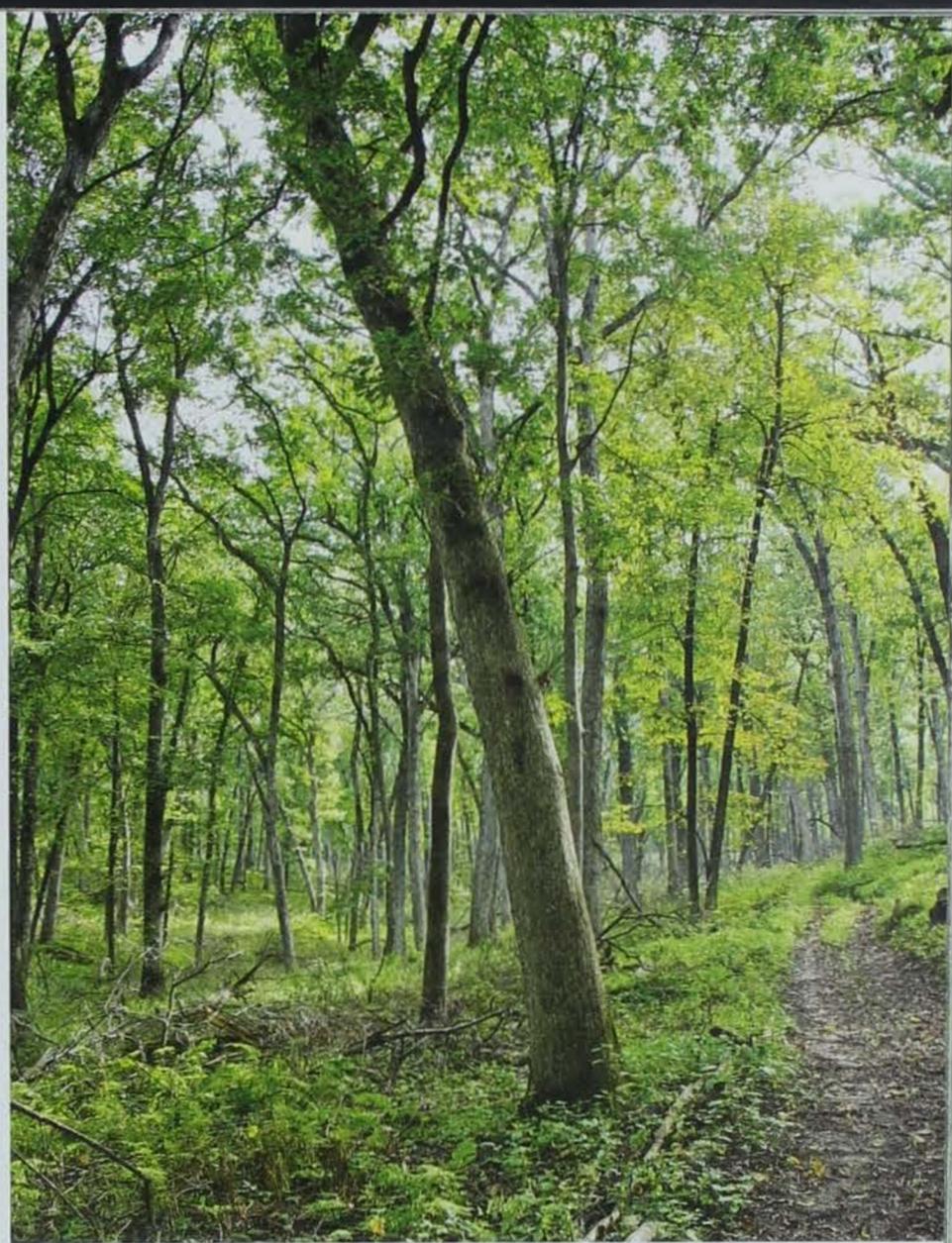
Iowa’s Premiere Spot for Spotted Bass

The lake is an angler’s delight—home to walleye, channel catfish, crappies, largemouth bass and muskie. Lake Macbride also is one of only a few waters in the state to challenge fishers with the prized Kentucky spotted bass. One reason the lake teems with fish is due to the DNR’s annual stocking of walleyes, channel cats and muskies.

Lost in Iowa



Lake Macbride is a perfect place to do just about anything. Go for a rustic hike, or a leisurely stroll along a limestone-packed trail. Pack a picnic lunch and relax lakeside with the family. Camp where amenities are limited, or choose a modern site with full hookups. Rent a boat, canoe, paddle boat or kayak and explore watery inlets, nooks and crannies. Horsepower and speed limit restrictions make paddling quiet, calm and relaxing. Put in at one of seven boat ramps. View a variety of native wildflowers, or 900 newly planted oaks that will one day stand tall and feed a variety of animals. Take the kids to the nearby Macbride Raptor Project (2095 Mehaffey Bridge Road NE) to see more than 20 raptors indigenous to Iowa. The birds were injured and brought to the center for rehabilitation. Despite best efforts, those permanently at the center were too severely injured to be released back into the wild. They are now used to help educate the public.



Lost In Iowa



Lake Macbride was one of the early projects recommended in the 1933 Report on the 25-Year Plan of the Iowa Conservation Commission. In 1934, as work was beginning, the park was dedicated as Lake Macbride State Park, in honor of the prominent botanist and former President Emeritus at the University of Iowa, Thomas Huston Macbride. Guest speaker at the dedication was Harry McGuire, editor of *Outdoor Life*. He began his address with "You have here today set a landmark in the history of recreation building in America. I predict that the 25-year plan, of which this project is a part, will go down in history as the most important plan of its kind ever formulated in America."

And no worries if you're not a boat owner. Access to the water is good for both shoreline and boat fishing.

"Fishing is the park's number one draw," says Puettmann. "The lake encourages non-powered boating. We have a 10-horsepower-motor limit from the Friday before Memorial Day through Labor Day, with a year-round 5-mile-per-hour limit." So no hot-dogging here—something that anglers, hikers, birders and anyone else wanting to embrace the quiet heartily approve.

For anglers, swimmers and those interested in water sports, it's a relief to know the water is good and getting better and better, after a lake renovation from 2000 to 2002 lowered the water level 20 feet so heavy equipment could access it for improvements to keep it clean.

"A watershed improvement project actually started right before the lake renovation," notes Puettmann. "It was spearheaded by the Natural Resources Conservation Service (along with several other partners), which had the purse-strings to provide cost incentives." A result of the

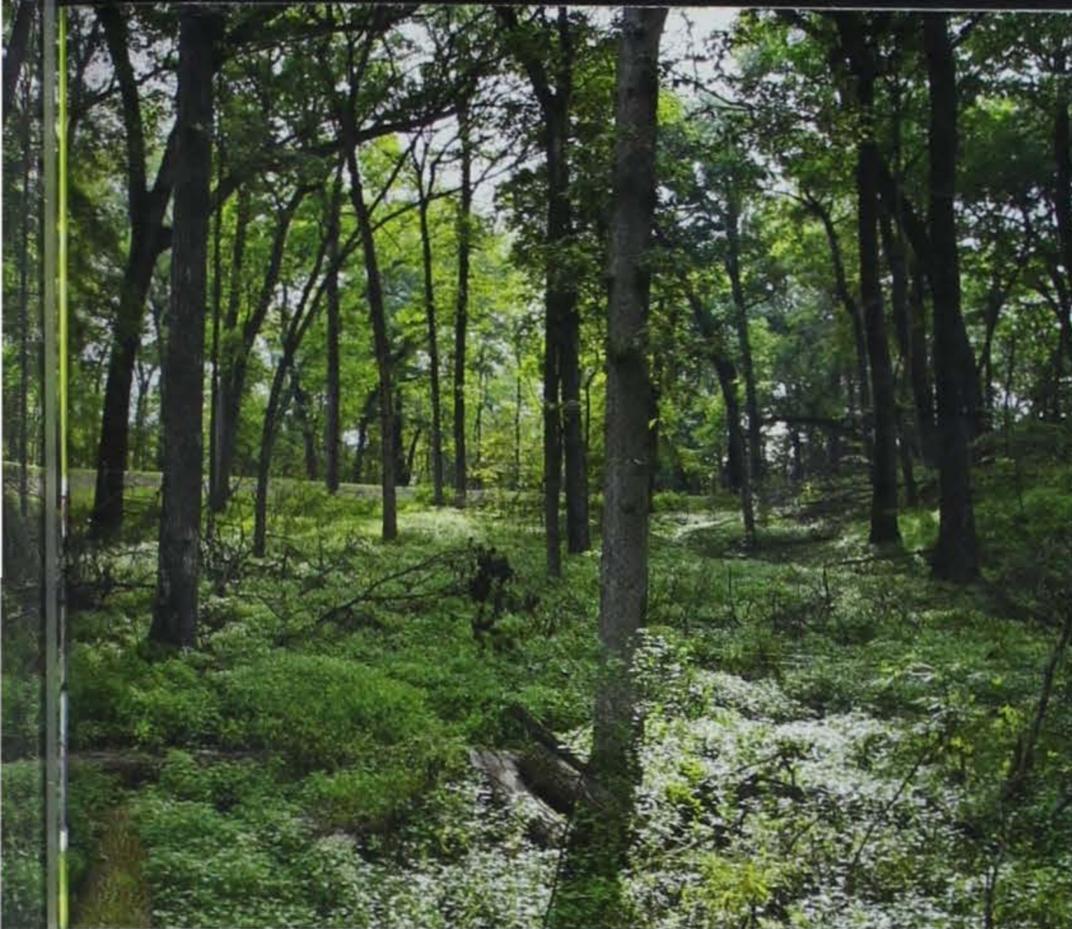
improvements is a shoreline protected with rock armor. In addition, a retention dam confines sediment to the upper end of the lake, allowing it time to dissipate before entering the main body of the lake.

A Lake For More than the Fish

The lake is a favorite for swimmers—open water swimming here is huge through late October and even into November. "Triathletes frequently practice here," observes Puettmann. And while the beach is popular on hot summer days, the real draw is the diversity of activity that the lake provides. Concession sales are brisk with rentals of pontoons, paddleboats, stand-up paddle boards, kayaks and canoes.

"We rent out 76 pontoon slips for the season, which runs May 1 to Oct. 15. Plus, the lake is very popular for sailing," says Puettmann, who helps oversee the park's seasonal storage of 100 sailboats with park ranger Nick Rocca.

Located only 14 miles from Iowa City off Highway



1 and just 12 miles from Cedar Rapids via Country Road W6E, Lake Macbride has a built-in clientele. It's a favorite haven for college students (and faculty) from Iowa City's University of Iowa or Cedar Rapids' Kirkwood Community College, who seek a break from the books with beach time in warm weather or cross-country skiing in winter. It's also a beautiful gathering place to bring visiting family members for a picnic or a stroll along the lake. One hundred acres of reconstructed prairie ensure multiple seasons of native wildflowers in bloom, and the enclosed lodge can be rented for special occasions.

Camping for Fun and Birding, Too

For anyone who doesn't live within a 15-minute drive of the park, Macbride is best experienced through camping. A modern campground at the west end of the park has 50 site pads with 37 electrical hook-ups, plus showers and restrooms. The primitive campground on the southeast side is close to the lake in a beautifully shaded area with

60 campsites. The difference? No showers or electricity, and only "nonflush" restrooms.

In the spring and fall, birds and bird watchers, binoculars peeled for migrating avian activity, are likely to outnumber other park visitors. A variety of shorebirds—loons, grebes, pelicans, cormorants, terns, herons and gulls, along with various ducks and geese—touch down during migration, especially along the mudflats when the lake is low. Then there are the usual suspects. Iowa's regular shorebirds including the piping plover, American avocet, red-necked phalarope, willet, godwits, ruddy turnstone and four species of sandpipers all have been viewed at the park. In the winter, Macbride draws birders intent on locating certain raptors—the long-eared, short-eared and Northern saw-whet owls. Ospreys and eagles are perennial favorites.

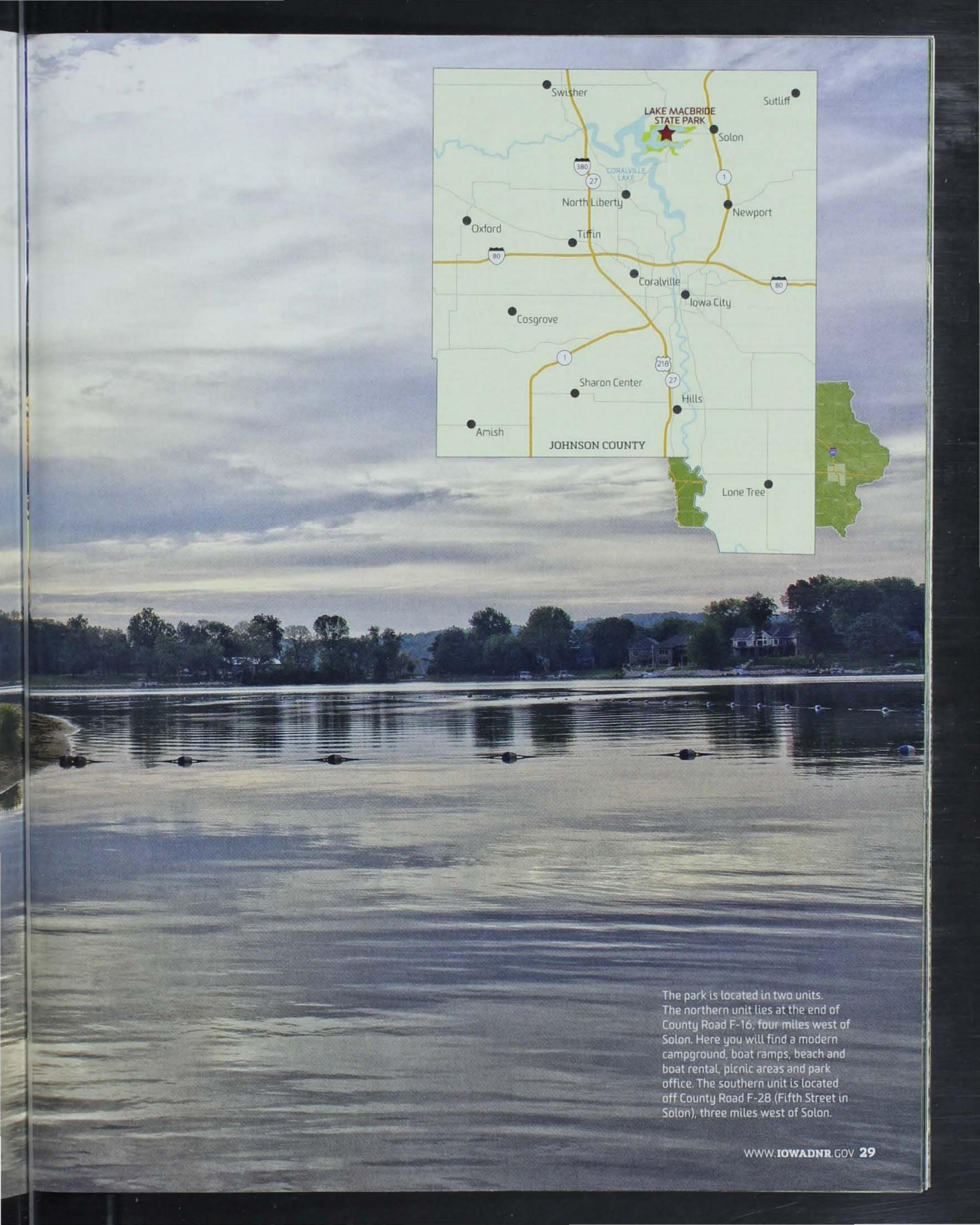
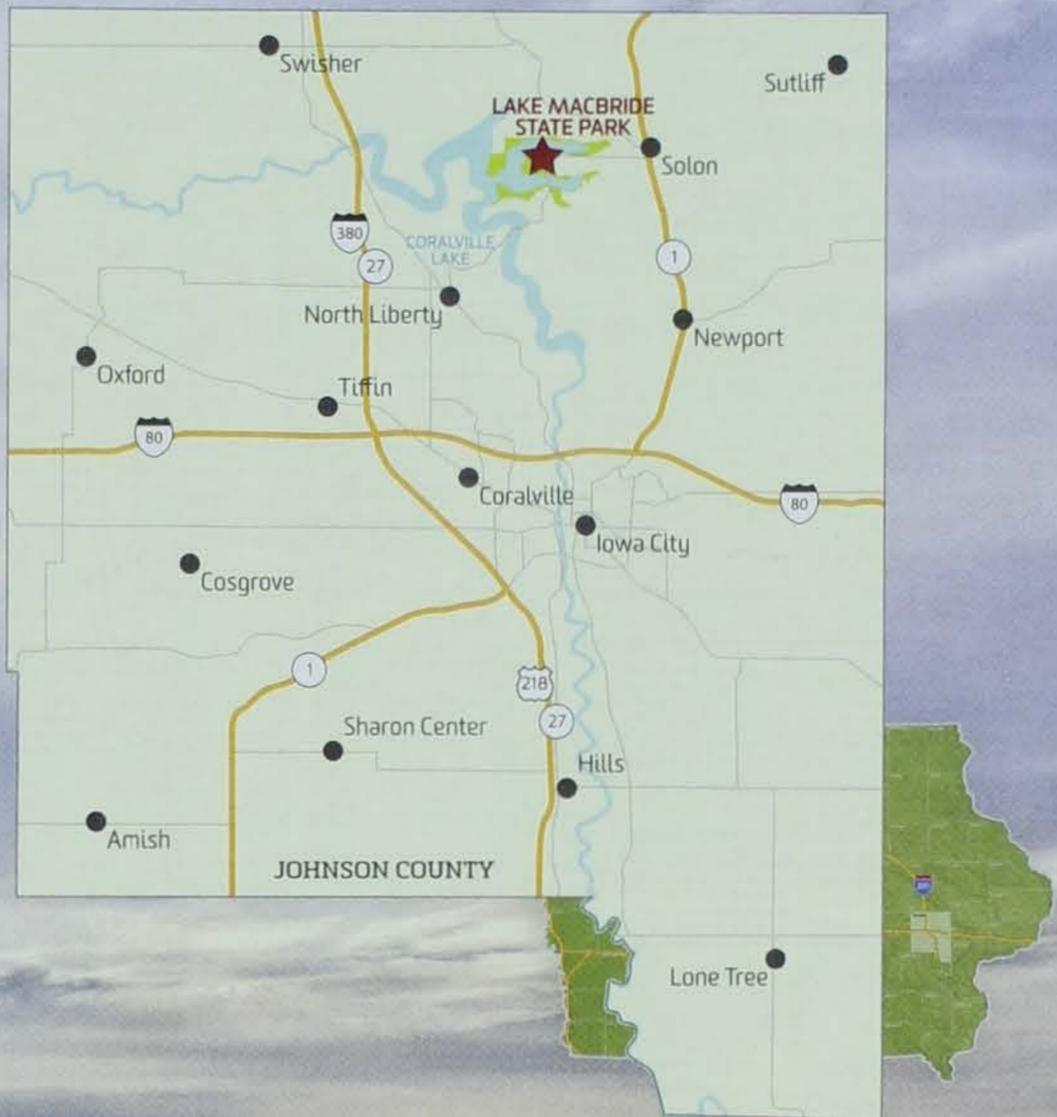
But the park isn't just about shorebirds or raptors. Nesting warblers and other passerines can be found in the wooded areas of the park in spring and summer. Each year brings with it certain rare sightings that make welcome additions to even the most seasoned birder's life list.

Which brings us back to those baby trees. Without careful management of the forest habitat, the park's bird life would not be nearly so abundant nor the park nearly so pleasurable. The good news, according to Vitosh, is that 90 percent of the seedlings that hijacked my hike have survived so far. And though the Forest Stewardship Plan was written to span a 20-year period, it is an active, working plan that can be tweaked every couple of years to make sure things stay on track.

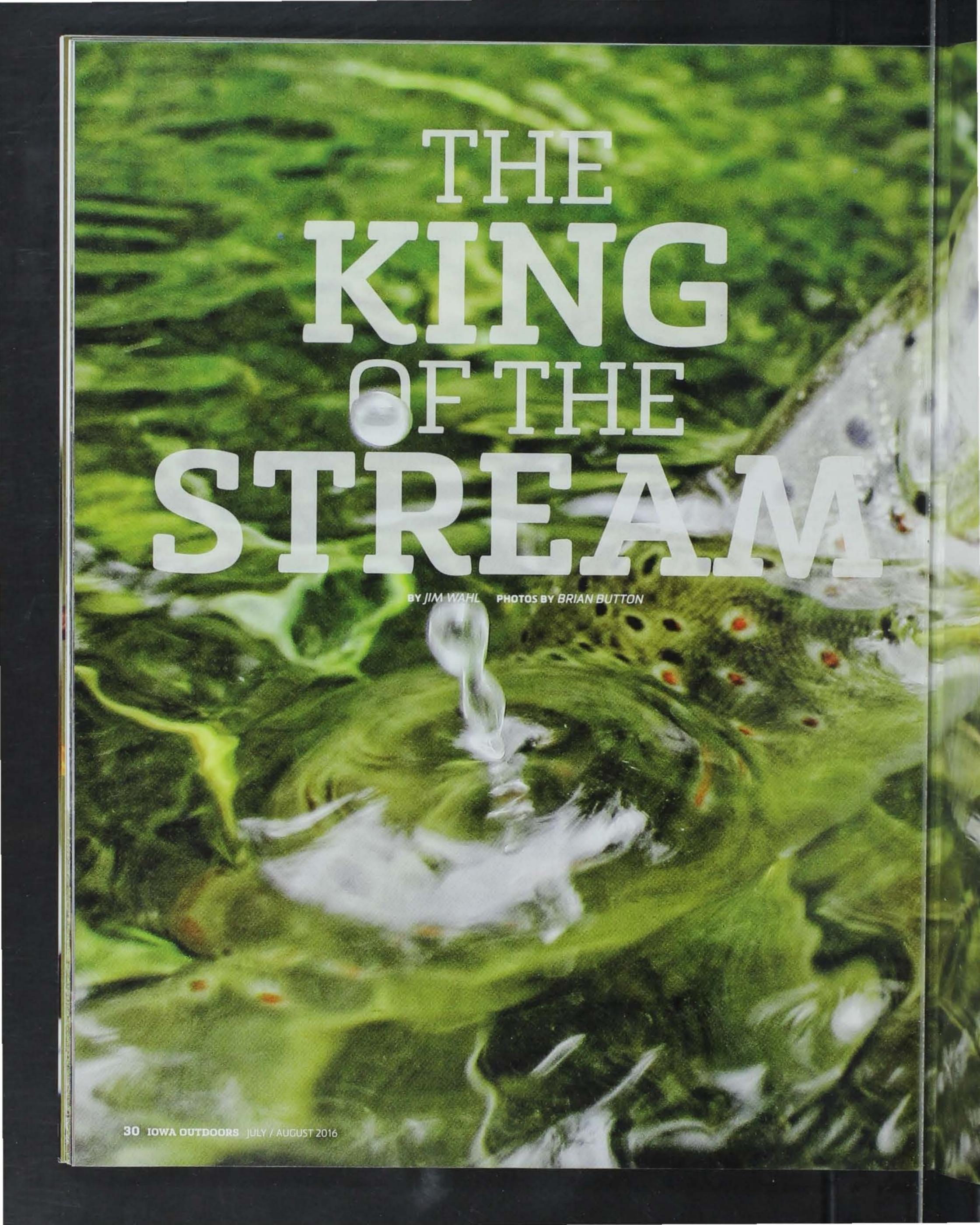
For Vitosh, survival of the seedlings is personal. "I caught my first crappie in this park 40 years ago when I was 10 years old," he says. "My hope is that this comprehensive cooperative forest plan will allow many future generations to make the same kind of memories." 🐸

Lost In Iowa





The park is located in two units. The northern unit lies at the end of County Road F-16, four miles west of Solon. Here you will find a modern campground, boat ramps, beach and boat rental, picnic areas and park office. The southern unit is located off County Road F-28 (Fifth Street in Solon), three miles west of Solon.

A close-up photograph of a stream. The water is clear, showing white splashes and bubbles. The streambed is covered in vibrant green algae and moss, with some small red spots. The overall scene is bright and natural.

THE KING OF THE STREAM

BY JIM WAHL PHOTOS BY BRIAN BUTTON



It was 90 degrees in the shade. The cool 60-something degree water felt good, especially since I was overdressed wearing heavy insulated chest waders. I was excited about trying out a new spot I'd never fished before. From the height of the grass bordering the stream, it was obvious no one had been on this stretch for quite some time.

After a considerable walk, I spooked a bedded deer on a small island within the stream. Since he ran downstream I figured this was a good spot to jump into the water and start fishing back upstream.

It didn't take long until I found a likely spot. I cast my elk hair caddis fly in the tail end of a shallow pool and immediately had a strike. I set the hook, but came up with nothing. This happened repeatedly and it was obvious the fish were small. Several casts and two small creek chubs and a common shiner later confirmed my suspicion.

I slowly moved further and cast in the fast water below a sharp outside bend. The spot looked perfect for trout and it was. On my second drift I had an aggressive rise and set the hook. This was not a minnow. I was sure it was a trout and after a brief struggle I had a beautiful 11-inch brown trout in hand.

I inched forward in the same spot and cast my fly further upstream searching water that had not previously been fished. On my third







Immerse yourself in the exciting world of flyfishing at the DNR's mentored flyfishing and tying weekend getaway at Springbrook Conservation Education near Guthrie Center.

Learn the difference between dry and wet flies, nymphs and streamers and when to use them. Tie your own Woolly Bugger, quite possibly trout fishing's most go-to fly, or an elk hair caddis the author relied on in his memorable trip. Tie one of the all time classic streamers—the Mickey Finn.

Put that newfound knowledge and handmade flies to the test and practice casting and fishing for panfish, bass and whatever else lurks in the local waters. Discover the secrets of fishing a pond, a lake or river, conveniently located close to the park. Once the techniques and skills are mastered, let mentors show you how to clean and cook your catch.

The workshop is held Oct. 8-9 at the Springbrook Conservation Education Center, 2473 160th Road, Guthrie Center. A mere \$75 covers meals, lodging, instruction and materials. Registration is limited. To register, contact A. Jay Winter at [641-747-8383, ext. 11](tel:641-747-8383), or Ajay.winter@dnr.iowa.gov.



Learn more about Iowa trout fishing,
visit iowadnr.gov/trout.

cast I hit the perfect spot, just below where the stream turned and fast water met slower moving water. The surface exploded. I set the hook and immediately a huge brown jumped nearly two feet out of the water. It was over as quickly as it happened. He successfully threw the hook.

Slightly shook up, I stopped fishing and tried to gather myself. I thought, "I just lost the largest trout I have ever hooked in an Iowa stream." It had to be in the 18- to 20-inch range—a brown trout produced naturally in this stream.

After a brief rest, I inched back into that perfect spot. I flailed the water with that same elk hair caddis and never a take. I was just about ready to move on and the surface exploded in the sweet spot ahead. I couldn't tell what he ate, but I was sure the aggressive fish was the one I lost moments before. I continued to fish, but to no avail. Then it happened. A grasshopper fell into the stream and the water exploded. Just a few minutes later, another hopper made the same fatal mistake with the same results.

At that point I thought, "I'm going to quietly back out of here and fish upstream, but return to this spot with an imitation hopper I knew was waiting in my fly box." Fishing upstream produced another 11-inch brown, but my mind wasn't there. All I could think about was going back downstream and trying to fool that huge trout that was king of the stream.

I pulled out a newly tied grasshopper imitation fly that had never been fished. It was huge in comparison to the number 16 caddis I had been fishing. I finished securing the knot and nearly sprinted in excitement to the pool with the sharp bend where the huge brown lived.

As I approached the spot, there was no evidence of the German brown monster. The surface was quiet and no unfortunate grasshoppers fell into his lair. My first two casts were timid, failing to reach the sweet spot. I extended my fly line and false cast several times to reach out further on the next two casts—still no fish. On my fifth cast the water exploded. I instinctively set the hook and I had him on again. This time I was hoping for better results.

It didn't take long and the king of the stream jumped, this time even higher than the first. I was no more than 20 feet away and got an excellent view of the fish. I had underestimated his size from our previous encounter—he was more than 20 inches long. The larger number 8 hook attached to the fake hopper had imbedded in his jaw and despite his aerial acrobatics, he was still hooked.

He quickly moved upstream, stripping line so fast I couldn't stop him. Reaching the far bank he buried himself into a deep cut bank and didn't move. I felt the pressure of my fly rod and was sure I not only had him hooked, but I was gaining some control of a chaotic sequence. Not being able to move him, I waded in deeper all the time keeping constant pressure, allowing no slack line which would give the advantage back to the fish.

At this point I made a decision to move in even closer. With my hand I followed the fly line down to the leader, and from the leader down to the tippet. I knew he was there. I reached in further and put my hand over the back of his head. I was certain in a moment I would have him secured and celebratory photos would be taken prior to his release. But the king of the stream had another idea.

My hands on his back prompted a sudden burst that I couldn't control, and I lost my grip. He ripped off line faster than I could imagine and suddenly turned and dove straight through my legs. My fly rod was bent in half with the tip extended between my chest waders. Suddenly it was over. He broke my line. I stood for a moment stunned, wondering what just happened.

I eased out of the hole and found a spot on the bank. My legs were shaking and my hands were quivering. What a thrill to outsmart this monster fish, but what a disappointment to not bring him to hand. "I'm a 60-year-old man," I thought. "This is silly to be reacting this way."

No it's not.

That's what fishing does to me. It turns a grown man into a boy—the excitement, the passion, the anticipation, the reward—all of those things and so much more.

I don't care if I ever land that monster brown. My satisfaction is knowing he's there. I will make one promise, though. I'll be back. The next time better prepared. If I get another chance that's great, but if not it won't matter. The king of the stream for a moment turned a man into a boy, and for that I will be forever grateful. 🐟



Organizations abound dedicated to fly fishing and trout fishing in general. Trout Unlimited is a national organization with more than 150,000 members dedicated to conserving, protecting and restoring cold water fisheries and their watersheds. The vision is to ensure native and wild coldwater fish thrive across their North American Range. To find a chapter near you, search tu.org.

Other clubs—like the Hawkeye Fly Fishing Association, Dubuque Fly Fishers and Siouxland Fly Fishing—while still dedicated to the conservation and protection of coldwater fisheries, sometimes lean more toward education and social interaction of the sport; hawkeyeflyfishing.com, dubuqueflyfishers.org, siouxlandflyfishing.com.

Happy Anniversary

BY JULIE TACK



July marks the 30th anniversary of the Iowa Department of Natural Resources and its partnership with citizens, companies, organizations and agencies to impact quality of life and preserve our natural heritage. While there's still work to be done, there are numerous success stories. Here are 30 to commemorate the anniversary.

30 Achievements for Natural Resources



Lakes Put Unity in Community

Lakes are local sources of pride and magnets for outdoor fun, fishing and tourism, and 22 lakes have been restored since 2006. Beautiful, clean restored lakes offer pole-bending fishing and attract tourism dollars as a primary tool for local economic development. An additional 37 lakes have projects in progress or in planning phases.

It's All About the Watershed

Streambank stabilization, buffer strips and sediment control ponds prevent more than 9,000 tons of soil from eroding, and more than 13,500 pounds of phosphorous from entering the water. "Fixing" a lake 30 years ago often involved just dredging—and not addressing erosion and runoff. Today, erosion control at critical points in the watershed are keys to improving water quality.

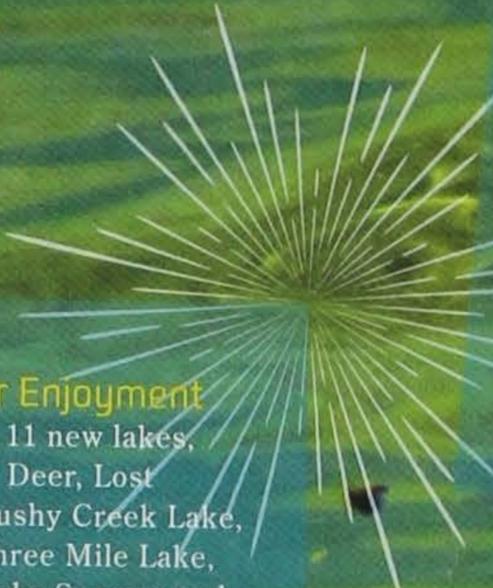


Hatcheries Mean Great Fishing

DNR hatcheries spawn, raise and stock more than 150 million fish annually, including northern pike, catfish, muskies and trout. Iowa is a national leader for its walleye hatchery and stocking process, boasting an 85 percent survival rate of fingerling-sized fish and producing 175,000 walleye each year for lakes and rivers. The DNR's walleye culture research and expertise is emulated by many agencies in North America.

Water Trail Wonderland

Iowa now boasts more than 915 miles of designated water trails, with 1,016 miles under development to give enthusiasts of fast-growing paddle sports plenty of places to explore. And to enhance safety, improve fish habitat and create new whitewater attractions, 15 low-head dams are being replaced or removed on several waterways, with 22 more under consideration.



New Lakes, New Outdoor Enjoyment

Fun abounds at 11 new lakes, including Belva Deer, Lost Grove Lake, Brushy Creek Lake, Beaver Lake, Three Mile Lake, 12 Mile Lake, Lake Sugema and Hawthorn. These beautiful waters are community centerpieces for fishing, boating and swimming and encourage new business through hotels, restaurants and stores.

Two Citizen-Supported Amendments

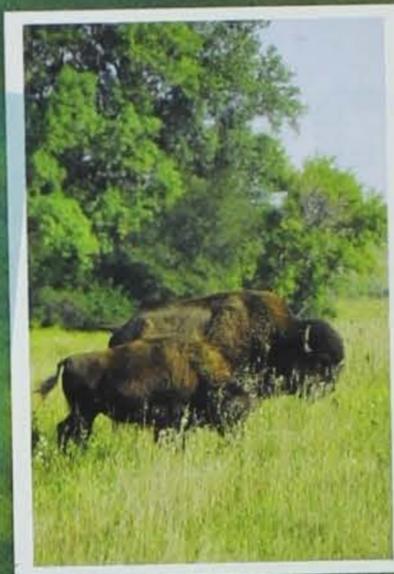
In 1996, 88 percent of voters passed an amendment to the Iowa Constitution to protect the Fish and Wildlife Trust Fund from being diverted for other purposes. In 2010, 63 percent of Iowans passed a constitutional amendment supporting a dedicated funding source for natural resources, paid for through a small percentage of the state sales tax if the tax is ever increased.

The Fish and Wildlife Trust Fund was established in 1937 to manage and regulate wildlife and fishery resources. Funding comes from purchases of hunting and fishing licenses. After efforts to use these funds for purposes other than natural resource, Iowa citizens voiced their support by passing an amendment that ensures these funds can only be used for promoting, managing, researching and regulating hunting, fishing and trapping in Iowa.

In the mid-2000s, a bipartisan group of stakeholders and legislators recommended creating a sustainable funding source for long-term water quality efforts, soil conservation and improved fish and wildlife habitat. The amendment to create the Natural Resources and Outdoor Recreation Trust Fund passed by a majority of Iowans and was supported by a coalition of 120 organizations representing 250,000 members in 99 counties. If a state sales tax increase occurs, a small percentage will go to the trust fund.

Return of Natural Landscapes

Since the early 1990s, nearly 1 million acres have been restored to forest, wetland and prairie thanks to partnerships among state, federal and private landowners. A prominent example is the Neal Smith National Wildlife Refuge, with 5,600 acres of restored prairie, plus the return of bison and elk to central Iowa.



REAPing the Rewards

Perhaps no other funding source has improved Iowa's outdoor recreation and conservation more than REAP. Since 1989, the Resource Enhancement and Protection Fund has provided \$316 million to more than 15,000 projects in all 99 counties. Projects include soil conservation, outdoor fun with trail and park improvements, protection of vulnerable areas such as the Loess Hills, environmental education for thousands of students and preservation of historic resources.



PHOTO: BRYAN BOYTON; IASD PHOTOGRAPHY; SMITH



Public Lands Provide Protection

An extra 147,000 acres of public lands became places for enjoyment, habitat or preservation of fragile areas. Towns near these wildlife management areas, parks and forest areas experience increases in tourism dollars, whether from hunters, birdwatchers, anglers, hikers or campers.

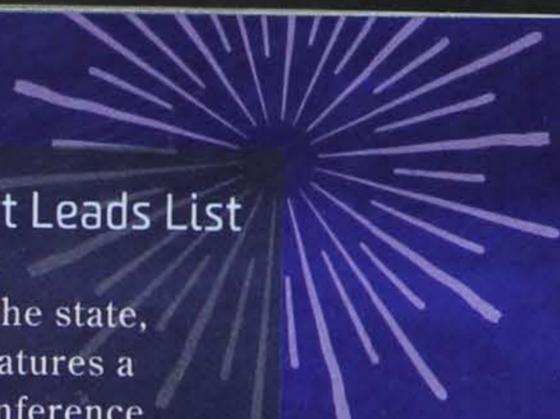
Standing Up for Sustainable Design

Thirty years ago, sustainable design was an emerging concept. Now, 102 buildings are Iowa LEED (Leadership in Energy & Environmental Design) certified, the highest certification level in the country. Sustainable design minimizes environmental and energy impacts and embraces the natural world in the building's design. They feature innovations in renewable energy, energy efficiency, improved water use and wastewater management and eco-friendly materials.



Trout Triumph

In 1980, just six burbling streams supported natural trout reproduction. Since then, hard work by fisheries and environmental services staff, landowners and groups like Trout Unlimited and the Hawkeye Fly Fishing Association to reduce sediments and control runoff have dramatically improved water quality. Today, 45 streams support trout reproduction. Trout require extremely clean and clear water to survive and reproduce. The thriving trout fishery draws thousands of anglers to northeast Iowa, helping businesses flourish.



Honey Creek Resort Leads List of New State Parks

The first-of-its-kind in the state, Honey Creek Resort features a lodge-like hotel and conference center, 18-hole golf course, indoor water park, 28 cottages, beach, boat rentals, activity center and green initiatives. Nestled along Rathbun Lake, the nicely-appointed resort offers leading-edge recreational facilities to attract families, travelers and professionals for vacations or conferences.

The DNR also opened Banner Lakes at Summerset State Park near Indianola and Elinor Bedell State Park in Okoboji. Both are situated near higher-population areas to provide expanded outdoor recreation to more Iowans. Good Earth at Blood Run in northwest Iowa is in the planning stages.

Deer Strategies Create World Class Herd

After being nearly extirpated in the 1800s, Iowa has earned a reputation as having some of the nation's best white-tailed deer hunting, creating economic activity from resident and nonresident hunters. But balancing the ecology of a healthy herd with societal concerns requires well-thought-out management strategies. In-depth analyses of harvest data and hunter surveys help set seasons and quotas to protect the population during vulnerable life phases, with adjustments for highs and lows in the herd. Hunters are a critical management link, buying into special hunts and programs, including Help Us Stop Hunger (HUSH), that provides venison to food shelters and ensures a balanced deer herd with quality hunting.

Conservation on Private Land

Private land easements held by the DNR have increased from seven acres in 1986 to about 4,500 acres across 17 counties. This joins hundreds of acres of easements through other non-profit organizations, cities and counties. Easements permanently protect vital natural areas while keeping land in private ownership. In addition, 9,000 acres of public hunting on private land is secured through the Iowa Habitat and Access Program (IHAP) which pays landowners for habitat improvements in exchange for opening lands to the public.

Rolling Up Our Sleeves

Thousands of Iowans have dedicated millions of hours volunteering for natural resource and environmental improvements to actively adopt "a greener way of life." This stewardship ethic has Iowans looking to improve parks and green spaces, plan outdoor events, clean litter, plant trees and monitor water quality, to name a few. From paddling clubs to prairie associations to hunter education—Iowans are making a difference.





GIS Puts Iowa on the Map

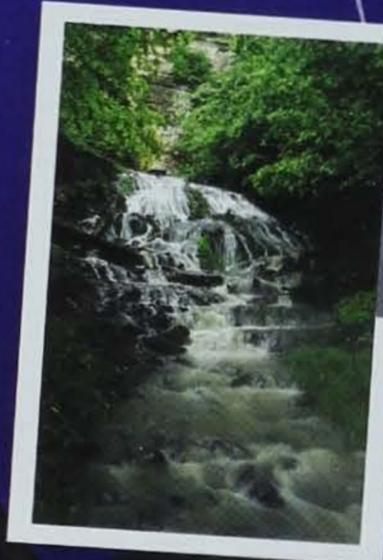
Take a satellite map or aerial photo, then spruce it up by overlaying some extra data, say locations of old Iowa coal mines, watersheds, industrial sites, recreation areas and that's Geographic Information Systems (GIS). It is transforming Iowa's ability to protect natural resources and improve recreation. Thousands of GIS datasets guide natural resource management and decision-making in everything from flood plain mapping to maps of animal feeding operations and watersheds.

Access to Outdoor Recreation

Passage of the American with Disabilities Act (ADA) opened previously inaccessible outdoor fun for the disabled. In state parks, more than 90 ADA-compliant amenities range from cabins to trails to fishing jetties. County and city parks also provide accessible amenities. Creating ADA compliant areas continues to be a priority.

The Groundbreaking Groundwater Protection Act

The 1987 Groundwater Protection Act established one of the most comprehensive approaches to water quality protection in Iowa history. With a focus on education and incentives for compliance, it established fee-based funding to create programs to clean up toxins from leaking underground storage tanks, closing of private wells and ag drainage wells that put chemical-laden water underground and proper waste disposal of hazardous materials. It created the Leopold Center for Sustainable Agriculture at Iowa State University and the Center for Health Effects of Environment Contamination at the University of Iowa.



Eagles Make a Comeback (As Do Peregrines, Turkeys, Swans, Otters and Ospreys)

Nesting pairs of eagles in Iowa has grown from two in 1985 to 360 in 2014. Peregrines, gone from Iowa by 1964, had their first restoration in 1989. By 2014, the state had 13 nesting pairs producing 33 young. Prairie chickens' last known nesting took place in 1952. Today, between 11 and 13 broods containing 85 chicks were observed in southern Iowa and northern Missouri in 2014.

Restoration efforts led to 15 nesting pairs of ospreys with 30 young. Trumpeter swans, once silent across our landscape, produced 437 nests in 2014. Otters, gone from Iowa by the early 1900s, are now so plentiful they can be legally harvested.

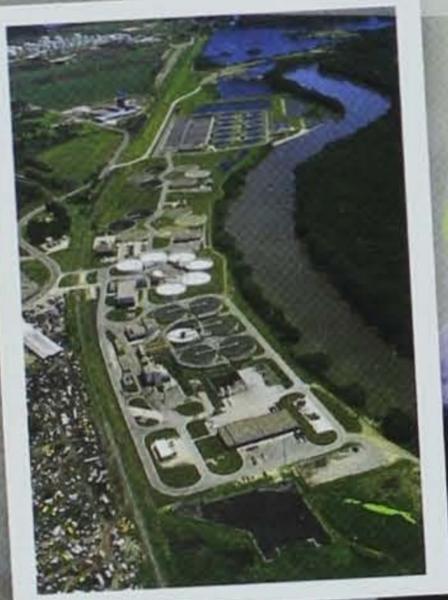
Green Bins—an Iowa Way of Life
Since 1992, towns with curbside recycling increased 176 percent, from 240 to 644. More than 2 million Iowans have access to curbside recycling to divert materials from landfills and save water, trees and valuable metals.

Wind Revs Clean Energy

Iowa blows other states away with more than 3,000 wind turbines producing more than 30 percent of our electricity, adding jobs and powering local economies. That avoids nearly 9 million tons of carbon emissions annually, equivalent to taking 1.5 million cars off the road. And in April, MidAmerican Energy announced a \$3.6 billion wind expansion—the largest economic project in state history.

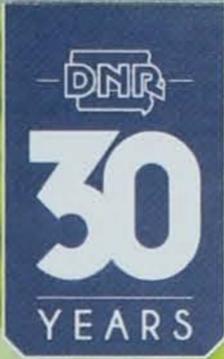
Waste Water Treatment Facilities Clean Up

Just 70 years ago, communities dumped untreated sewage into rivers. The 1972 federal Clean Water Act established discharge limits for treatment facilities, with the goal of fishable and swimmable streams and the reduction of pollutants entering a stream. Today, more than 800 communities manage wastewater to minimize impacts on waterways. In the last 30 years, numerous communities have used state and federal funds to update wastewater facilities. One program alone, the State Revolving Fund, has provided \$1.6 billion since 1989 for these purposes.



KIDS RECYCLING PHOTO BY ISTOCKPHOTO.COM; REMAINING PHOTOS, DNR FILE PHOTOS

WE RECYCLE



Safely Managing Household Hazardous Material

In the past, harmful materials were not often disposed of safely, but since 1995, more than 51 million pounds of household hazardous materials have been collected. Today, 70 regional collection centers serve 500,000 households to collect toxic, flammable, corrosive and reactive chemicals that can harm people and the air, land and water. Iowa has more collection areas than Minnesota, Missouri, Nebraska and Illinois combined.



Clearing Up Nasty Air Emissions

Since 1990, Iowa's gross domestic product soared 65 percent, total vehicle miles traveled climbed 38 percent and the state population rose 11 percent. Despite more emission sources, vehicles and people, sulfur dioxide emissions have plummeted 60 percent and nitrogen oxides are down 43 percent. Facilities statewide have reduced emissions by replacing old equipment with more efficient technology with advanced emission controls. And modern vehicles are much cleaner. Reducing air emissions better protects those with asthma, heart problems and other diseases.



Putting the Plug in Ag Drainage Wells

Agricultural drainage wells decreased 60 percent since the early 1990s, from 400 in northern Iowa to less than 60. These were installed in the early 1900s to provide outlets for surface runoff and tile drainage from cropland. The drainage water, carrying fertilizer, pesticides and contaminants from livestock manure and sometimes rural septic systems, posed a threat to drinking water in nearby domestic wells. DNR and the Iowa Department of Agriculture and Land Stewardship worked with farmers to close or permit these wells, providing cost-share for alternatives.



WE RECYCLE

KIDS RECYCLING PHOTO BY ISTOCKPHOTO.COM; REMAINING PHOTOS: DNR FILE PHOTO

The Great Iowa Trail Boom

Iowa's bike trail system has expanded to more than 1,200 miles since the 1980s, along with hundreds of miles of trails in state parks and public areas. With leadership from the Iowa Natural Heritage Foundation, the Iowa DOT and others, trail systems make life fun, increase tourism and create greater enjoyment and pride in our outdoors.

Addressing Environmental Impacts of Animal Feeding Operations

In the 1990s and early 2000s, Iowa was one of the first states to pass laws addressing animal feeding operations and their impacts at levels more stringent than federal standards by establishing separation distances between feeding operations and residences, as well as distances from environmentally sensitive areas. Similar laws created separation distances for manure application on fields, while requiring training and certification for more than 4,500 applicators to apply manure. In addition, established criteria is used by 88 Iowa counties to determine air, water and community impacts of new or expanding facilities prior to approving construction.

A Whole New Way of Doing Business

The environmental ethic of businesses and industries has changed how companies operate, manufacture, distribute and dispose of materials. For example, companies participating in the Pollution Prevention internship program (an engineering intern from an Iowa college provides pollution prevention strategies) have saved more than \$78 million while reducing 1.47 billion gallons of water, 218,000 tons of solid waste, 8,300 tons of hazardous waste, 377 billion kWhs, 42,800 grams of mercury and nearly 555,000 metric tons of greenhouse gases. "Companies are looking at more than just the bottom line. They are recognizing their importance in protecting the environment and they want to be good corporate citizens," says Mike Ralston, director of the Iowa Association of Business and Industry. Beyond protecting the environment, companies know green practices produce financial benefits by reducing waste and increasing production efficiencies that lower energy use and air emissions.



Removing Threats Hidden Underground

Of 6,000 contaminated underground storage tank sites, 5,300 are cleaned up. Almost 30,000 underground tanks have been removed since the 1980s. Over time, older tanks corrode, causing hidden petroleum leaks into soil and groundwater. Improvements in technology, regular inspections, trained operators, new piping and better construction mean fewer toxins enter underground water supplies.

Terrestrial Turnaround

Since 2003, more than 1,000 “brownfields”—typically old industrial sites—have been cleaned and redeveloped through grants and technical help from the DNR and EPA. Many former industrial districts and blighted areas are being renovated into showcase areas including Port of Dubuque, Coralville’s Iowa River Landing, the renovated Stockyards District in Sioux City and Riverpoint West in Des Moines. In addition, more than 10 million tires from 100 stockpiles were recycled and re-used to eliminate risks of environmental catastrophe. Large tire stockpiles can burn for months, releasing toxins into the air, soil and water. 🐾

BRIDGE PHOTO COURTESY OF IOWA TOURISMA; TANK PHOTO, DNR FILE PHOTO



One family. Five generations. Five decades camping at...

BACK

BY JERRY MELLEMM

I am not sure what month it was, but it was late spring 1964. We lived in Davenport, and my father borrowed a pop-up camper from a friend. That Friday night, he loaded Mom and us five kids in

the car and pulled the camper to Backbone State Park's Six Pines Campground, the only campground there at that time. There was a hand pump for water and an outhouse. Dad went fishing several times that weekend,



COOKING BONE

PHOTO FROM WELLEM FAMILY

but never alone. All of us kids had learned and loved to fish. My oldest sister and I were the two who usually went. Although we both knew how to fish, this was a different type of angling. Trout fishing took different

knots, a different way of baiting the hook, learning how to “sneak” up on the trout and a great deal of patience. This was the first of several times that summer we would enjoy camping and fishing.

The first few times I felt a little bit sorry for Mom, because Dad and I would go fishing and she was cleaning up from or preparing the next meal. But this was short lived—after a few trips, my two older sisters and I got pulled into meal preps and dishes, too.

After the first summer, Dad decided to buy a pop-up camper so we no longer had to borrow one, and we camped more often. Oh the memories we created. One of my sisters never wore shoes at home, and camping one weekend, she forgot hers. Dad and Mom had no sympathy, and she spent the weekend barefoot. The walk to the outhouse across a gravel road and through knee high grass was surely painful. I am sure it was no fun. Another time that same sister watched a bumblebee fly into the camper. She was petrified and screamed. I was able to get it out without getting stung or killing it.

Over the years, all three sisters have been thrown in the lake, as well as many grandkids, nephews and nieces. Of course my two brothers and I went in as well, because that was the only way to get others in. One of my brothers and I would take our watches off to forget about the time. We only knew what day it was because we had to go back to work or school the following Monday. We often missed meals and sometimes still do because we prefer to fish and enjoy the country.

In recent years, floods caused water levels to rise above the bridge, relegating us to campground activities. If we are unable go fishing, family games of Skip-Bo, Scrabble, cribbage, euchre and countless others, were an adequate substitute. Hours upon hours have been spent relaxing in the sun reading a book or by a fire in the evenings. Often a guitar was brought and songs sung around the campfire—with of course, the ritual s'mores.

Trout meals are frequent, and it makes no difference which meal as it's hard to beat fresh trout for breakfast. One brother makes a fantastic potato soup—a couple hour process—but well worth it. A few years ago, with bellies full, a few cooked trout found their way into leftovers, turning the soup into the next day's trout bisque. A three-star Michelin-rated restaurant chef has never tasted better leftovers.

One weekend my brother and brother-in-law were fishing a catch-and-release stream. They both caught several nice brown trout and released them as required. They returned to Richmond Springs and my brother-in-law caught a brood stock brown. My brother placed himself between my brother-in-law and the stream, told him that the precious and tasty brown trout had to be returned there as well. Grumbling, he unhooked the trout and went to return



it. My brother stayed between him and the stream, and finally told him he could keep it—that he was just teasing. My brother-in-law was not amused.

Another trip, while my dad and I were fishing, he laid his pole on the ground. I wasn't watching where I was walking, stepped on the tip of his expensive new fly rod and broke it off below the second eyelet. He wasn't happy with me at all and told me to walk up or down stream and fish there. He had bought a rod with two top sections though, so he changed the sections and continued to fish with his new rod. As we left the stream that afternoon, he put his pole in the back of the station wagon and promptly closed the door on the second section, breaking it in half. The words he used are not repeatable.

One Friday, when I was 13 or 14, in the furthest hole downstream under a huge rock, I spotted a 19-inch trout. I told my father I was going to catch it if it took all weekend. I spent Friday evening until after dark waiting, catching nothing. Saturday, daybreak saw me back at the same hole. I knew the fish was there, because once in a while it would come out of the undercut rock and swim around. Dad came around about noon, but I refused to go to lunch. He gave me a stick of beef jerky. Early afternoon saw a smaller trout drift into the hole from upstream. It was hungry, picked up my bait and shook it. The "pool owner" trout came out of nowhere, swam around twice and hit the smaller trout broadside. The trout floated to the surface and into the downstream rapids. Not one to pass up a trout, I picked it up and put it on my stringer. Later that afternoon, the monster trout came out of the overhang and played

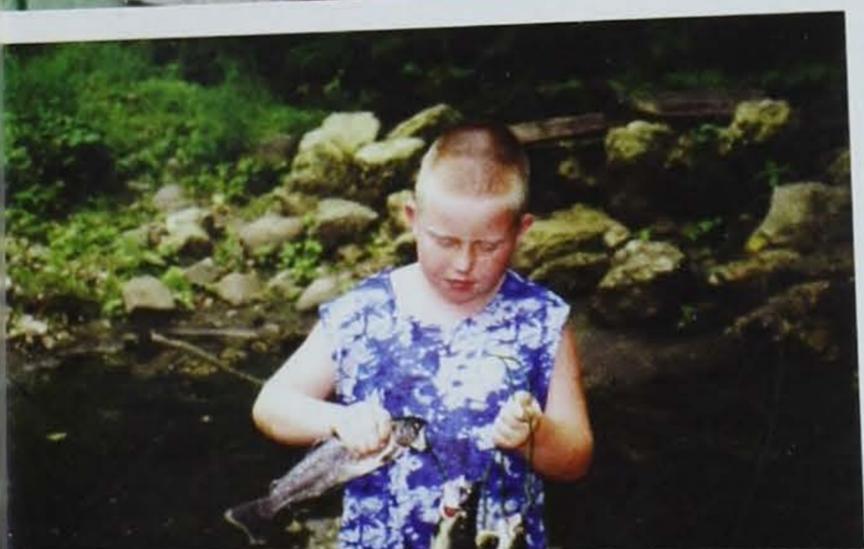
TROUT PHOTO BY BRIAN BUTTON SIGNS PHOTO BY BEN CURTIS; REMAINING PHOTOS FROM MELLEAM FAMILY



REGISTERED
CAMPER'S
ENTRANCE



NIGHT
CRAWLERS



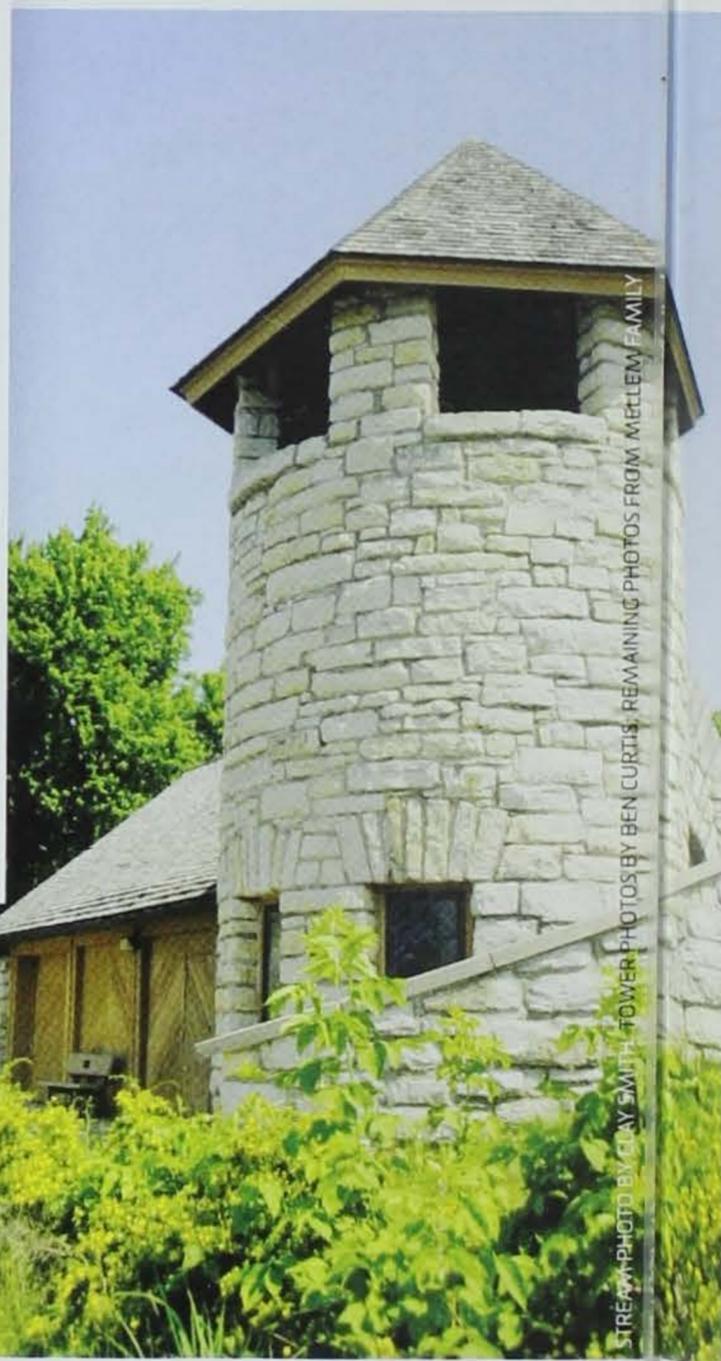
TROUT PHOTO BY BRIAN BUTTON SIGNS PHOTO BY BEN CURTIS, REMAINING PHOTOS FROM MELLEME FAMILY



PHOTO BY BEN CURTIS



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STREAMPHOTO BY CLAY SMITH. TOWER PHOTOS BY BEN CURTIS. REMAINING PHOTOS FROM MELLEEM FAMILY



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with my nightcrawler. I waited. He shook it several times, spitting it out each time. I was patient. Finally I saw him eat it. I set the hook and the fight was on. Dad had a 4-pound leader on the fly rod, and I knew I had to be careful or I would break the line and would not have another chance. The sun sparkled off the water as the line zipped back and forth from one side of the pool to the other. The trout tried every tactic it knew, and I tried to keep it from going back into the undercut in the rock. If it did, the line would be cut and my patience would be in vain. Finally the old monster tired, and I eased it into the downstream rapids. I lifted it from the water onto the bank. I was so excited, I grabbed it and took off for the road. I had no idea where my father was fishing but I had to find him. A short while later, Dad and Mom drove up. They were coming to take me back to the campground for supper whether I wanted to go or not. Years later I remembered that I left the nightcrawlers, my small tackle box and the other trout by the stream. Our next camping trip I visited that hole. The ever-shifting landscape had changed. Leaves and other debris had filled the area, and the hole was vacant. I felt a twinge of remorse, but remembered the excitement, and how delicious my patience had tasted over an open fire.

I cannot tell you how many times we have gone to the stream just to come back to the campground with fewer nightcrawlers and no trout. We have used about every bait available—nightcrawlers, salmon eggs of almost every color, miniature marshmallows, artificial baits, cheese, corn and lures. We have caught trout on almost all of it. A special “never miss” bait is . . . you think I am really going to tell?

Dad has always been the friendly type, and always visited with other campers in the campgrounds. Most people are from Iowa, but there are families from Illinois, Wisconsin, Minnesota and several other states. He would talk about the weather, crops, fishing, family, jobs, etc. Once in a while he would even invite others over for a meal. At home, Dad made breakfast almost every Saturday, so he had the skill to cook breakfast while camping. He would cook bacon, eggs, pancakes, trout and toast. Dad could cook toast over a two-burner stove without burning it—an admirable feat. A half-century and numerous camping trips later, I still can’t do it like he did. I cheat with an electrical site and plug-in a toaster.

Dad loved the outdoors so much, and he passed that on to all of his kids. He taught us to be observant rather than just looking. When he saw something worth looking at, he took the time and patience to show us and teach us what he knew. That could be anything from recognizing poison ivy to watching and waiting for a chipmunk to move so we could see it.

Backbone is a great place to teach the art of observation. Rarely over the years have we not seen

some part of nature that gave us a sense of beauty. There is scenery, watching the changes of the park and stream over the years and the adding of the new campgrounds. And then there is the wildlife—deer, raccoons, foxes, squirrels, groundhogs, chipmunks, snakes and more. We have seen such a variety of birds, identified their calls, and read about their habitat and eating habits.

Our camping continued until 1968, when we moved from Iowa to Wisconsin. For about 10 years our park visits and camping were uncommon. Siblings and I completed schools, married and went different ways. None left the upper Midwest, but none lived closer than 100 miles from the park. Many years ago my oldest sister finally declared the first week in August as family Backbone week. Some of the family could not make it, but the week was a success. My folks again were camping and fishing there. There was now a modern campsite with electricity and pressurized water that did not have to be hand pumped. There were still a few outhouses, plus modern facilities like flush toilets and showers. The park is always so nice and the staff friendly. Even after rough weather, the park is maintained and in good order. Year after year we have enjoyed our family week at Backbone, and many years there have been additional weeks and weekends as well. Sometimes just one family camped and sometimes we were there just for a picnic.

We have celebrated anniversaries and birthdays sometimes early or late, but Backbone was and is the best place to celebrate. The year I turned 50, the family offered to give me a huge party at the park. I joked “I would not show up.” But I tricked them, arriving disguised as an old, old man. No one recognized me until I was a few feet away.

Over the last years, our reunion week has shifted from August to May. May 2015 we celebrated 51 years from when we started camping at Backbone. Mom and Dad are still with us. Dad is 92 and mostly blind. In 2014, he enjoyed the park very much, but last year declined the visit. Mom, who is 89, has arthritis and difficulty getting around, but said the week in the campground this year “did her wonders.”

As we children grow older, now 66, 64, 62, 57, 53 and 48, we see the results of what my folks started so many years ago. Many of our adult children now join us and make it a part of their life, too. Our kids are starting to bring their children and even some great grandkids are learning to camp and enjoy the park beauty. The generations continue to learn to respect natural areas, and the beauty and awe of the park. What a wonderful legacy my folks are leaving.

Next year, find us camping in the second or third week of May again. Not all of the family may make it, but you can be sure those who can will be there. It will be very comforting if either of my folks are there too. They both say Backbone is one place they never tire of. 🐾



TALES FROM THE

SUN DOWN CLUB

BY DAN MAGNESON PHOTOS BY CLAY SMITH

A familiar pond takes on a surreal new world as darkness settles and an angler's senses rely more on sound and feel than eyesight.

I think the main pleasure I derive from listening to pop hits from the late 1960s through the 1980s stems from the fact each individual song provides a unique trip down memory lane. I'm a nostalgic sort anyway, and these songs take me back to the days when I was younger, conjuring up treasured memories of some very special times. The memories triggered by each song are usually comprised of happy occasions, but not always, and what seems most unusual to me is just how vividly I recall very specific people and very specific settings.

For the first time in years, I recently heard Jim Stafford's 1973 hit "Swamp Witch," and that song invariably takes me back through the years to night fishing for largemouth bass in the farm ponds of southwest Iowa.

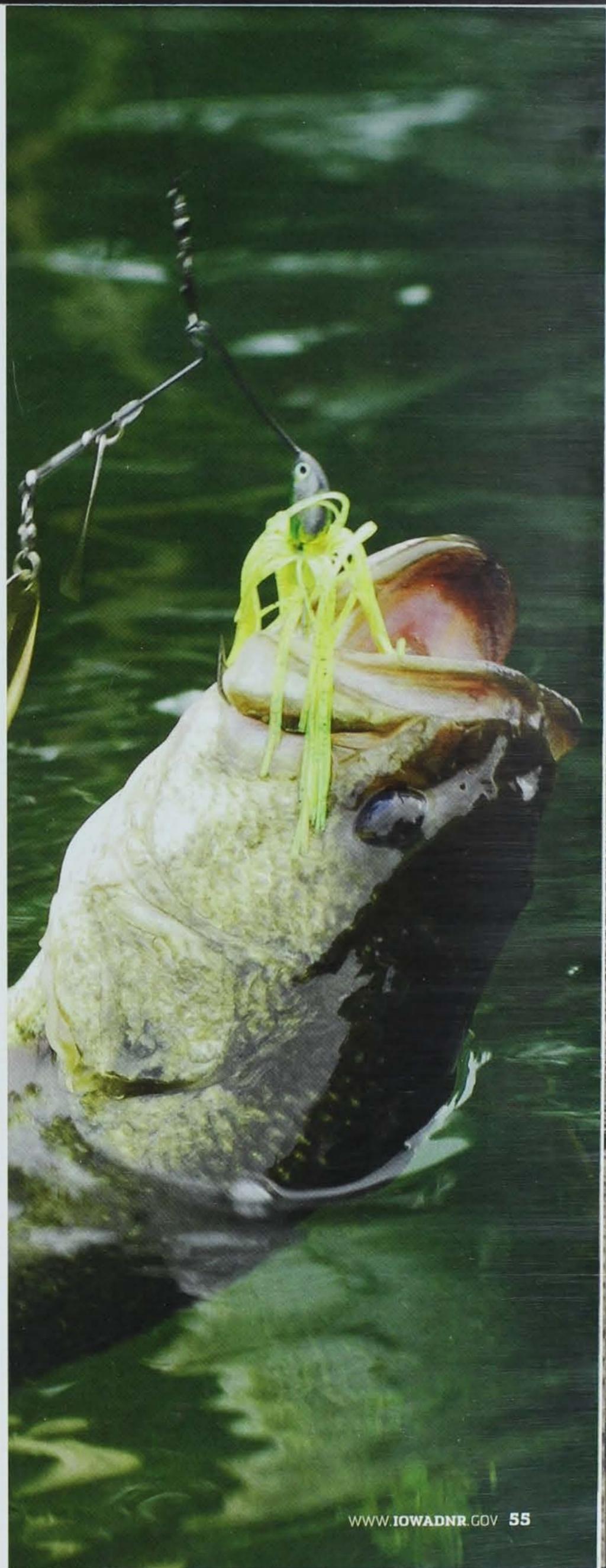
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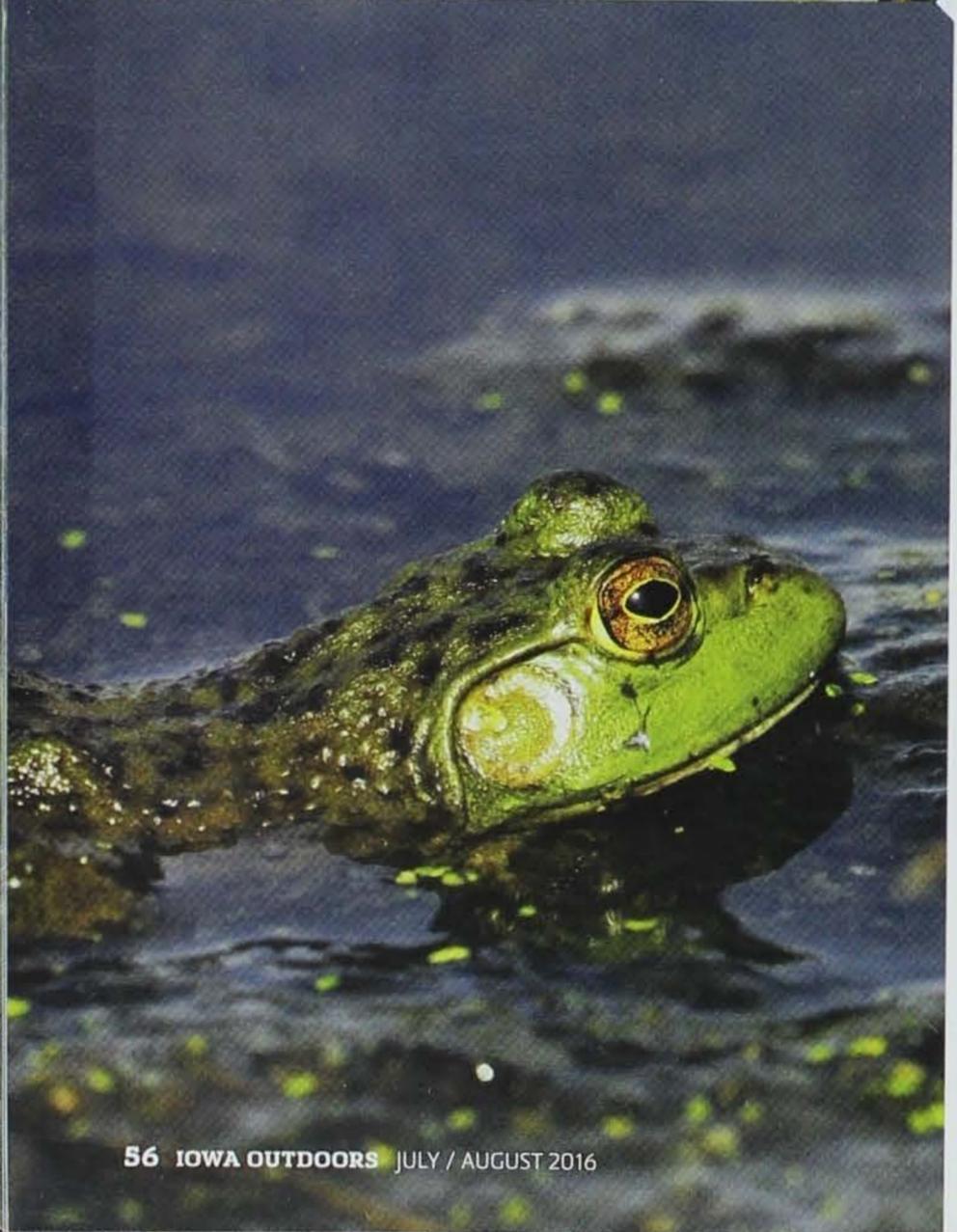
I fished these ponds for largemouth bass during the daytime and was intimately familiar with that routine: the song of meadowlarks from the surrounding fields, the crow of a rooster pheasant that somehow always reminded me of an antique car horn, the red-winged blackbirds that hovered over and scolded you, pushing your way through elbow-high grass near where the bank dropped off down to the water and how that caused those little reddish-hued grasshoppers to panic and frantically hurl themselves in every direction, with some always seeming to land back on you and others out in the water. Next you would startle those clusters of little sulphur butterflies gathered on the pudding-like mud along the water's edge, and they would rise skyward in a swirl of saffron. There would be jewelweed tucked against the bank and every once in a blue moon, maybe even some cardinal flower, whose flowers always seemed so intensely—so startlingly—red. Then some patches of duck potato and intermittent cattails and then that omnipresent, concentric band of pondweed ringing the outer perimeter before the depth dropped away too sharply. Maybe there would be water lilies, too, in certain parts of certain ponds.

I remember how I admired the alternating light and dark blotching on the wings of the twelve-spotted skimmer dragonflies and the bright colors and iridescence on some of the damselflies. I marveled at the intricate and ornate blend of black and yellow patterns on the garden spiders that hung in the zipper-like center of their circular webs, and how all of this seemed so tropical-looking. The air would be hot and heavy with humidity—so thick you almost felt you could slice it with a knife—and it would smell vaguely like mildew. Most of all, I remember the excitement when those bass struck a topwater plug, how the silver of their scales had that slight greenish cast to them, the roughness of those little teeth along the lower lip as you lifted them from the water, and that dark band that ran down along the center of their sides. I learned that the presence of good bullfrog habitat often meant good largemouth fishing just a little further out; both seemed to have a strong affinity for slack, still waters and seemed to avoid areas of flowing water.

That was the world I knew, and I lived for and loved all of it, and especially that tranquility in the evenings after work. According to some, I liked it too well. This was back during the heyday of movies like *Saturday Night Fever* and somehow I just never quite got the allure of the throngs of people and the throb of the music at the local discothèque. Oftentimes behind my back and sometimes to my face, I was called “anti-social” for my indifference, but I remained as I was.

That world changed after I read an outdoor magazine article about bass fishing at night. I knew that fishing at





night was an effective strategy for channel catfish and walleye, but didn't know it worked for largemouth bass too.

It was weird starting to fish at the time I had previously been packing up and heading home. The western horizon was painted various hues and blends of purple and red and yellow and orange and pink and the landscape took on a slightly golden look. The breeze always seemed to die down in the evening, and sound carried over long distances: Metallic clanking sounds emanated from self-feeders in the hog lot atop the neighboring hill. Cattle would be lowing off in the distance. The erratic flight and distinctive "speark" cry of a passing nighthawk sounded overhead. Across the water, a bullfrog started a deep and deliberate serenade. Bats were starting to take over where swallows were leaving off. Long shadows faded, sky turned a still-deeper shade of blue, the evening star became visible, a whip-poor-will called, the sky worked its way toward indigo and finally into blackness. At some point along the way, flashes of fireflies around you were overwhelmed by stars above.

One thing that proved refreshing was the reduction in clutter: while vast choices of possible lures and seemingly-infinite variety of colors that ruled daytime fishing could combine to give you a migraine, nighttime fishing for largemouths was amazingly spartan: always Fred Arbogast's famous Jitterbug, always black in color and always 5/8 ounce in weight. I rounded that out with a pair of needle-nosed pliers in my back pocket and a penlight clipped to my shirt pocket, and I was set for the evening.

This was a new world dominated largely by sound and to a lesser degree physical sensation, but most definitely not by sight, and you felt a lot less cocky and a lot more humble when you could hear and feel things but could not see them so well. You felt like you were a part of it and apart from it both at the same time. The air turned instantly cooler during your last steps down to the water's edge, as though you'd passed through an invisible veil. Your eyes would adjust better than you might imagine, but your vision was still vague and rudimentary. The blazing and brilliant streaks of shooting stars were automatically guaranteed to be your most stunning visions for the night, but when looking skyward, my personal favorite was always "the Teapot," which was really a part of the constellation Sagittarius, and it did indeed look like a sort of connect-the-dots teapot that always seemed to hang low in the southern sky.

But your hearing seemed to improve considerably out there, and helped to offset your far-poorer vision. Amid the gentle din of the crickets you could often discern your fishing partner casting and the plop of the lure landing in the water. Sometimes you could hear the trill of a screech owl down along the creek bottom or maybe a train whistle way off in the night.

We didn't have alligators or cottonmouths in our neck

of the woods, which was comforting when prowling pond banks in the dark. We were young then, and in keeping with being young, didn't worry about things like treble hooks flying through the darkness or breaking your leg in an unseen muskrat hole. The closest call I ever had was once mistaking the ivory-colored underside of a snapping turtle for the ivory-colored underside of a big bass.

And it was incredibly eerie out there. We never used our penlights except when we absolutely had to, and then only when kneeling down within cover of tall, dense grass. Things tumbled out of black willows and cottonwoods. June bugs? What's that moving through the grass and slipping into the water? A muskrat? A northern watersnake? That faint flutter and little blast of air against the side of your face—was that a bat or just a big moth wheeling away in the darkness? You never really knew for sure. The rustling of the grass as something moved away from the water was somehow spookiest of all; that would really make the hair stand up on the back of your neck.

But bass fishing was very good, and fish ran considerably larger at night; they seemed to drop their guard under cover of darkness. The even cadence of that soft, back-and-forth lou-duh-lou-duh-lou-duh-lou-duh of the Jitterbug working toward you through the darkness was a pleasant and even reassuring sound. Sometimes those explosive strikes happened close, so very close that you were starting to lift the lure from the water when it occurred, and coupled with the ferocity of the strike it was such that it might well splash water back onto your pants as the rod tip seemingly dipped to your toes. It was also pretty common for bass to miss the lure completely, and especially when it occurred right up against shore, you'd stand there in darkness with your heart pounding in your ears and watch moonlight wobbling in the ripples. And when you latched onto what seemed to be an exceptionally-large bass, you'd wade out in hasty excitement to disentangle your fish from the weeds, and you would feel that cool water seeping through your tennis shoes, and then smell that rotten egg odor wafting up from the bottom of the pond.

When we were all done, I can still recall how impossibly bright that greenish-whitish glow from the dashboard lights seemed to be, and sitting inside the car with your own headlights hurting your eyes and causing you to squint. It was a somewhat-surreal world out there, one that left you with a deep feeling that seemed simultaneously—and incongruently—between having attended a Christmas evening church service and having spent Halloween night in a cemetery, a hybridized feeling that at the same time was both holy and haunted.

Maybe because we were tired, or maybe because of something much more, we always seemed to ride back home in silence. 🐼



Dan Magneson grew up in Red Oak, Shenandoah and Clarinda. He is assistant hatchery manager at Quilcene National Fish Hatchery on Washington State's Olympic Peninsula and has worked for the U.S. Fish & Wildlife Service since 1989.

BEE-UTIFUL TIPS TO ATTRACT POLLINATORS TO YOUR YARD



One out of every three bites of food we eat relies on pollinators. Unfortunately, bees, butterflies and moths, bats, birds and beetles are facing unprecedented population crashes due to habitat loss, pesticides, disease and parasites.

TIPS TO HELP POLLINATORS IN YOUR BACKYARD:

Diversify

Take out the yew hedge that flanks the front yard and replace it with a variety of flowering shrubs and native plants, varying by species, height and blooming time. Grouping at least eight different species together attracts a significantly greater number and type of species. Remember, pollinators like flowers.

Go Native

Native perennials are adapted to local soil, climate and pest conditions, making them hardier than cultivated varieties. Their smaller upright blooms often offer more nectar than hybrid varieties—allowing pollinators to spend less energy as they feed. Natives help cut down need for fertilizer and supplemental watering.

Four Seasons of Beauty

Choose a sunny location to plant nectar-producing plants that bloom from early spring (wild lupine, spiderwort) to mid-summer (bee balm or *Monarda*, purple prairie clover, purple coneflower) through late fall (*Liatris* or blazing star, New England aster, goldenrod). Add a few native warm season grasses like big bluestem for overwintering habitat and weed resistance. Provide host plants required for insect larvae, for example, native milkweeds for



monarch butterflies, pussytoes for painted lady butterflies and golden alexanders for black swallowtails.

Be Untidy

Much as it goes against many gardeners' instincts, nature likes untidy landscapes. Bare areas with no mulch provide nesting spots for native solitary bees—nests may look like small holes in the dirt. Small brush piles provide nest materials for birds and bees, and, if undisturbed, overwintering shelters for many insects. Cut down on chemicals. Keep pesticides away from pollinator habitat, as they are designed to kill insects.

Get more ideas at [pinterest.com/iowadnr](https://www.pinterest.com/iowadnr)

Native, Easy to Care For Yard Plants For Pollinators

Native plants are resilient and pest resistant, take less watering and care and will reward you with an April through October blooming season. With some 250 native prairie plants (translate prairie as “sun-loving”) to choose from, which plants are the must-haves for the average yard or garden?

It's hard to choose. But the following picks include early spring to late fall blooms, a monarch necessity (the milkweed) and a complementary yellow-purple color scheme. Keep in mind the benefits to wildlife, including pollinators, as well as holding soil and improving water quality.

1. **GOLDEN ALEXANDER**, *Zizia aurea*, is a great choice for an early bloomer. Growing 1 to 3 feet tall, its yellow blooms resemble a small Queen Anne's lace. Blooms April to June.

2. Three deep purple petals top **SPIDERWORT**, *Tradescantia ohioensis*. Don't be fooled by the name, spiderwort's delicate flowers are attractive at the front of the garden. Blooms April to July, growing 1 to 2 feet tall.

3. Add a **MILKWEED**. Choose yellow-orange butterfly milkweed, *Asclepias tuberosa*, for most garden moisture conditions. Pink to



Get Involved

Numerous organizations are working to protect pollinators and help fend off potential extinction of the monarch butterfly. Learn more and get involved by visiting:

THE XERCES SOCIETY provides resources, outlets for citizen science, education, events and conservation for invertebrates. Learn more at xerces.org.

THE IOWA MONARCH CONSERVATION CONSORTIUM'S mission is to enhance monarch butterfly reproduction and survival in Iowa through collaborative and coordinated efforts of farmers, citizens, conservation organizations, state agencies, companies and Iowa State University. Find events, activities and learn more at <http://monarch.ent.iastate.edu/>

rose-colored swamp milkweed, *A. incarnate*, is best for poorly drained soils. Blooms attract many butterfly species. Plant at the back of the garden as this essential food for monarch caterpillars may get a little ragged as the leaves are consumed. Blooms June to August. *A. tuberosa* grows 2 to 3 feet tall, *A. incarnate* reaches 3 to 5 feet.

4. Celebrate the Fourth of July with a bouquet of **WILD BERGAMOT**, *Monarda fistulosa*. Each lavender bloom resembles a cascade of

Supporting Populations

(*Asclepias* species) monarch butterfly support a diversity of abundant nectar sources in gardens, habitat restoration plantings and yards habitat for monarchs and source for other beneficial sources of native plugs and perennials see Xerces.org.

PANTRY

Waterset, IA 50273
jan@allendanseed.com
allendanseed.com/
Swamp, purple, prairie, butterfly whorled milkweeds

SEEDS

Lynville, IA 50153
hokseynativeseeds.com
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butterfly, swamp milkweed

ht@acegroup.cc
1/

LOSENBAUGH'S PRAIRIE SEED FARMS

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11009 542nd Street

Lucas, IA 50151

(641) 766-6790 • info@PrairieSeedFarms.com

<http://www.prairiseedfarms.com/>

AVAILABLE SPECIES: butterfly milkweed

SEED SAVERS EXCHANGE

3074 N Winn Rd, Decorah, IA 52101

(563) 382-5990 • <http://www.seedsavers.org>

AVAILABLE SPECIES:

Butterfly and swamp milkweed

THE PRAIRIE FLOWER

1760 290th St, Spencer, IA 51301

(712) 262-5864 • prairieflower@evertek.net

theprairieflower.com

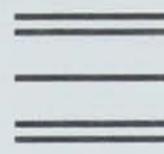
AVAILABLE SPECIES:

Swamp and butterfly milkweed

Pastors For Pollinators

A REAP community education mini-grant is helping area houses of worship and religious organizations install native pollinator gardens. The grant to the Polk County Conservation Board provides garden designs and native plants, along with education of congregations about native pollinators and encourages plantings at home.

The leveraged funds are designed to help projects with measurable results that engage Iowans in natural resources to benefit our environment and citizens. Grant deadlines are May 15 and Nov. 1. Learn more and apply for your own grant at iowadnr.gov/reap.



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IOWA OUTDOORS

PO BOX 37832
BOONE IA 50037-0832



4 feet tall, blooming August to October. The asters have a shorter season, blooming September to October.

AVAILABLE SPECIES:

Swamp, purple prairie, butterfly whorled and common milkweeds



BY KAREN GRIMES

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monarch butterflies painted lady butterfly alexanders for black

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Much as it goes against instincts, nature likes Bare areas with no m spots for native solitar may look like small h Small brush piles prov for birds and bees, an overwintering shelter Cut down on chemica away from pollinator l designed to kill insect

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yellow-orange butterfly milkweed, *Asclepias tuberosa*, for most garden moisture conditions. Pink to

rose-colored swamp milkweed, *A. incarnate*, is best for poorly drained soils. Blooms attract many butterfly species. Plant at the back of the garden as this essential food for monarch caterpillars may get a little ragged as the leaves are consumed. Blooms June to August. *A. tuberosa* grows 2 to 3 feet tall, *A. incarnate* reaches 3 to 5 feet.

4. Celebrate the Fourth of July with a bouquet of **WILD BERGAMOT**, *Monarda fistulosa*. Each lavender bloom resembles a cascade of fireworks. Also called horsemint, *Monarda*, like other mints, is square-stemmed and has a pleasing fragrance. Blooms July to August, standing 1 to 3 feet tall.

5. **PICK GRAY-HEADED OR YELLOW CONEFLOWER**, *Ratibida pinnata*, or **BLACK-EYED SUSAN**, *Rudbeckia hirta*, for splashes of brilliant summer and fall color. The coneflower head has an anise or licorice fragrance when mature. Both are easy to establish. Coneflowers are taller, 3 to 4 feet, and bloom June through September. Black-eyed Susan stands 1 to 2 feet tall and blooms longer, from June through October.

6. Pair **BOTTLE GENTIAN**, *Gentiana andrewsii*, or **GREAT BLUE LOBELIA**, *Lobelia siphilitica*, with **BLACK-EYED SUSANS** or **YELLOW CONEFLOWERS**. The brilliant deep purple gentian and blue lobelias contrast nicely with the yellows for stunning fall bouquets and garden displays. Lobelia thrives in wetter soils, stands 2 to 3 feet tall and blooms August to September. Place gentian at the front as it stands only 1 to 2 feet tall, blooming August to October.

7. Finally, choose between **NEW ENGLAND ASTER**, *Aster novae-angliae*, a purply-pink 2- to 4-foot tall aster, and **STIFF GOLDENROD**, *Solidago rigida*, for long-lasting fall color. Asters attract moths and butterflies. Both make great cut flowers. Stiff goldenrod stands 2 to 4 feet tall, blooming August to October. The asters have a shorter season, blooming September to October.

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Help Struggling Monarch Populations with Six Native Milkweeds

Native milkweeds (*Asclepias* species) are essential for monarch butterfly caterpillars and support a diversity of pollinators with their abundant nectar. Including milkweeds in gardens, landscaping, wildlife habitat restoration projects, roadside plantings and yards provides breeding habitat for monarchs and a valuable nectar source for butterflies, bees and other beneficial insects. Here are Iowa sources of native milkweed seed and plugs and perennials for pollinators—source Xerces.org.

ALLENDAN SEED COMPANY

1966 175th Lane • Winterset, IA 50273
(515) 462-1241 • allendan@allendanseed.com
<http://www.allendanseed.com/>

AVAILABLE SPECIES: swamp, purple, prairie, common, butterfly and whorled milkweeds

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<http://hokseynativeseeds.com/>

AVAILABLE SPECIES: butterfly, swamp and whorled milkweed

ION EXCHANGE INC.

(800) 291-2143 • hbright@acegroup.cc
<http://ionxchange.com/>

AVAILABLE SPECIES: Swamp, purple prairie, butterfly whorled and common milkweeds

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AVAILABLE SPECIES: butterfly milkweed

SEED SAVERS EXCHANGE

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AVAILABLE SPECIES: Butterfly and swamp milkweed

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1760 290th St, Spencer, IA 51301
(712) 262-5864 • prairieflower@evertek.net
theprairieflower.com
AVAILABLE SPECIES: Swamp and butterfly milkweed

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Save Money, Reduce Waste—Rethink your Drink

A sales-growth tsunami for bottled water takes its toll on consumer wallets, landfills and the landscape—not to mention the crude oil used to produce plastic and truck the water. On average, Americans spend about \$5 a week on bottled water, so switching to a reusable water container filled with quality tap water will save \$260 per year. And taking this plunge lessens the impact of those 42 billion plastic bottles generated each year.

Ironically, more than half of all bottled water comes from municipal taps, giving buyers a good soaking, as ounce for ounce, bottled water can cost up to \$9 per gallon versus a fraction of one penny for tap.

But a new wave of consumers are turning the tide against bottled water as healthy and less expensive tap water flows without the same environmental impacts and costs. Reusable water bottles are a money-saving green product to keep hydrated while on the go. The best choices for durability are stainless steel sports and hiking models.

Shipping bottled water hundreds, even thousands of miles is an energy-thirsty undertaking that emits carbon dioxide. And disposable plastic bottles are a petroleum product that often ends up in landfills or as litter. About 18 million barrels of oil were needed in 2005 to replace billions of containers that were landfilled, according to The Container Recycling

Institute.

For those concerned about product safety, bottled water is generally no better or worse than municipal tap water. “Both are monitored and have to meet standards and both are safe if they meet the standards,” says the DNR’s Corey McCoid, a supervisor with the water supply section, who notes the popular misconception

that bottled water is safer than municipal tap water.

He suggests homeowners can simply add an inexpensive filter to their home faucets if they prefer their water without a hint of chlorine. Filters are at most hardware and home improvement centers.

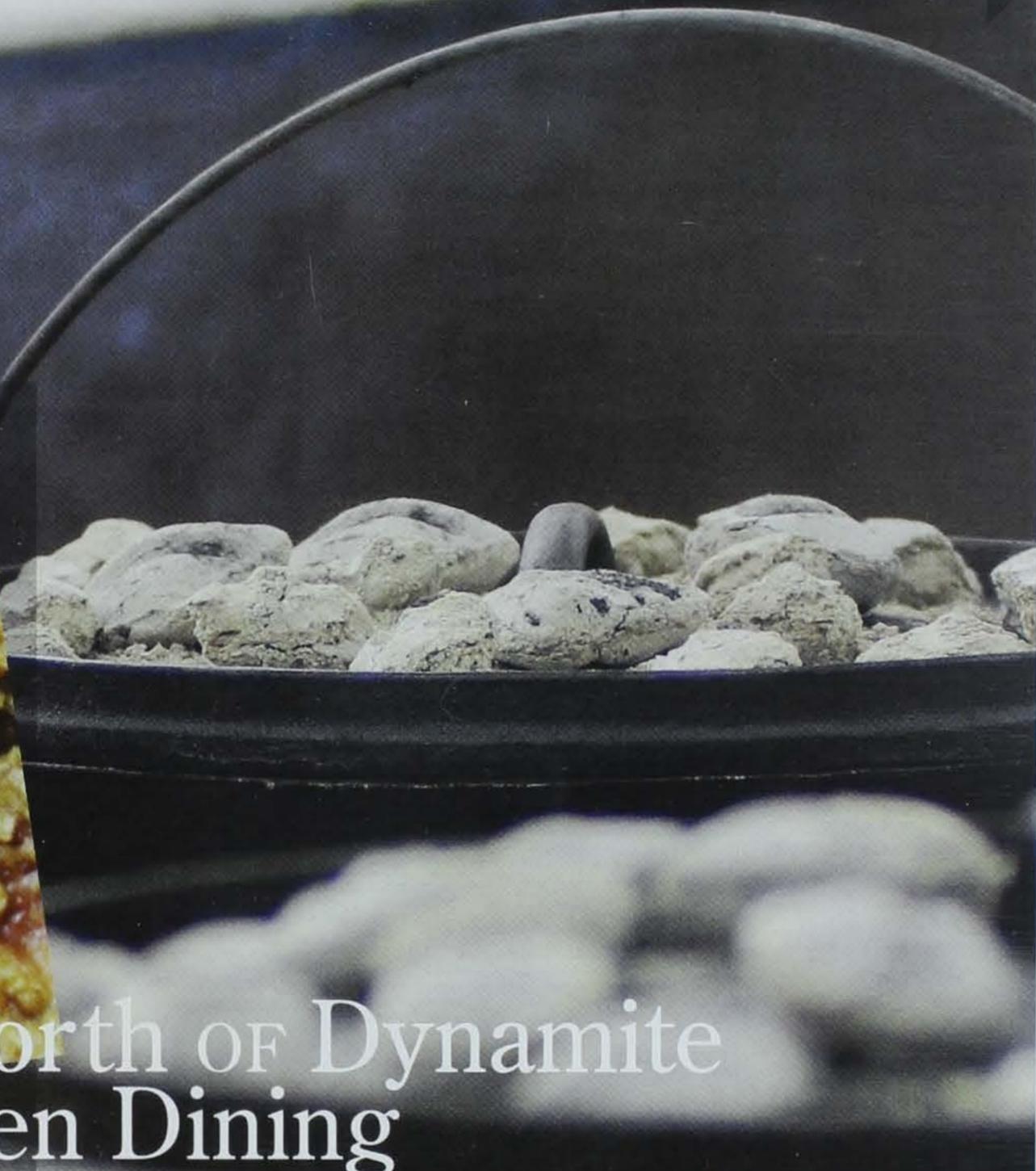
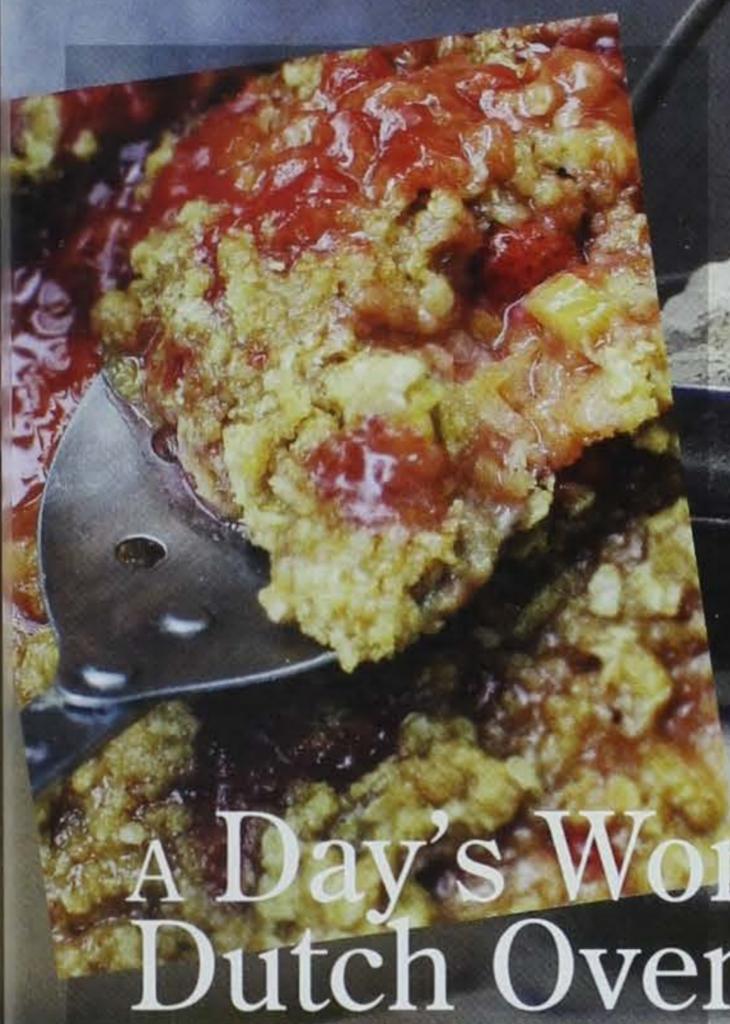
Tale of the Tap

- A gallon of tap water costs \$0.002 cents per gallon. Bottled water can cost up to \$9 for the same amount—several thousand times more expensive.
- In the U.S., only 27 percent of all plastic bottles are recycled.
- Nearly half of all bottled water comes from public water systems.
- More than 90 percent of Iowans rely on public water systems for drinking water.
- One gallon of bottled water can cost as much as 1,000 gallons of tap water.
- The Iowa DNR oversees about 1,100 community drinking water facilities which must test regularly for nitrate and bacteria, monitor up to 80 contaminants, notify customers of unsafe water, have certified operators and fix problems noted during inspections.

Free Testing For Private Well Users

Unlike municipal water supplies, private wells are not monitored by the state and users should have their well water quality tested. Health organizations recommend testing well water at least annually.

Fortunately, private well owners and users in most Iowa counties can take advantage of free water testing through the “Grants to Counties Well Program” managed by The Iowa Department of Public Health and funded by the DNR. This service will help you understand the safety of your well water. Contact your county environmental health department to arrange your free water test or learn more about well water issues and safety at iowadnr.gov/privatewells.



A Day's Worth of Dynamite Dutch Oven Dining

Stroll through a campground at meal time and you'll see the gamut, from plates heaped with lunch meat sandwiches, potato chips and store-bought pasta salad, to others serving up hearty, intricate meals. And of course, everything in between.

Enjoy a day's menu of good food and camaraderie of the campfire ring with these meal-time suggestions. While the recipes may seem extensive, it's mostly toss in the ingredients, heat and eat. These easy recipes can be pre-prepped at home to save even more time.

The star of this day's meal plan is smoked trout. No need for a big smoker grill or elaborate supplies. We

are doing this the easy way—over wood planks. It's quick and inexpensive, and has long been favored as a way to cook fish and other meats.

The origin of cooking on wood planks is arguable between those who believe it is of Native American descent, and a few who believe it is a Scandinavian technique brought to America by early travelers. There is no argument tribes of the Pacific Northwest used the technique extensively, taking advantage of plentiful salmon, a centerpiece of ritual ceremonies and feasts. Not only did the wood serve as a seasoning for fish and other meats, it also

preserved fish for the long winter months ahead caught during large salmon runs.

The woody, smoky flavor of a fire lends a unique flavor profile to meats and seafood. When time is of the essence and the smoker is too bulky to make it to the campout or barbecue, and your creel basket or cooler is brimming with fresh Iowa trout, pheasant or wild asparagus, do what the Pacific Northwesterners did and cook them over wood planks.

Wood planks can be purchased at grocery stores, home improvement centers, hardware stores, barbecue centers and online.

Wild Cuisine CAMPSIDE

LUMBERJACK BREAKFAST

- 12 eggs
- 1 pound sausage or bacon
- 1 medium onion, chopped fine
- 1-2 peppers, chef's choice depending on spice level desired
- 16-ounce carton mushrooms, sliced
- 1 bag frozen hash browns
- 8-ounce bag shredded cheese

In Dutch oven, brown sausage or bacon and drain fat. Add onion, peppers and mushrooms and sauté until crisp tender. Add potatoes and cook until lightly browned. In separate bowl, mix eggs and a little milk until well blended and pour on top of mixture. Place six to nine coals underneath Dutch oven and 12 to 18 on lid. Bake covered until eggs are set, about 30 minutes.

ZESTY SLOPPY DOES

- 1 to 1.5 pounds ground venison
- 1/2 chopped onion
- 1/2 chopped pepper
- 10-ounce can tomato soup
- 8-ounce can thick and zesty tomato sauce
- 1/2 an 8-ounce can tomato sauce
- 1/2 cup packed brown sugar
- 2 tablespoons ketchup
- 3 tablespoons Worcestershire sauce
- 1.5 teaspoons prepared mustard
- 1.5 teaspoons ground mustard
- 1/2 teaspoon chili powder
- 1/2 teaspoon garlic salt
- 1 can crescent rolls

In a Dutch oven over a full spread of coals, brown venison and onion. Add green pepper. Cook five minutes and drain grease. Add the next 10 ingredients. Place nine coals on

the bottom and 10 to 12 on top and allow to simmer 10 minutes. Spread crescent rolls on top of mixture. Replace lid and bake 15 to 20 minutes until biscuits are brown.

BAKED BEANS

- 4 to 5 slices thick cut bacon, diced
- 4 small cans pork and beans
- 2 tablespoons butter
- 1/2 cup ketchup
- 1/2 cup brown sugar
- 1/2 cup sugar
- Pinch of ginger
- Dash of liquid smoke

In Dutch oven over 300-degree heat, brown bacon. Drain. Add remaining ingredients and stir well. Bake over low heat for 1.5 hours until thickened.

DUTCH OVEN TEMPERATURE GUIDE

- **250 to 300 (low)**
8 to 10 coals on top; 6 to 8 under
- **300 to 350 (medium)**
10 to 12 on top; 7 to 9 under
- **350 to 400 (hot)**
12 to 14 on top; 8 to 10 under
- **400 to 450 (very hot)**
14 to 16 on top; 9 to 12 under



SMOKED TROUT

Start with clean, untreated cedar, about an inch or less thick. Soak in liquid at least an hour; can use water, fruit juice or a combination. Lightly brush cooking side of plank with olive oil. For a more intense smoke flavor, preheat planks on grill until they start to smoke.

Place meat on plank. Although the plank should be placed over direct heat to allow smoldering, the plank serves as a heat barrier, so cooking times may increase by as much as 50 percent. Check for doneness after 15 to 20 minutes.

Keep a spray bottle handy to douse flare-ups.

Season trout inside and out with olive oil, salt, pepper and your favorite fish seasoning. Stuff cavity

with lemon slices and fresh herbs (rosemary, dill, etc). Baste with butter, citrus juice or marinade as the meat cooks.

CLEANUP

Remove plank from grill and place in a container of water. Rinse with soap and water and let dry. Store in a clean, dry place.

Planks can be reused two to three times, depending on original thickness and length of cooking just as long as there is wood left to use.

Crumble charred planks over coals to use as smoking chips.

DUTCH OVEN COBBLER

1 stick butter or margarine
1 box yellow or white cake mix
2 teaspoons cinnamon

1 large can fruit in heavy syrup or juice,
or other fruit as desired

Dump fruit and liquid into Dutch oven. Spread cake mix over fruit; do not mix. Sprinkle top with cinnamon. Slice pats of butter and scatter on top. Bake using four coals on bottom and 11 on top for 30 to 45 minutes, or until top is browned. If you are lucky enough to stumble on a wild raspberry patch or other wild fruit at the park, use fresh fruit with a little sugar instead. Can also use favorite crisp topping.



Want more Dutch oven recipes?

[pinterest.com/iowadnr/dutch-oven-recipes](https://www.pinterest.com/iowadnr/dutch-oven-recipes)



BY ERIKA BILLERBECK



A NEED TO KNOW BASIS

I remember sitting in class during my law enforcement academy training and asking the question students of all disciplines have asked for ages. "When will I ever need to know this?" As a recruit sponsored by the Wisconsin DNR at the time, I didn't think I would ever need to know that two short blasts (or was it one long one?) of my traffic whistle meant "Stop!" I had a hard time imagining when I would need to know about burglary tools, fingerprint dusting or gang signs. I doubted a fish and game officer would ever investigate a case of human trafficking or arrest someone for domestic assault.

In the end, it's a good thing I dutifully paid attention in class (you can take a student out of the classroom, but you can't take a lifetime of being the principal's daughter out of a student). Little did I know at the time of my academy training that someday I would be assigned to a territory containing the Hawkeye Wildlife Area. Though I still have my doubts about needing to know that one long blast (or is it two short ones?) on my traffic whistle means "stop," I actually *can* envision a time when I may need to know about burglary tools, fingerprint dusting, gang signs and human trafficking. And thanks to a group of campers last summer I've already checked the box on domestic assault.

One muggy evening, Alex, a seasonal patrol officer, and I were patrolling Hawkeye hoping to check some late night anglers when we noticed a small tent set up in one of the parking lots. As I pulled into the lot, intending to remind the campers to pick up after themselves, my headlights swept across three people standing in the middle of the parking lot. One man, the larger of the two whom I will call "Jerry," was bending over and picking

something up off the ground. A woman, "Cindy," was standing near Jerry, while "Todd," the thinner of the two men, was standing near the tent.

I parked and stepped out of my truck.

"How's it going tonight?" I asked.

"It was just a little argument," Todd answered.

It doesn't take much police training to know that Todd's answer was a little odd. Most people say, "Fine," when asked how things are going. Alex and I set to work, separating the three so we could try to ascertain what exactly Todd meant by "a little argument."

I talked with Jerry first. According to Jerry, he and his girlfriend Cindy decided to go camping. For some reason, Jerry thought it would be a good idea to include his friend Todd in the camping trip. Apparently Cindy disapproved of the idea. Once they arrived at Hawkeye and the men set up the tent, Cindy suddenly decided she would rather not camp after all and told Jerry she wanted to go home. "A little argument" ensued.

I questioned Jerry at length about whether or not their "little argument" had gotten physical and he denied that it had. Cindy told me the same thing. She just didn't want Todd to be camping with them and didn't like the thought of spending the night inside a roasting hot tent with two guys, so she told Jerry she wanted to leave.

The whole story sounded strange to me. I couldn't say that I blamed Cindy all that much. Why would she want to spend a night camping in the parking lot of a wildlife area in the boiling heat with her boyfriend and his buddy? Sounded less than romantic to me, unless, there were drugs and/or alcohol involved. I asked to look inside the tent hoping to

find evidence of drugs. Jerry opened the tent door. Inside there were a couple blankets and two coolers. The coolers contained frozen pork chops, a 2 liter bottle of Cherry Coke, a bottle of rum and a partially full Hardee's cup. Well, at least I got the alcohol part right.

Cindy gave me permission to search her car next. When I opened the car door and could smell the distinctly skunky odor of weed, I knew I had gotten the drugs part right as well. Sure enough, tucked inside Cindy's purse I found a marijuana pipe and a small bag of pot.

After issuing citations, seizing evidence and reminding them to take all their stuff with them when they left, Alex and I continued patrolling. It wasn't until we returned to the parking lot later that night that we realized we weren't quite done dealing with Jerry and Cindy. Instead of picking up after themselves as instructed, they decided to leave the bottle of Coke and the Hardee's cup—litter. I hate litter.

The next day, Alex and I set out for Jerry and Cindy's apartment with the intention of issuing a littering citation to Jerry. Jerry stepped out of the dark apartment into the sunlight. As I explained the littering problem to Jerry, Alex stood off to the side and watched.

From Alex's vantage point he had a very good view of something I had missed in the dark the previous night. Running the length of Jerry's face from his temple, along his jaw line, and onto his neck was a long, deep and jagged cut.

And so began my investigation of an academy topic I thought I would go through my career without needing to know—the mandatory arrest of a person due to a domestic assault.

I interviewed Jerry who told us Cindy caused the cut when they were having their "little argument." At the moment we pulled into the parking lot the previous night, Jerry had been bending over to pick up his glasses that Cindy had knocked off his face. He admitted it wasn't the first time she had injured him, and they had broken up before due to violence in their relationship. He begged me not to arrest her. It was "no big deal."

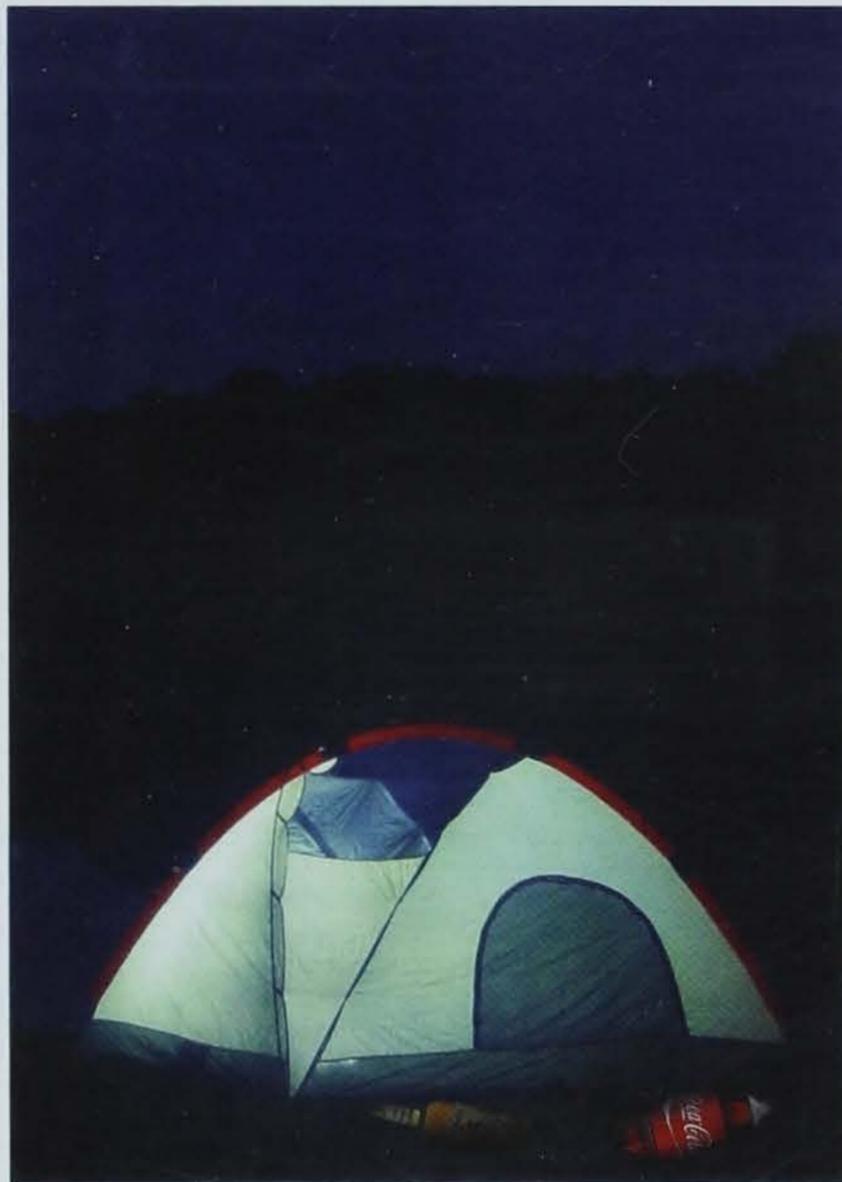
Cindy told me they never "physically fight." Sure, every once in a while they "tussle," sometimes they "wrestle," but again, it was "no big deal" because they were in love.

For half an hour the couple threw around different words. It was all just semantics. Whether the couple calls what they do "tussling, wrestling, struggling, arguing or skirmishing," when there is physical evidence of a domestic assault, the officer is left with no discretion. It is a mandatory arrest. Based on my investigation, Cindy was the primary aggressor, so she is the one who went to jail that afternoon.

If I have learned anything from my job it is to expect the unexpected. A cliché lesson? Probably. But at least it reminds me to always pay

attention. And if my memory of some training is a little foggy it might be a good idea to re-learn the material so it is fresh for that one moment when I need to know the answer. And by the way, just so you

know—the answer is ONE LONG BLAST. It takes one long blast of the whistle to stop traffic. 🐘



BY MARIAH GRIFFITH

Wild Bergamot *Monarda fistulosa*

PRETTY IN PURPLE

Wild bergamot grows in foothills and plains across Iowa and most of North America. A native wildflower of the mint family, it's often called horsemint or bee-balm. Like most mints, the stems are distinctly square, its leaves grow opposite one another and the flowers are small but fragrant. Flowers range from white to a light purple, and grow in tight clusters resembling a single, large blossom. Blooming starts in July and may continue through September. The flowers and leaves are sometimes steeped for tea.

RHIZOME REACHER

Wild bergamot typically grows in clumps or colonies because it spreads not only by seeds, but by special stems called rhizomes. These primary stems grow horizontally underground, with secondary stems that extend upward. Thus, wild bergamot can cover an area quickly, making it a good container plant for gardening. It fills up vertical space too—the stems can be up to 5 feet tall and covered in large flowers, which attract pollinators like butterflies, hummingbirds and bees. Bergamot grows best in damp, alkaline soils. The leaves can be used as a substitute for oregano and go nicely with pork dishes, while the flowers are a bright garnish to salads and drinks.

MEDICINAL MARVEL

This plant was widely used by Native Americans including the Menominee, Ojibwe, Winnebago and Blackfoot to treat a score of maladies. When mashed into a poultice, it was used to treat mild skin infections or wounds, including acne. As a tea, it helped alleviate mouth and throat infections from gingivitis and tooth decay. The plant's antiseptic properties are presumably due to its content of thymol, the same active ingredient in commercial mouthwashes. The leaves of wild bergamot were also eaten with boiled meat to prevent flatulence, and a paste of the boiled herb was used as hair pomade.

DÉJÀ VU FOR YOUR NOSE

As a tea or fresh flower, wild bergamot smells remarkably similar to Earl Grey tea, which uses the rind or oil of a similar-smelling, but unrelated, citrus plant called the bergamot orange. Bergamot essential oil is made from bergamot orange, not wild bergamot herb.

In wild bergamot, the aroma emanates from both the flowers and leaves and can last months after the foliage has died. Some people describe the smell like lavender, while others say it's more like an orange. Chemically, the aroma includes compounds that give the distinctive scents of thyme, oregano, pine, nutmeg, cardamom and an essential oil shared with hemp, rosemary, cloves and hops.

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