

# MISSOURI. Conservationist

VOLUME 76, ISSUE 4, APRIL 2015 • SERVING NATURE & YOU



## [NOTE TO OUR READERS]

# You Give Us Something To Look Forward To

It is late February as I write this, and snowy weather is on the way. The bird feeders are alive with northern cardinals, tufted titmice, purple finches, and downy woodpeckers. In the field across the road, a flock

of 20 or so turkeys are feeding on grain strewn by the neighbors under a copse of eastern red trees.

The forecast makes it hard to believe that spring is around the corner, yet trout season is now open at Missouri's four managed parks. This is sure evidence spring will soon be at our doorstep! I have been fortunate to attend a few trout openers during my career, and they are always an exciting time for young and old alike as they catch their first fish of the day.

The ability to watch wildlife and enjoy the outdoors in Missouri doesn't occur by happenstance. A lot of time and effort is invested by many to ensure healthy and abundant resources. Much of the credit goes to Missouri citizens, especially those private landowners who are stewards of more than 90 percent of the forest, fish, and wildlife resources in our great state.

This past week, I had the opportunity to meet with the Agricultural Leaders of Tomorrow (ALOT). This group of bright young men and women represent every aspect of the agriculture industry in Missouri. They included landowners who till the land to produce corn and soybeans, livestock producers, and participants in important agribusinesses. Others were bankers, attorneys, journalists, and public servants from other state agencies. All have a vital role in Missouri's agricultural landscape and, in their own way, influence how private land is managed to provide life-sustaining products for humans while maintaining important habitats for forest, fish, and wildlife. We engaged in lively discussions on a variety of topics including habitat projects for rare species and river habitats, the value of Missouri's citizen-created system of conservation governance, authority and regulatory responsibility for white-tailed deer, and the use of genetically altered and insecticide-treated seed. As you might expect, these robust discussions included many differing viewpoints.

It is my opinion that these types of interactions bode well for Missouri and its citizens. In order to ensure that forest, fish, wildlife, soil, and water resources are sustained for future generations of Missourians, it is critically important that individuals from all walks of life engage in these discussions. The



**A father passes on the tradition of spring turkey hunting to his daughter.**

**Missouri has excellent hunting and fishing opportunities, thanks to citizen support.**

Department is currently seeking insights and opinions of citizens regarding Missouri's white-tailed deer herd and potential future management strategies to safeguard this important cultural heritage and economic resource.

As we together contemplate the state of Missouri's natural resources and, in particular, forest, fish, and wildlife resources, remember that a part of our generation's legacy will be the state of the resources we pass on to the next Missourians. These important resources will continue to be abundant into the future as long as the partnership between private landowners, sportsmen, and the state remains strong. A strong partnership must be built upon the foundation of continual open and honest dialog about important conservation issues facing Missouri and its citizens. Continued citizen vigilance will enable Missourians of today and tomorrow to experience the many exciting spring adventures that we eagerly await. Turkey and morel hunting and crappie fishing are just around the corner, enjoy your spring.

Tom Draper, deputy director



## FEATURES

### 10 **Your Ideas Count!**

by Michele Baumer

The latest Conservation Opinion Survey results help us understand and meet your needs for forest, fish, and wildlife management

**Special  
Insert**

### **Serving Nature and You**

Conservation makes Missouri a great place to live, work, fish, hunt, view wildlife, and be outdoors

### 17 **Keeping Tabs on Turkey Numbers**

by Joanie Higham Straub, photographs by David Stonner

Five-year study is yielding data that will shape Missouri's wild turkey management

### 22 **Birds Are Awe-some**

by Sarah Kendrick

A beginner's guide to birding

Cover: A great crested flycatcher perches on a box elder twig near Troy, Missouri. Photograph by Noppadol Paothong. For a primer in birding, turn to Page 22.

📷 600mm lens +1.4 teleconverter  
f/5.6 • 1/400 sec • ISO 400

## DEPARTMENTS

- 2 **Letters**
- 4 **Hunting & Fishing Calendar**
- 4 **Agent Notes**
- 5 **Ask MDC**
- 6 **News & Events**
- 30 **Plants & Animals**
- 32 **Places to Go**
- 33 **Discover Nature**

# WHAT IS IT?

Our photographers have been busy exploring the intricacies of outdoor Missouri. See if you can guess this month's natural wonder. The answer is revealed on Page 8.



NOPPADOL PAOTHONG

## LETTERS

Submissions reflect readers' opinions and may be edited for length and clarity.

### LONGTIME READER

I have had the pleasure of reading the *Missouri Conservationist* for a long time. I remember seeing it for the first time at my grandparents' home. Then, just a few years ago, I was at my brother's home and they had a subscription to *Xplor*. I now receive that as well. Both are so wonderful. Pictures are fabulous, information always helpful.

*Cynthia James, Wright City*

### DOWNLOAD YOUR ISSUE

I like being able to download the *Conservationist* and was wondering if you were going to offer *Xplor* as a download also.

*Tom Tobey John, via Facebook*

*Conservation Department: You can read both magazines online or download them as PDFs. Visit the Xplor magazine ar-*

*chive at [xplor.mdc.mo.gov/xplor/stories/xplor-magazine](http://xplor.mdc.mo.gov/xplor/stories/xplor-magazine). There is a download link for each issue. The current issue of the *Conservationist* is available online at [mdc.mo.gov/conmag](http://mdc.mo.gov/conmag), and other recent copies are available under "Archive."*

### RECIPROCAL FISHING

If I have a Missouri fishing license, can I fish on the banks of the Mississippi River on the Illinois side, or do I need an out-of-state Illinois license?

*Wat Wat, via Facebook*

*Conservation Department: The Reciprocal Fishing Privileges (Page 21) of the 2015 Summary of Missouri Fishing Regulations says that if you are properly licensed or exempted in Missouri, you may fish from Illinois banks along the*

*Mississippi River. However, you must abide by the more restrictive of the two state's regulations. Visit [mdc.mo.gov/node/6108](http://mdc.mo.gov/node/6108) for complete details.*

### KEEPING CURRENT

I really liked the article about eradicating wild hogs in the February issue. My family and I have land in Stoddard County and are avid hunters. We know that the hogs are close, and we like to know how to deal with them once they get to our area.

I like it when I open the magazine to see workshops that are coming up and the current things that are going on, whether they be good or bad. I am 13 years old, and I have been to several workshops, and they have all been helpful and fun.

I think that your magazine is a great way to let people know what to look out for, and how to take care of many problems. I also think your magazine is very interesting and entertaining.

*Clayson R. Anderson, Sikeston*

### MISSOURI TO MEXICO

I was in a store parking lot in Rockport, Texas, when I saw a car with Missouri plates. The owner said he was from southwest Missouri. I told him that I retired from the Conservation Department office in Branson, so I was familiar with southwest Missouri. He said he gets the *Missouri Conservationist*, and, after he has read it, he always takes it to a doctor's office and asks if he can leave it in the waiting room for others. He said we have the best conservation department in the country because years ago the people took it out of politics. Quite a pat on the back. In conclusion, several years ago I went to the dentist in Progresso, Mexico, and when I sat in the waiting area, the first magazine that I picked up was the *Conservationist*. We never know how far-reaching our efforts may be.

*Darrel L. Testerman, retired conservation agent*

### CORRECTION

In *First State Record of Ivory Gull*, Page 8 of the March issue, we wrote: "The gull flew up and down the Missouri River near Quincy and crossed over to the Missouri side of the river, resting on the barges tied there." The river mentioned should have been the Mississippi River.



### Reader Photo

### SPRING HAS SPRUNG

Shaun Ratcliff of Union, Missouri, captured this image of a downy serviceberry. The small tree is one of the first to bloom in the spring. Serviceberries bloom for only a few weeks, but as early bloomers, they provide nectar to bees and other insects just emerging from winter hibernation. "On this particular day, I was hiking through Long Ridge Conservation Area in hopes of finding a few early season morel mushrooms," said Ratcliff. "As I recall, it was still a bit early for the mushrooms; however, there was plenty to be seen hiking through Long Ridge, including this beautiful little tree I ran across on the way back to my car."





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### MDC Online

Discover more about nature and the outdoors through these sites.

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 Missouri Conservationist: [mdc.mo.gov/node/83](http://mdc.mo.gov/node/83)

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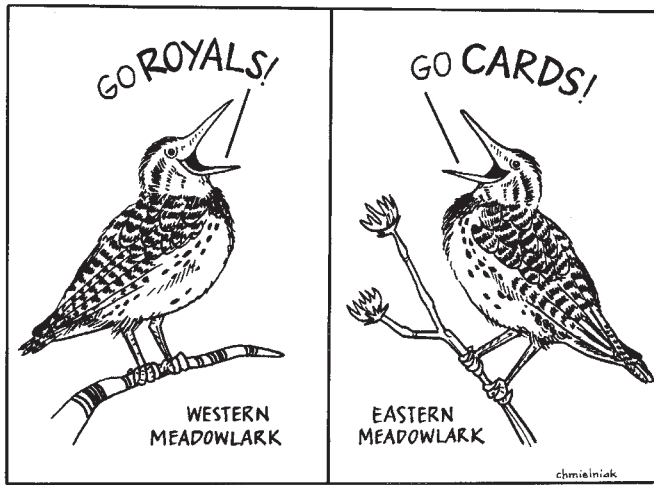
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Missouri's two species of meadowlarks look nearly identical, but can easily be identified by their calls.

## Agent Notes

### Tips for Safe Turkey Hunting



SPRING TURKEY SEASON is popular with many hunters. However, vocal gobblers present special challenges to hunters trying to harvest a turkey while maintaining a safe and enjoyable hunting experience. Here are a few tips to help keep you safe during your hunt.

Hunt defensively, and always prepare for the unexpected. Avoid other hunters whenever possible, and never assume you are the only hunter out there. If you find a turkey that another hunter is already working, back out and try to find another bird. Always try to sit with your back against a large tree where you can see other hunters approaching, and use your voice to alert them of your presence. Before pulling the trigger, positively identify your target, which in the spring includes seeing a visible beard. If you choose to wear camouflage, do so in such a way that you are completely concealed. Avoid wearing anything blue, black, red, or white so as not to be mistaken for game by another hunter. The best color to wear while moving afield is hunter orange to alert other hunters of your presence. Bring a hunter orange-colored bag to safely transport the bird out of the woods.

Find other tips, as well as information on hunting locations, programs, recipes, and more on our Turkey Hunting page at [mdc.mo.gov/node/72](http://mdc.mo.gov/node/72).

*John Pratt is the conservation agent for Butler County. If you would like to contact the agent for your county, phone your regional conservation office listed on Page 3.*

## HUNTING & FISHING CALENDAR

FISHING	OPEN	CLOSE
Black Bass from Ozark Streams	05/23/14	02/29/16
Nongame Fish Snagging	03/15/15	05/15/15
	09/15/15	01/31/16
Paddlefish	03/15/15	04/30/15
Paddlefish on the Mississippi River	03/15/15	05/15/15
	09/15/15	12/15/15
Trout Parks		
Catch-and-Keep	03/01/15	10/31/15
HUNTING	OPEN	CLOSE
Coyote (restrictions apply during April, spring turkey season, and firearms deer season)	All year	None
Deer		
Archery	09/15/15	11/13/15
	11/25/15	01/15/16
Firearms		
Urban Zones Portion	10/09/15	10/12/15
Early Youth Portion	10/31/15	11/01/15
November Portion	11/14/15	11/24/15
Antlerless Portion (open areas only)	11/25/15	12/06/15
Alternative Methods Portion	12/19/15	12/29/15
Late Youth Portion	01/02/16	01/03/16
Groundhog (woodchuck)	05/11/15	12/15/15
Pheasant		
Youth	10/24/15	10/25/15
Regular	11/01/15	01/15/16
Quail		
Youth	10/24/15	10/25/15
Regular	11/01/15	01/15/16
Rabbit	10/01/15	02/15/16
Squirrel	05/23/15	02/15/16
Turkey		
Archery	09/15/15	11/13/15
	11/25/15	01/15/16
Firearms		
Youth	04/11/15	04/12/15
Spring	04/20/15	05/10/15
Fall	10/01/15	10/31/15
Waterfowl	see the <i>Waterfowl Hunting Digest</i> or <a href="http://mdc.mo.gov/node/3830">mdc.mo.gov/node/3830</a>	

TRAPPING	OPEN	CLOSE
Beaver and Nutria	11/15/15	03/31/16

For complete information about seasons, limits, methods, and restrictions, consult the *Wildlife Code* and the current summaries of *Missouri Hunting and Trapping Regulations* and *Missouri Fishing Regulations*, *The Spring Turkey Hunting Regulations and Information*, *the Fall Deer and Turkey Hunting Regulations and Information*, *the Waterfowl Hunting Digest*, and *the Migratory Bird Hunting Digest*. For more information, visit [mdc.mo.gov/node/130](http://mdc.mo.gov/node/130) or permit vendors.



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# Ask MDC

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**Address:** PO Box 180, Jefferson City, MO 65102-0180  
**Phone:** 573-522-4115, ext. 3848 **Email:** AskMDC@mdc.mo.gov



**What is eating the bark off of these trees? Whatever it is must climb the tree because I have seen the damage anywhere from 3 to 20 feet off the ground. Also, there is only a small amount of bark under the trees, so it must be eating it and not just tearing it off.**

It looks like squirrels are to blame. Squirrels strip bark from thin-barked and smooth-barked trees and use it to line their nests. The bark removal also exposes the tree's cambium layer, which holds nutrients and sugars that provide vital food for hungry squirrels, especially in winter and early spring when other food sources are less readily available. Chewing on bark and wood also keeps squirrels' ever-growing teeth in good shape. The effect on a tree depends on the extent of the damage

and the health of the tree. Learn more about dealing with problem squirrels at [mdc.mo.gov/node/4659](http://mdc.mo.gov/node/4659).

**I want to go morel hunting this spring. Have any tips? What are the regulations?**

There are at least three species of edible morels in Missouri, and all are hollow-stemmed mushrooms that emerge from the ground in the spring from early March through April. They have a honey-combed cap and can be found in a variety of habitats, including moist woodlands and river bottoms. They are often associated with ash trees, dying elms, and apple trees, although they are found elsewhere as well, under both hardwoods and conifers. Don't confuse true morels with false morels, which are poisonous and have caused deaths. Don't eat any wild mushroom unless you've identified it as a safe edible and have cooked it thoroughly.

The experts at the Missouri Mycological Society can help with mushroom identification at [momyc.org](http://momyc.org). The Department also has guidance on safe mushroom hunting at [mdc.mo.gov/node/3397](http://mdc.mo.gov/node/3397). Mushroom hunting for personal consumption is allowed on most conservation areas without a permit. Check area regulations. For more information on morels, visit [mdc.mo.gov/node/991](http://mdc.mo.gov/node/991). Check regulations for other public property before collecting morels and get permission from private landowners.



**What are these things? I found them in a seed dish I leave out for birds. The dish also contains black oil sunflower seeds, which provide scale for the size of the mystery items. The balls are very light in weight, and my guess is that they are some kind of owl pellets.**

According to our wildlife ecologist, the mystery items are not owl pellets — they're opossum pellets. An opossum munched the sunflower seeds until the nutmeats were consumed and only the hulls remained in a well-formed mass, which it then spit out. The balls do resemble owl pellets in shape, but owl pellets have a shiny coating from being swallowed and coughed up and would contain parts of the skeleton from the prey the owl ate, such as a mouse. Owl pellets are made when the raptors cough up indigestible parts of prey animals such as bones, fur, and feathers. They can often be found under the bird's favorite perch or its nest.



## FalconCam Gives Bird's-Eye View of Peregrine Falcon Chicks

One official sign of spring is the return of the peregrine falcons to their nesting box at Ameren Missouri's Sioux Energy Center in St. Louis. For the fourth year, the public has online access to the FalconCam, a bird's-eye view of the peregrine falcons raising their chicks. The FalconCam is made possible through a cooperative effort among the Missouri Department of Conservation, Ameren Missouri, and the World Bird Sanctuary (WBS).

Falcon nesting activities can be viewed via the FalconCam from 7 a.m. until 8 p.m. (CDT), seven days a week on the Department's website at [mdc.mo.gov/node/16934](http://mdc.mo.gov/node/16934), on Ameren's website at [AmerenMissouri.com/FalconWatch](http://AmerenMissouri.com/FalconWatch), and on the WBS website at [worldbirdsanctuary.org](http://worldbirdsanctuary.org). WBS experts will offer periodic website commentary about what's happening in the nest. The FalconCam will be available until nesting activity is complete and the young have left the nest.

Peregrine falcons are the world's fastest animals, having been clocked at 261 mph when diving in pursuit of the pigeons and other birds that are their most common prey. For more information on peregrine falcons, visit [mdc.mo.gov/node/3848](http://mdc.mo.gov/node/3848).

## Wright County Conservation Agent Wins National Award

Conservation Agent Keith Wollard received the National Wild Turkey Federation's (NWTf) Wildlife Officer of the Year award at their national convention in Nashville, Tenn. Wollard has been a conservation agent for 30 years in Wright County.

One aspect of Wollard's job that drew praise from NWTf was his enforcement record, particularly as it related to turkey-poaching violations. Wollard has made more than 180 arrests of people attempting to hunt turkeys outside

**Top: A female peregrine falcon flies over her nest at AmerenUE Sioux Power Plant near West Alton, Missouri. Inset: Peregrine falcon chicks at just a few weeks old.**



of the spring and fall seasons. Though enforcing Missouri's game and fishing regulations is the primary focus of his job, Wollard's approach to informing citizens about the state's great fish and wildlife resources is definitely innovative.

Wollard helped form and now leads a conservation program that improves habitat for turkey, quail, and other game species on private and public land in Wright and surrounding counties. He has been instrumental in involving the Soil and Water Conservation District, NWTf, and the National Resource Conservation Service in this effort. He also is a founding member of the Mountain Grove NWTf chapter and is active in youth-mentored hunts, selecting youth scholarship recipients, and hosting young hunters at JAKES (Juniors Acquiring Knowledge, Ethics, and Sportsmanship) events.

"Agent Wollard is an outstanding example of someone who recognizes the importance of conserving wildlife and habitat and preserving our hunting heritage," said NWTf CEO George Thornton. "His dedication to upholding game laws and reaching potential hunters is impressive. We commend his service and are proud to honor him with this award."

## Discover Nature Through Women's Outdoor Skills Weekend

The Department of Conservation invites women to have a weekend of fun while learning outdoor skills at its annual "Discover Nature — Women Summer Workshop." The weekend of hands-on learning will be May 29–31 at the Windermere Baptist Conference Center in Roach, along the Lake of the Ozarks. The registration deadline is April 24.

The workshop provides a safe and friendly environment where women learn beginner-level, hands-on outdoor-skills in four courses in one of the following areas: archery, basic hunting, canoeing, introduction to firearms, plant-animal-tree identification, camping, fishing fundamentals, fly tying, map and compass reading, and shotgun shooting. First-time participants are encouraged to attend the program a second year to complete four additional courses.

The special weekend is targeted to women 18 years and older. Young women ages 14-17 may also attend, when accompanied by a woman 18



years or older. The workshop is free, but a \$20 deposit is required at the time of registration and will be refunded at check in. There is no deposit

fee for young women ages 14-17 when registered with an adult.

Participants are responsible for making room and meal reservations directly with Windermere by calling 573-346-5200 or 800-346-2215, or online at [windermereusa.org](http://windermereusa.org). Various lodging options are available at the Windermere Conference Center, including lodge, motel, cabin, and camping. Accommodation prices will vary with the number of guests per room.

Download the brochure with full course descriptions and a registration form at [mdc.mo.gov/node/3958](http://mdc.mo.gov/node/3958). For more information, call 573-522-4115, ext. 3808.



## CONSERVATION COMMISSION ACTIONS

The February Commission meeting featured presentations and discussions regarding a lake renovation plan, Missouri Natural Areas program, Missouri Conservation Heritage Foundation, MDC website redesign, feral hogs, and fiscal year 2015 mid-year review of major construction projects, information technology projects, and revenue and expenditure trends. A summary of actions taken during the Feb. 19–20 meeting for the benefit and protection of forests, fish, and wildlife, and the citizens who enjoy them includes:

- » **Approved** the designation of three new Missouri natural areas and removal of one from the Missouri Natural Areas System.
- » **Approved** entering into a contract with Bill Sullivan Excavation, Inc. of Silex, Missouri, for construction of the Ted Shanks Conservation Area (CA) three-phase electric pump station project located in Pike County.
- » **Approved** entering into a contract with Branco Enterprises, Inc. of Neosho, Missouri, for the construction of the Shepherd of the Hills Fish Hatchery auxiliary water supply connection project located in Taney County.
- » **Approved** a work-plan proposal from Taylor Studios of Rantoul, Illinois, for fabrication of exhibit features at Burr Oak Woods Conservation Nature Center located in Jackson County.
- » **Approved** the sale of 886,586 board feet of timber located on 391 acres of Compartment 6, Deer Ridge CA in Lewis County.
- » **Approved** the purchase of approximately 4,269 acres in Pemiscot County as an addition to Black Island CA conditioned upon additional agreement from the seller.
- » **Approved** the exchange of 0.6 acre of Angeline CA in Shannon County for a 0.6-acre parcel in Shannon County as an addition to Angeline CA.
- » **Approved** the disposal of 43.17 acres in Pemiscot County.
- » **Approved** nominations for induction into the Missouri Conservation Hall of Fame for Edwin "Ed" H. Glaser and Richard "Dick" W. Vaught.

The next Conservation Commission meeting is April 16 and 17. For more information, visit [mdc.mo.gov/node/3430](http://mdc.mo.gov/node/3430), or call your regional Conservation office (phone numbers on Page 3).

(continued from Page 7)

### Busch Shooting Range Renovation Project Online

The Conservation Department's August A. Busch Memorial Conservation Area Shooting Range and Outdoor Education Center in St. Charles closed its

doors at the end of 2014 to make way for construction of an expanded, state-of-the-art shooting range on the current property. You can watch the daily progress of this renovation project through two Web cameras that give a high-level view of the construction site at [mdc.mo.gov/node/30020](http://mdc.mo.gov/node/30020).

The easy-to-navigate control panel allows viewers to choose between the two cameras, zoom in, and scroll around the image, and even choose the date and time of the images displayed. There is also a time-lapse feature to show the progression of the site over time.

The new Busch range will incorporate the most current national shooting range design standards, including more shooting stations, new classroom facilities, improvements for user convenience, and reduced wait times. The entire project is part of the Department's ongoing commitment to help Missourians improve their outdoor skills and discover nature, and is expected to take 24-30 months, depending on construction and weather.

Phase I of the project began in January and included the demolition of the current facility, as well as site preparation and grading for the new facility, which will be built from the ground up on the same location. Phase II, which should commence in 2016, will include the construction of the new range.

To help shooters stay informed and engaged during the Busch shooting range renovation project, the Department has an online renovation update blog at [mdc.mo.gov/node/29307](http://mdc.mo.gov/node/29307). The blog includes periodic postings and photos documenting all stages of the renovation project, including initial demolition of the old range through final construction and opening of the new facility. It also offers other informative content such as shooting safety, hunter education, events, and other shooting-related opportunities.

### 2015 Hunting, Trapping, Fishing Regulation Booklets Available

The Missouri Department of Conservation's *2015 Summary of Missouri Hunting and Trapping Regulations*, *2015 Summary of Missouri Fishing Regulations*, and *2015 Spring Turkey Hunting Regulations and Information* booklets are now available. The booklets contain information on regulations in an easy-to-read format, including changes from the previous season and new information for the year ahead. Get copies of the free booklets where permits are sold, at Department offices throughout the state (regional phone numbers on Page 3), and online at [mdc.mo.gov](http://mdc.mo.gov).

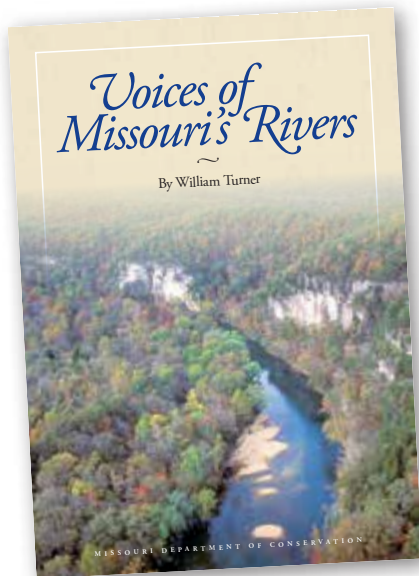


## WHAT IS IT?

### Western Painted Turtle | *Chrysemys picta bellii*

The western painted turtle can be found statewide, except for southeastern counties. This species may occur in slow-moving rivers, sloughs, oxbow lakes, ponds, and drainage ditches, and it spends much time basking on logs. This brightly colored, small, semiaquatic turtle has a smooth upper shell, which normally has yellow, irregular lines and a reddish-orange outer edge. Head and legs may be dark brown or black and strongly patterned with yellow lines. The lower shell is red-orange with a prominent pattern of brown markings. It eats aquatic plants, snails, crayfish, insects, and some fish. —photograph by Noppadol Paothong





## New Book Explores the History of Missouri's Rivers

Learn about Missouri's rich river history and how clean flowing water in our rivers is vital to sustaining the lives of all Missourians. In *Voices of Missouri's Rivers*, published by the Department of Conservation, retired Department Fisheries Division Chief William Turner explores the natural and cultural history of Missouri's rivers in 360 pages of vivid, full-color detail. Highlights include the state's river history, basic river science, and a glimpse of the future of river conservation. The book sells for \$19.50 plus tax (and shipping for mail orders) at MDC nature centers, regional and public contact offices, and online at [mdcnatureshop.com](http://mdcnatureshop.com).

## Rod-and-Reel Loaner Program

If you've ever wanted to try your hand at fishing, but didn't want to invest in equipment, consider using the Department of Conservation's Rod-and-Reel Loaner Program. With 40 locations throughout the state, you are sure to find one near your favorite fishing hole.

Since 2001, this program has promoted family outings and encouraged anglers who might not be ready or able to purchase their own rods and essentials. It's also a great resource for anglers away from home.

To borrow equipment, you must have a valid fishing permit. In addition to rods, participants receive a small tackle box filled with hooks, sinkers, bobbers, and a stringer to help make their outing a success.

To find a loaner location near you, visit [mdc.mo.gov/node/28592](http://mdc.mo.gov/node/28592). —Tisha Holden

BASS: NOPPADOL PAOTHONG; GIRL WITH BLUEGILL: CLIFF WHITE

## DID YOU KNOW?

*Conservation makes Missouri a great place to fish.*

### Helping You Discover Nature Through Fishing

- » **Conservation Department cold-water hatcheries** stocked 1,558,746 trout in 2014. These fish were distributed in five trout parks, 12 stream special management areas, and Lake Taneycomo.
- » **Conservation Department hatcheries stocked** 7,849,036 warm-water fish in 2014. Species stocked include hybrid striped bass, muskie, pallid sturgeon, paddlefish, largemouth bass, hybrid sunfish, channel catfish, and walleye.
- » **Visit [mdc.mo.gov/9258](http://mdc.mo.gov/9258) to buy permits** online for easy and immediate printing and use. You can also buy permits from vendors and by phone by calling toll free 1-800-392-4115.
- » **Our free Find MO Fish phone application** shows you where to find Department of Conservation boat ramps on Missouri's major lakes, rivers, and streams. It also shows where the Department has established underwater fish structures that attract fish. With the geo-location feature, you can guide your boat to a fish attractor and start fishing. For more information and to download the application, visit [mdc.mo.gov/node/15421](http://mdc.mo.gov/node/15421).
- » **Our Discover Nature — Fishing program** helps kids ages 7 to 15 and families gain the skills and confidence to go fishing on their own. Call your regional Department of Conservation office (find the phone numbers on Page 3) to learn when program classes are available in your area, or visit [mdc.mo.gov/node/27175](http://mdc.mo.gov/node/27175) to browse the Discover Nature — Fishing events calendar online.
- » **The Department's Fishing Reports & Prospects** is updated from the first Thursday in April through September. The report gives general fishing conditions at selected lakes, rivers, and trout parks across Missouri. To receive a weekly email of the report, sign up at [fishing.mdc.mo.gov](http://fishing.mdc.mo.gov).



# Your Ideas Count!

The latest Conservation Opinion Survey results help us understand and meet your needs for forest, fish, and wildlife management

BY MICHELE BAUMER

**O**DDS ARE, THE LAST TIME YOU SHOPPED, THE CASHIER CIRCLED A website address on your receipt and asked you to complete an online survey. Even before the Internet, businesses used surveys to learn about their customers' experiences and needs. The results help them improve product selection and service.

Here at the Missouri Department of Conservation, our business is helping you discover, conserve, and enjoy our state's forests, fish, and wildlife. And, like any good business, we make every effort to keep in touch with our customers' views, experiences, and needs. As a result, your feedback fuels our harvest regulations, habitat management, and outreach services.

The Department has a long history of asking people about their opinions and interests. These efforts began with the citizen conservation committee that asked Missourians for their opinions before the 1936 election. Listening and surveys continued through the Department's early years, and in 1978, the Department was the first fish and wildlife agency in the nation to hire a full-time human dimensions technical expert.

That staff person's name was Dan Witter, and he began conducting statistically designed surveys to gather public sentiment. In 1980, Dan conducted the conservation opinion survey in three cities statewide. Ten years later, those efforts expanded to include both urban and rural areas, and it marked the beginning of a core set of similar questions that can be compared over time. The 2013 Conservation Opinion Survey marks the third time this set of questions has been used to survey Missourians. This event makes the Department the only fish and wildlife agency in the nation with a set of three surveys of similar information that has been conducted across two decades.

Every day, Department staff work steadily to listen to Missourians and earn their trust. Although we can't reach every adult in the state, the 2013 Opinion Survey has been statistically designed to be representative of all Missouri adults. We mailed a survey to almost 20,000 randomly selected households in Missouri. The results were weighted to accurately reflect Missouri's adult population by age, gender, and region.

In 2013, the Department relied on many experts at the University of Missouri in Columbia to complete this survey. The university provided objectivity to the survey and enhanced the Department's capacity. Using technical experts ensures that the data being presented from the survey is objective, accurate, and reliable.



The 2013 Conservation Opinion Survey shows strong support for the Department and Conservation Priorities

Missourians are interested in conservation

**86%**

of Missourians are familiar with the Department.

**89%**

feel it is important for outdoor places to be protected.

**95%**

of Missourians are interested in forests, fish, and wildlife.

Missourians are interested in observing wildlife



Bald eagles  
**94%**

Deer  
**92%**

Ducks and geese  
**90%**

Turkeys  
**89%**

Butterflies and ladybugs  
**87%**

River otters  
**80%**

Bears  
**66%**



## Missourians' interest in conservation remains high

Missourians have maintained a strong interest in forests, fish, and wildlife since we first asked this question in 1990.

**95%**

Familiarity with the Department has significantly increased since 1990.

**72% → 86%**

Around **90%** of Missourians enjoy watching wildlife.



Troy and Tori McAfee, Shannon County

### INTEREST

"I'm president of our National Wild Turkey Federation (NWTf) chapter, and my wife, Margaret, and my daughter, Tori, are active as well. We are dedicated to our hunting heritage and like to promote it. Our NWTf Current River Callers Jacks Fork JAKES Chapter and MDC's Twin Pine Conservation Education Center co-host a JAKES Day and Extreme JAKES Day. These events expose kids to hunting, conservation, and outdoor education. I think it is all about education and carrying on our hunting heritage to the next generation." The McAfees appeared in *An Ordinary Outdoor Girl — Accessible conservation facilities allow Tori and others with disabilities to enjoy the outdoors* in the January 2009 *Missouri Conservationist*.



People are spending more time outdoors in the past 10 years. We have found the following:

Hiking  up **10%**

Biking  up **8%**

Walking  up **7%**

Pistol or rifle shooting  up **7%**

Canoeing/kayaking/rafting  up **7%**





## Missourians are satisfied with the Department

Two-thirds rated the Department as good or excellent for providing services for the following:

Themselves  
**67%**

Family  
**65%**

Community  
**64%**

State  
**68%**

Almost two-thirds of Missourians agree the Department is doing a good job enforcing fish and wildlife laws.

# 65%



MCACFEE FAMILY AND HUBERS FAMILY: DAVID STONNER;  
CONSERVATION AGENT: NOPPADOL PAOTHONG

### Browse Survey Results Online

If you'd like to learn more about the 2013 Conservation Opinions Survey's key findings and methods, visit [mdc.mo.gov/node/30230](http://mdc.mo.gov/node/30230) and download the three-page PDF.



Brandon and Jocelyn Huber,  
Perryville

## SATISFACTION

"Hunting Swan Lake and the other managed hunts for hunters with disabilities is a great opportunity to enjoy the outdoors and meet others who face the same challenges. We always have a great time on all the hunts we go to," says Brandon. The Hubers' story, *Missouri Deer Hunting: Opportunity for All*, appeared in the July 2014 *Missouri Conservationist*.

## Missourians trust the Department

**76%**

of Missourians agree the Department is a name they can trust.

**76%**

of Missourians agree that they cannot imagine the state without the Department.

## Missourians support conservation activities

Missourians agree that it is important for places to be protected even if they don't plan to visit the area.

**89%**

The Department should designate natural areas to protect Missouri's best examples of forests, prairies, marshes, and glades.

**82%**

Over three-quarters agree that the Department should help private landowners who want to restore native communities of plants and animals.

**77%**

The Department should conserve and restore rare and endangered plants.

**77%**

Over three-quarters agree the Department should make an effort to restore animals that once lived or currently are very rare in Missouri.

**76%**



Bill Clark,  
Columbia

### TRUST

"I am not a hunter, fisherman, or trapper, and I never use the shooting ranges. Still, the Department of Conservation is a major factor in my life. I'm one of Missouri's 2.5 million birders, and I have visited 1,050 conservation areas on birding trips. I am amazed at the magnitude and frugal use of tax dollars to make our conservation areas the best birding spots in the state." Bill's interest in birding was featured in *I Am Conservation* in the April 2010 *Missouri Conservationist*.



There are still obstacles to outdoor participation

“Not enough time” is the major obstacle keeping Missourians from participating in outdoor activities.



Carl Roberts,  
St. Louis

## PARTICIPATION

“I look at participating in outdoor activities, such as fishing, as a way of life. Conservation is a part of me. You have to take care of it like your own body.” Carl’s photo appeared on the cover of the June 2006 *Missouri Conservationist*. His passion for pursuing big blue catfish at the confluence of the Missouri and Mississippi rivers was featured in the story, *Catching Big River Blues*, by Danny Brown.

## Meeting Your Needs

Since its beginning almost 80 years ago, the Department has depended on citizen involvement to help it achieve its many world-class accomplishments. In addition to helping restore the state's depleted forests, fish, and wildlife, citizens voted to provide dedicated and stable funding in 1976, amending the Missouri Constitution to create a funding source that other states continue to envy nearly 40 years later. At every step, the citizenry of Missouri has spoken, taken action, and provided funding to help the Department achieve their goals.

The Department knows that citizen support is essential, and we strive to maintain Missourians' trust in our management. The Department's job is to listen, understand, and personally deliver programs and services in a manner that benefits all Missourians and the forest, fish, and wildlife resources in our state. Following are several ways the Department stays in touch with your needs, ideas, and requests:

- » The Conservation Commission meets regularly around the state. Anyone may contact the Director's office at Department Headquarters (find the phone number on Page 3) with comments or request to appear at a Commission meeting.
- » Department regulations are formed and discussed in a public setting, and citizens may request time on the agenda.
- » The Department seeks public input on proposed regulations through a variety of venues, including the Department's regulation comment Web page at [mdc.mo.gov/node/24141](http://mdc.mo.gov/node/24141).

- » Department staff answer questions and address concerns via AskMDC, a service you can access through regular mail, telephone, and email. Selected questions and answers appear monthly on Page 5, where you can find all AskMDC contact information.
- » The Department has conducted attitude, opinion, satisfaction, and participation surveys for more than 30 years. It continues to conduct a wide variety of statistically accountable mail surveys, telephone surveys, and focus groups to determine Missourians' opinions and attitudes about conservation and the Department.
- » Conservation area management plans are available for public comment as they are drafted. Browse [mdc.mo.gov/node/19563](http://mdc.mo.gov/node/19563) to comment on them.
- » The Department has eight regional service centers with staff available to assist Missourians with their conservation requests and needs.
- » The Department maintains an extensive website ([mdc.mo.gov](http://mdc.mo.gov)) with conservation information, contact information, and online comment forms.
- » The Department conducts frequent public forums to obtain interactive feedback from all Missourians at locations throughout the state.

Your ideas and opinions really do count! ▲

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*Public Involvement Coordinator Michele Baumer has been with the Department for 26 years. She loves spending time in the outdoors with her family hunting, canoeing, hiking, and long-distance running.*





# MISSOURI DEPARTMENT OF CONSERVATION



*Our mission is to protect and manage the forest, fish, and wildlife resources of the state and to facilitate and provide opportunities for all citizens to use, enjoy, and learn about these resources.*



*Conservation makes Missouri a great place to live, work, fish, hunt, view wildlife, and be outdoors.*

# Serving Nature and You





## Our Responsibilities

### 1 Manage Missouri's Forests, Fish, and Wildlife

- We work for and with Missourians to sustain healthy forests, fish, and wildlife.
- Conservation successes are many and include forests, streams, white-tailed deer, turkey, fish, and other plants and animals.
- We enforce the *Wildlife Code of Missouri* to provide current outdoor opportunities and to ensure future generations will have those same opportunities to hunt, fish, and enjoy the outdoors.
- Research and citizen input informs decisions on the future of Missouri's forest, fish, and wildlife resources.



### Our Forests, Fish, and Wildlife

- Conservation is a partnership. Missouri has more than 44 million acres, over 90 percent are privately owned.
- There are nearly 1,000 conservation areas that provide close-to-home outdoor opportunities on nearly one million acres.
- Healthy forests, fish, and wildlife enrich our economy and the quality of life for all Missouri citizens.





## 2 Educate Missourians

- We help educate Missourians as they discover nature and improve their outdoor skills.
- Missouri has a rich conservation heritage of a quality outdoors that is being passed along to the next generation through free school materials.
- Hunter education, archery, fishing, shooting skills, and nature-viewing classes empower citizens to enjoy the outdoors.
- Citizens learn about the outdoors through an award-winning *Missouri Conservationist* magazine and children's *Xplor* magazine, along with Web, video, and print information.

## 3 Help People Be Outdoors

- We provide close-to-home outdoor opportunities in urban, suburban, and rural areas throughout the state at conservation areas, boat ramps, public lakes, nature centers, interpretive centers, shooting ranges, and fish hatcheries.
- We partner with tens of thousands of landowners to help restore, improve, and sustain Missouri forests, waters, and wildlife habitats.



## Conservation Pays Its Way

- Conservation generates \$12 billion dollars each year in economic impact and continues to be a wise investment.
- One of every four tourism dollars in Missouri is spent on fish and wildlife recreation.
- 89,000 Missouri jobs are supported by fish and wildlife recreation and the forest products industry.







## Participation in Missouri

- 1.7 million view wildlife; over one million fish; and over 500 thousand hunt.
- Hunter education graduates total over 1.1 million since 1987.
- More than 6,000 volunteers help the Department educate citizens and deliver conservation each year.
- More than 34,000 landowners, conservation organizations, agricultural groups, and communities work with the Department each year to improve Missouri's forest, fish, and wildlife resources.

## More than 75 years of successful conservation!

- A statewide Constitutional vote established the Department in 1936.
- A statewide Constitutional vote established dedicated funding for conservation in 1976.
- The Missouri Department of Conservation receives no general revenue from the state and always has a balanced budget.
- A citizen's committee led the effort to establish the Department. Missouri citizens continue to be important partners for advancing conservation.



For more information, visit [mdc.mo.gov](http://mdc.mo.gov)  
or call 573-751-4115  

Serving nature and you<sup>®</sup>



Conservation Department biologists and University of Missouri researchers bait and capture wild turkeys with a rocket net in order to monitor their survival and reproduction. All turkeys are released at the same location where they were captured.



# ***KEEPING TABS ON TURKEY NUMBERS***

Five-year study is yielding data that will shape Missouri's wild turkey management

**BY JOANIE HIGHAM STRAUB**  
PHOTOGRAPHS BY DAVID STONNER





## **IT'S DAY THREE, AND JASON ISABELLE CONTINUES TO FIGHT THE BITTER COLD.**

This early January morning, snow covers the ground and temperatures are in the single digits. Finally, a flock of turkeys comes into view and meanders over to a pile of cracked corn. Six feet behind the corn is the rocket net that Isabelle and his research crew set up the day before.

When the 18 hens and last year's young begin to feed, Isabelle presses a button. Three rockets sail through the air, the net following close behind. A cloud of white smoke fills the air and the smell of black powder lingers. Finally, the smoke lifts, and he can see the result. Success! Isabelle netted all 18 hens and their young. Now it's time to quickly get the turkeys banded and fitted with radio transmitters, then set free to once again roam the countryside. Jason Isabelle is the Missouri Department of Conservation's statewide turkey biologist. It's his job to monitor Missouri's wild turkey population and use this information, along with hunter input, to recommend regulations for the fall and spring turkey hunting seasons.

The rocket-netting of wild turkeys is part of a five-year study he began last year. His team is conducting the research project in northern Missouri in partnership with the University of Missouri, the University of Washington, and the National Wild Turkey Federation (NWTF). In addition to Isabelle, many Conservation Department staff from several divisions are included with the project. Funding for the project comes from the Conservation Department as well as grants from the U.S. Fish and Wildlife Service's Wildlife Restoration Program and the George Clark Missouri State Chapter of the NWTF.

### ***Rocket Nets, Radios, and Manpower***

Rocket-netting involves firing a large net over wild turkeys that are baited into open areas, typically corn or soybean fields.

"Rocket-netting is a very effective method of capturing wild turkeys," Isabelle said. "A large group of turkeys can be captured with a single shot of the net."

Once captured, turkeys are banded and fitted with radio transmitters then released at the same location where they were captured. Each transmitter has a unique radio frequency, which allows researchers to track a number of turkeys at the same site.

Transmitters weigh less than 3 ounces and are attached so they don't affect a turkey's behavior. Transmitter bat-



**Isabelle and his team cover the turkey's head with a sock so it stays calm while being fitted with a leg band and radio transmitter.**

teries last for several years, allowing researchers to monitor turkeys for extended periods of time.

"The tracking devices we are using are called VHF (very high frequency) transmitters. Once you fit a turkey with a transmitter, the device emits a signal immediately," Isabelle said. "Unlike a GPS transmitter that stores data





on-board, the transmitters we're using give a signal that we pick up with a receiver and antenna."

That's where manpower comes into play. Conservation Department staff, along with two full-time and six seasonal researchers, drive into the area where they captured birds, trying to pick-up a signal. Depending on its movement, the transmitter signal will let the team know if a particular bird is alive or dead. If it's dead, they will try and locate the bird's carcass to determine cause of death. Isabelle's team enters all this information into a database, which his collaborators will use to develop population models.

### ***Monitoring Reproduction and Survival***

In addition to tracking movement and mortality, the research project involves collecting reproductive informa-

tion. The team monitors hens in the spring and summer during the nesting and brood-rearing seasons, which run from early April through the end of July.

"During the nesting period, we track hens a lot more intensively because we want to be able to identify when they start nesting," Isabelle said. "We generally monitor hens about five times a week during spring and summer."

Once they locate a hen repeatedly in the same area, Isabelle and his team will know she has started to nest, and they mark the general location of the nesting area.

After hens leave the nesting area for good, the researchers locate the nest to determine how many eggs (clutch size) the hen laid and whether or not the nest was successful. Knowing clutch size and how many poults (young) the hen still has with her at a later date allows researchers to determine poult survival.

According to Isabelle, a typical clutch size is about 10-12 eggs, but only about one in three nests hatches. Of the poults that do hatch, only about four of 10 will survive to be a month old.

“Usually only about 40 percent of turkeys survive their first month of life,” Isabelle said. “Young turkeys can’t fly until they’re about 10 to 14 days old and are very susceptible to cold, wet weather and predators.”

Isabelle’s collaborators at the University of Missouri and University of Washington will use information they gain from the project to develop new population models that will provide biologists with information about Missouri’s wild turkey population. Conservation Department staff will use results to update the state’s wild turkey management plan and guide future turkey management efforts.

### ***A Wildlife Conservation Success***

The resurgence of wild turkeys in Missouri and the nation is one of the greatest success stories of wildlife conservation. Each spring and fall, turkey hunters enter the woods with hope of bagging one of the most prized North American game birds. In fact, Missouri is one of the top wild turkey hunting states in the country. But that wasn’t always the case.

Wild turkeys once roamed Missouri in such great numbers that they were common table fare. By the late



**This project will build upon previously conducted research to help inform wild turkey management decisions.**

1800s, those numbers plummeted from around a quarter million birds to a couple thousand by the early 1950s. Loss of habitat and unregulated hunting were to blame. Missouri closed its turkey hunting season in 1938.

From the 1950s through 1970s, the Conservation Department focused on restoring this popular game bird. Those efforts included trapping more than 2,600 wild turkeys and releasing them into 142 areas in 87 counties, where they were scarce or nonexistent. Missouri’s environment was perfect for the birds. The populations grew exponentially, with birds establishing new populations in the many areas of good habitat and eventually moving into marginal habitat. Even in northern Missouri, once thought to be unsuitable for wild turkeys, the birds thrived.

Through conservation efforts, wild turkey hunting in Missouri has risen from a harvest of 94 birds in 1960 to more than 53,000 in 2014.

### ***Where Do We Go From Here?***

Missouri has a long history of conducting wild turkey research. Past research projects have yielded information on survival, harvest rates, and reproduction, all of which provided the foundation for the management of turkeys. It has been more than a decade since the Conservation Department conducted turkey research. This project will build upon previously conducted research and will maintain the Conservation Department’s tradition of using science-based information in its management program. The results will inform wild turkey management decisions and sustain opportunities for all Missourians to view this majestic bird in the wild.

“The Department conducted a long-term research project in north Missouri in the 1980s. In the 1990s, we shifted gears and studied wild turkeys in the Ozarks,” Isabelle said. “So the most current information we have about demographics of the population is from the Ozarks.”

According to Isabelle, it just made sense to conduct the current research project in northern Missouri, where

**Researchers bait a field with corn and hide the rocket net in order to set up for the next flock of wild turkeys.**







Department of Conservation Turkey Biologist Jason Isabelle releases a wild turkey after gathering the information he and his team need.

there has been a noticeable decline in the turkey population, and because data is older and new information is needed.

“Having updated information from the field is important to our wild turkey management program,” Isabelle said. “Our collaborators will use the information to develop population models that will be an important

## Results from year one

During the first year of the wild turkey research project, researchers captured over 260 turkeys — 140 jakes (juvenile males) and gobblers (adult males) and about 120 hens (females) — in northern Missouri.

According to Department of Conservation Turkey Biologist Jason Isabelle, preliminary research project results have been interesting. First-year research project results indicate hunters are removing a rather small percentage of male wild turkeys from the landscape during the spring hunting season. Of the adult gobblers that researchers monitored, less than 20 percent were harvested by hunters during the spring turkey season. Hunters shot even fewer jakes, harvesting less than 10 percent of the banded birds.

The additional four years of research that remain will allow researchers to determine how much harvest rates (the percentage of banded birds shot by hunters) vary from year to year.

Researchers also started monitoring hens closely to determine how successfully they nested and reared young.

“Most of the hens that we tracked initiated incubation of a nest during the spring,” Isabelle said. “However, the majority of nesting attempts were not successful, which is not unexpected due to the impacts of nest predators and weather.”

For those hens that were unsuccessful in their first nesting attempt, about half started a second nest. Of the poults that hatched, just under half survived their first month of life. In addition to being susceptible to wet and cold weather, wild turkey poults are a food item for a wide range of birds and mammals, including coyotes, bobcats, foxes, raccoons, hawks, owls, and free-ranging dogs and cats.

As they have done with male wild turkeys, researchers will continue to monitor hens for four more years to determine the amount of variability there is in nest success and survival of poults.

Isabelle encourages any hunter who harvests a banded turkey in Missouri to call the toll-free number engraved on the band. Reporting your harvest will provide important information for the project.

part of how the Conservation Department monitors turkey populations in the future.”

Isabelle points out there have been advances in the development of population models that will help determine how many turkeys are on the landscape, as well as wild turkey survival rates, recruitment, and harvest rates. The Conservation Department is using the best science-based data to help make informed decisions to manage the Show-Me State’s wild turkey population. ▲

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*Joanie Higham Straub is the media specialist for the Department’s Central and Northeast regions. She enjoys hiking and floating Missouri’s many streams.*



# BIRDS ARE AWFUL SOME

*A beginner's  
guide to birding*

BY SARAH KENDRICK





← A male eastern bluebird is alert and in search of food. Birding is identifying birds by sight or sound.

# Birds are awesome.

I mean that well beyond the slang sense — birds fill me with awe. I wasn't one of those people who grew up knowing what they wanted to be, and my first round of college didn't narrow that down much. But when I decided to return to school to study natural resources, I took an ornithology course. My first experiences with birding immediately hooked me.

My mind was blown on a regular basis that semester. I identified my first dickcissel, learned the “wichity wichity” call of a common yellowthroat, and held my breath as my professor gently handed me a brilliantly blue male indigo bunting to hold when we learned how to mist-net birds. I had finally found a topic full of variety, with fun and exciting information to share with others.

## Diversity, Diversity, Diversity

Birds are a true phenomenon. They are the most easily observed wildlife and are found in all corners of the world — urban or rural, on the tops of mountains and in caves, over land and sea. They fly, walk, swim, and hop. They nest in cavities, on steep cliffs, in the slightest depressions of earth, on the ground, in shrubs, and high up in trees. They eat nectar, plants, insects, berries, nuts, dead things, and meat — some even eat other birds! Their vibrant colors and diverse life strategies fill us with wonder, tease our scientific interests, and prod our competitive nature to see new species and add them to our life lists.

Not a birder? If you know what a cardinal or a blue jay looks like, then you've birded. That's all birding is, identifying birds by sight or sound. If you've never thought of birding as a fun or adventurous activity, I suggest you give it a try. With little more than a pair of binoculars and a field guide, you can start a hobby that will last a lifetime and continually pique your interest. No two birding trips are ever the same, especially during spring and fall migrations or while traveling — these provide a whole new set of birds to identify.

With a few simple pointers about equipment and ways to get started, I hope that you, too, can have a mind-blowing and birdy new hobby.



Yellow-rumped warbler

## Binoculars

Birding is more enjoyable when you can see the birds well. Looking for and enjoying birds requires little equipment, but binoculars are essential. Identifying birds by ear alone is great fun, but if you're a beginner, it's helpful to start by locating birds in your binoculars and familiarizing yourself with their field markings and behaviors. Multicolored and heavily patterned birds like warblers and sparrows are small and can be tricky to identify if you do not know their songs or calls. The colored cap of a sparrow or the bold eyestripe of a wren can reveal the difference between these two similar-looking species.

### Which kind should I buy?

There are many options available when purchasing binoculars, including a variety of brands, magnifications, and prices.

*Magnification.* A common magnification for birding binoculars is 8x42. The first number describes the magnification, while the larger number describes the size of





Indigo bunting



Red-bellied woodpecker

the objective lens, which is the lens at the end of the binoculars farthest from your eyes when looking through binoculars. Size 42 objective lenses capture more light and work better in low-light situations. Smaller, mid-weight, and more compact binoculars work well for backpacking or travel, but if you want small binoculars, you'll want a higher-quality brand to guarantee quality and avoid eyestrain.

*Cost.* Binoculars range in price from about \$25 to thousands, depending on brand and quality. As with most products, you don't want the cheapest kind you can find, because you'll get what you pay for. While birding, you look through binoculars often. Cheap binoculars can easily cause eyestrain, and this annoyance can quickly zap all excitement. A relatively affordable pair of binoculars with a fault-free lifetime warranty will run you \$200-\$300. This is pricey, but binoculars are an investment. If you plan on spending any time learning to bird, or you enjoy viewing other wildlife, binoculars are really fun to have in the outdoors.

BIRDS: NOPPADOL PAOTHONG; WOMAN HOLDING BINOCULARS: DAVID STONNER

## How to Use Binoculars



Many folks find it difficult to find their target (birds or other wildlife) through a pair of binoculars for the first time and get frustrated. Use this simple rule when using binoculars, and you'll find what you're looking for.

Look at your target (a bird or other wildlife) and do not take your eyes off of it. Bring the binoculars up to your face without taking your eyes off of the bird. This guarantees that the binoculars will be pointed at the target. Do not bring the binoculars up to your face and then move your head around to relocate the target.

## Field Guides: Books and Apps

A trusty bird field guide is also a must. All experienced birders have a torn and battered, well-traveled, and coffee-stained old bird guide. Again, there are choices to make. Some birders prefer field guides with photographs, while others like illustrations — and most feel strongly about their preference.

If you don't want to invest in multiple guides to try in the field, check out a few from your local library and see which works best for you. I recommend field guides that cover a wide geographic range, like the eastern United States or North America, instead of guides with a handful of the “most common” birds. These rarely help

## Build a Feeder

You can buy or build your own bird feeder. Woodworking is a fun activity solo or in a group and a great way to teach children the importance of helping out the critters on your property. Visit [mdc.mo.gov/node/4955](http://mdc.mo.gov/node/4955) for plans and a video on how to make two different kinds of feeders.

## Department Birding Pages

Look through the Conservation Department's birding Web pages at [mdc.mo.gov/node/235](http://mdc.mo.gov/node/235) for more bird resources, including birding hotspots, bird behavior, and identification tips.

you identify birds outside of your backyard and do not account for many migrant birds that pass through on their way north or south.

I love holding my own trusty coffee-stained bird book and flipping through the pages. But if you prefer to travel light and enjoy technology, as a growing number of birders do, you can download a bird identification application, or app, on your mobile device. Some believe that technology removes people from nature, but bird identification apps are a portable and handy reference in the field and a great education tool. Apps are also updated with more regularity than is possible with books. Apps usually include birds' song and call notes, which is another aspect of bird identification that books can only describe.

Field sparrow, left  
Northern cardinal, right



BIRDS: NOPPADOL PAOTHONG



I continue to familiarize myself with the different families of birds by thumbing through my bird book, and that is a bit more cumbersome in an app. But my beat-up bird book doesn't sing to me with the touch of a finger, which is one of a birding app's coolest features.

A few free birding apps exist for download, including Merlin Bird ID by the Cornell Lab of Ornithology, but most high-quality apps cost a fee so that creators can be competitive with book guides — they are providing a lot of information, after all.

## Practice, Practice, Practice

### Backyard Birding

If you've never birded, a great first step is to put up a bird feeder in your yard where you can see it from a window. Try identifying the birds that visit. It may take a few weeks for birds to find your feeder, so don't become discouraged if you don't see many right away. Once they catch on, birds will generally sit on a feeder or visit over and over, giving you ample time to look at their markings and size to identify them.

Black oil sunflower seed attracts various sparrows, northern cardinals, black-capped or Carolina chickadees, and tufted titmice year-round. Suet or peanut butter feeders attract most of Missouri's woodpeckers. Halved



White-throated sparrow

fruit like oranges or apples will attract orioles when they are in Missouri in the spring and summer, and, of course, sugar-water feeders attract the buzzing activity of ruby-throated hummingbirds (Tip: You don't need to color the sugar water red; hummingbirds will find and visit a feeder with clear sugar water).

## Field Markings

Identifying birds can be overwhelming, especially with nearly 400 different bird species recorded in Missouri. One way to begin is to take mental or written notes about

the color of a bird's various body parts, or field markings, and then use your field guide to identify it. For example, if I take a winter hike and happen upon the aptly named male white-throated sparrow, I would describe it as having yellow in front of the eye, white and black stripes on the head, and a white throat. I would also make note of the bird's behavior. If it is foraging on the ground or seen near the ground in a bush or thicket, this can sometimes help you identify the bird as a sparrow.

Similarly, if I saw a male common yellowthroat perched in a field in June, I would describe it as having a black mask bordered with white on top and a yellow throat and underside.



Common yellowthroat

The best birders did not learn their birding tricks by staying indoors.



American goldfinch

Practice picking out key colors and unique features of the birds that you see. This practice not only applies to songbirds but also is useful for waterfowl, hawks, shorebirds, and others that are tough to differentiate.

Field markings are just one way to identify birds. Spend time learning how your field guide works. Read its introductory pages that describe range maps, body shape, flight patterns, and habitats of each bird. All of these facts help you to piece together the clues and narrow your search.

Remember that the best birders did not learn their birding tricks by staying indoors. Years of practice in the field helped them hone their skills. Get outside and visit a conservation area near you. Some of Missouri's most diverse birding spots are Department-managed public lands. Visit the Conservation Department's Conservation Area Atlas at [mdc.mo.gov/atlas](http://mdc.mo.gov/atlas) to find a nearby conservation area or nature center.

## Take to the Field

The best way to learn your birds in the field is to find experienced birders and go on birding field trips in your area. A mentor or birding group will provide helpful tips and years of experience and bird knowledge that





Scissor-tailed flycatcher

you won't find in a book or app. Most birding groups are happy to see fresh faces joining the hobby. Visit the Audubon Society of Missouri website at [mobirds.org](http://mobirds.org) to find birding resources, view a calendar of birding events, improve birding skills, and become a member of the society. Missouri chapters of the National Audubon Society also can be found by visiting [audubon.org/chapters?state=MO](http://audubon.org/chapters?state=MO).

Your local Conservation Department nature center also may have birding programs that allow you to practice your identification skills outdoors with a knowledgeable naturalist. Visit [mdc.mo.gov/node/4439](http://mdc.mo.gov/node/4439) for a list of Missouri's nature and interpretive centers.

## An Unseen World

My favorite part about birding is the realization that birds are all around us. When I began my first field job searching for Acadian flycatcher nests at Whetstone and Rudolf Bennitt conservation areas to monitor their survival (yes, there are jobs like this!), I felt like a mere speck in the forest. I was just passing through while thousands of birds worked tirelessly for the opportunity to pass on their genes. They were gathering grass or sticks to build nests, silently hunkering down and incubating eggs, and making nonstop trips back and forth to feed tiny, gaping beaks. Birding makes me feel like part of something bigger that is unseen and moves all around us.

My birding experience is a blink compared to that of many widely traveled and field-hardened birders across the state. But the diversity of birds, their beauty in sight and sound, and their varied life strategies and adaptations have continued to hold my interest like nothing else. So grab your field guide and binoculars and take flight! You're in for a tweet. ▲

*Sarah Kendrick is the outreach and marketing supervisor in the Wildlife Division. She has a Master's in Avian Ecology.*

## Life Lists

Once you begin having success with bird identification, start a life list. A life list can be a great memento of all of your birding trips, and now it can feed science. eBird ([ebird.org](http://ebird.org)) is an online, real-time bird listing website that allows users to store their life lists. You can choose to allow your lists, which are checked by a committee for accuracy, to be used as part of a worldwide effort to monitor bird populations. One great feature is the occurrence maps available at [ebird.org/content/ebird/occurrence](http://ebird.org/content/ebird/occurrence). These maps were created using eBird data from birders just like you to illustrate migration patterns of a variety of birds across the lower 48 states in a given year.

## Columbine

APRIL IN MISSOURI is a perfect time for outdoor photography — flowers are in bloom and migratory songbirds are making their way back from a long winter hiatus. But it can also be a challenging time with often-unpredictable periods of rain.

One late afternoon at the end of April, I arrived at the Valley View Glades Natural Area in the pouring rain. Located south of St. Louis, this area is known for dolomite glades, which supports more than 250 native plant species.

For most people, even outdoor photographers, rain makes being outside less than ideal, but I decided to venture out despite the weather in search of photo opportunities.

After hiking on a wet, muddy trail in the fading daylight, my eyes gravitated to bright, red-colored Columbine flowers blooming along the creek.

Columbine (*Aquilegia canadensis*) is one of the brightest flowers that bloom in Missouri from April through July. You can easily find them in rocky woods, slopes, bluffs, ledges, and open areas. Columbine features a single, long stem, with five distinctive red spurs in a bell-like shape and a mass of bushy yellow stamens. They are a welcome sight for hummingbirds that migrate back to Missouri in spring.

Standing in the pouring rain, I debated how best to capture the Columbine. Overcast light, with less shade and shadow to work against, is perfect for flower photography, so I wanted to seize this opportunity. My instinct said a macro lens, which would allow me to get closer to the flower while isolating everything else in the background. However, I decided instead to use a wide-angle lens and capture the whole environment, with the colorful Columbine flower as a strong foreground.

With my camera mounted on a tripod, I carefully moved closer to the flower until I reached a minimum focus distance, which was less than 5 inches from the flower. I also set up a flashlight beneath the flower to help illuminate the subject against the background.

Technically speaking, flowers aren't the most challenging subject to photograph, compared to birds that are constantly on the move. However, the slightest wind could sway the flower, changing the image composition and focus. I patiently waited and took pictures whenever the breeze stopped.

As the forest grew darker, I could hear thunder from the distance, so I decided to pack up and hike back to my car.

When I look back at the images I have captured over the years, some stand out and bring back a special memory. This shoot is one of those special ones because I didn't let the inclement weather ruin my day. It turned out that I made a good decision.

—*Story and photograph by Noppadol Paothong*

📷 17–40mm lens • f/22 • 1/4 sec • ISO 400

*We help people discover nature through our online Field Guide. Visit [mdc.mo.gov/node/73](http://mdc.mo.gov/node/73) to learn more about Missouri's plants and animals.*







# Otter Slough Conservation Area

*Steeped in history and home to one of the last cypress-tupelo swamps left in Missouri, this Stoddard County area has a diverse suite of habitats that offer a wide variety of recreational opportunities.*

THE LAND THAT is now called Otter Slough Conservation Area was acquired in three land purchases that began in 1944 with the acquisition of the 244-acre Bradyville Tract and ended in 1988 with a 3,500-acre purchase from Gaylon Lawrence. Perhaps the most historic purchase was in 1978, when the Department purchased the 1,244-acre Greenhead Hunting Club from the Charles Miller family. The area headquarters is reminiscent of the log cabins where Miller and his guests stayed after sharing waterfowl hunts on the cypress-tupelo swamp that is now Otter Lake. Seven waterfowl hunting blinds are still maintained on the lake in close proximity to the historic blinds, but duck hunters today are more likely to communicate via text message during the hunt, rather than the old crank telephones that used to be in each of the hunting club's duck blinds.

Otter Slough is one of Missouri's top public waterfowl hunting destinations and can accommodate up to 34 hunting parties when the 2,500 acres of managed wetlands are completely flooded. During peak migration, duck numbers on the area can grow to more than 60,000, and about 100 lucky hunters per day draw out for a hunt to experience the large flocks of waterfowl flying overhead.

Most of the wetlands are dedicated to the management of native moist-soil plants that waterfowl and other wetland-dependent wildlife eat. Managing for these plants requires area staff to mimic natural water fluctuations and accommodate a wide range of species. The fall and spring



17–40mm lens • f/16 • 1/50 sec • ISO 400 | by Noppadol Paothong

shorebird migration can be quite impressive. Visitors can test their bird identification skills as tight knots of shorebirds dart across the mudflats that are created with a combination of disking and shallowly flooding or slowly dewatering the impoundments. A wide variety of forest birds also may be seen or heard while enjoying our nature trail or hiking to the Bradyville Natural Area. Several geocaching sites are also located on the area.

The great number of waterfowl hunters that visit Otter Slough in the fall are only rivaled by the many anglers who flock to the area's managed fishery, Cypress Lake, during the spring spawn. In the spring and summer, visitors can paddle a canoe through Otter Lake and view the wide variety of wildlife that call it home.

If you plan a trip in late summer, be sure to call the headquarters first because Otter Lake is drained periodically to promote a healthy ecosystem. Managed archery deer hunts throughout the fall and rabbit hunting after the close of duck season provide further hunting opportunities on this diverse area.

—Kevin Brunke, area manager



## Otter Slough Conservation Area

**Recreation Opportunities:** Bird watching, hunting, fishing, geocaching, canoeing, hiking, primitive camping, and wildlife and nature viewing

**Unique Features:** Cypress-tupelo swamp, managed wetlands, and bottomland hardwood forest

**For More Information:** Call 573-290-5730 or visit [mdc.mo.gov/node/a5004](http://mdc.mo.gov/node/a5004).





MDC

# DISCOVER nature



## IDEAS FOR FAMILY FUN

To find more events near you, call your regional office (phone numbers on Page 3), or visit [mdc.mo.gov](http://mdc.mo.gov) and choose your region.

### BEGINNING TURKEY HUNTING

**APRIL 1 • WEDNESDAY • 6–9 P.M.**

*Southwest Region, Wildcat Glades Conservation and Audubon Center, 201 W. Riviera Drive, Joplin, MO 64804  
Registration required, call 417-629-3423 for information*

*All ages, families. Children 16 and younger must have a parent or guardian present.*

Spring turkey hunting offers some of the most challenging, exciting, and rewarding hunts in Missouri. Join us to sharpen your skills, learn new techniques, and gain confidence so you can harvest a spring gobbler.

### NATURE CENTER AT NIGHT: BE BEAR AWARE

**APRIL 9 • THURSDAY • 5–8 P.M.**

*Southeast Region, Cape Girardeau Conservation Nature Center, 2289 County Park Drive, Cape Girardeau, MO 63701  
No registration, call 573-290-5218 for information*

*All ages, families*

Black bear numbers are up in Missouri and they become very active in the spring, especially at campsites and near trash containers. How do we keep bears from becoming a nuisance? Visit the displays in the lobby to discover more about bears and how to keep safe while enjoying the outdoors. Youth and adult groups welcome.

### EARTH DAY AT THE HATCHERY

**APRIL 18 • SATURDAY • 9 A.M.–2 P.M.**

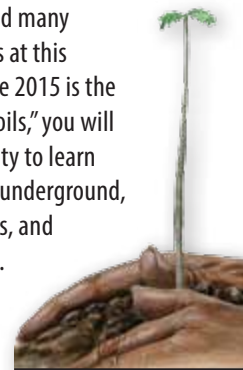
*Southwest Region, Shepherd of the Hills Fish Hatchery, 483 Hatchery Road, Branson, MO 65616*

*No registration, call 417-334-4865 ext. 0 for information*

*All ages*

Celebrate Earth Day with eco-games, recycling, nature art, and many other hands-on displays at this 11th annual event. Since 2015 is the “International Year of Soils,” you will also have the opportunity to learn about animals that live underground, how soils shape habitats, and soil/water conservation.

The first 500 visitors will receive a free tree seedling.



### FLIGHTS OF FANCY

**APRIL 18 • SATURDAY • 10 A.M.–2 P.M.**

*Southeast Region, Cape Girardeau Conservation Nature Center, 2289 County Park Drive, Cape Girardeau, MO 63701*

*No registration, call 573-290-5218 for information*

*All ages, families, youth and adult groups*

It’s a bird! It’s a plane! No wait . . . it is a bird! Come learn about the birds of Missouri and their amazing abilities. Learn about long distance travelers, how to feed them, and how to identify them. There will be crafts, games, and live bird presentations at 10:30 a.m., 11:30 a.m., and 12:30 p.m. Hikes are every 30 minutes.







Subscribe online • [mdc.mo.gov/node/9087](http://mdc.mo.gov/node/9087) • Free to Missouri households



## I Am Conservation

The Steuber family has participated in turkey hunting for generations. "My dad, Roger (top right), and my grandpa started hunting turkeys the first year there was a turkey season in Maries County," said Joe Steuber (top left) "I couldn't really tell you how young I was when I started hunting. I do, however, vividly remember when I was old enough to carry my own shotgun." Joe sought to get his two daughters, 9-year-old Maci (bottom right) and 12-year-old Madi (bottom left), involved in hunting at an early age. "They grew up doing lots of activities outside on our family farms," said Joe. "Naturally, turkey hunting was just one more fun thing to do outside." Joe said he especially likes turkey season for family fun because there are many things happening to keep kids engaged in the outdoors. "You can outsmart a loud, old gobbler in the morning, pick native flowers for great-grandma off our glades, or even luck into a mess of morel mushrooms," said Joe. He said the family also enjoys getting together in a similar fashion during firearms deer season and to enjoy small game hunting and fishing on the family farm. "As the girls are now getting a little older, we are beginning to prepare for expanding our activities to upland bird hunting and some waterfowl hunting," said Joe. "This is a type of hunting I am not too familiar with, but my wife's family is." Roger said all of his grandchildren are growing up steeped in outdoor activities. "Seeing these experiences through their eyes is a great reward for grandpa!" —*photograph by Noppadol Paothong*