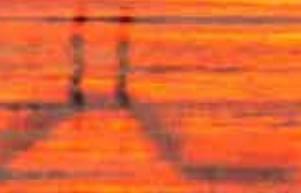


MISSOURI CONSERVATIONIST

VOLUME 81, ISSUE 12, DECEMBER 2020
SERVING NATURE & YOU



xplor



Looking for a way to coax your kids to unplug, climb off the couch, and get outside? Then check out **xplor**, the Conservation Department's free magazine for kids and kids at heart.

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MISSOURI DEPARTMENT OF CONSERVATION

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MISSOURI CONSERVATIONIST



ON THE COVER

Bald eagles fly over the Mississippi River

NOPPADOL PAOTHONG

500mm +2.0x teleconverter
f/8, 1/640 sec, ISO 800

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Inbox



Letters to the Editor

Submissions reflect readers' opinions and may be edited for length and clarity. Email Magazine@mdc.mo.gov or write to us:

MISSOURI
CONSERVATIONIST
PO BOX 180
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GOT YOU COVERED
The October 2020 cover photo is the best in years. All of the covers are excellent, but the simplicity that says so much about the core magazine subject makes it the singular best!

Dwaine Goodwin
Ozark

THE BLUE SKY BALLET

I've been reading the *Missouri Conservationist* cover to cover for many years, and I have not only learned a lot but I also have enjoyed the presentation of how the words and wonderful photos have tied together to tell the stories. *Blue Sky Ballet* by Matt Seek has raised an already high bar of excellence [October, Page 16]. This is a subject I suspect most people have little knowledge and probably no experience, which made it even more interesting.

Art Bullman via email

On behalf of my 93-year-old father: Kudos to Matt Seek and the incomparable photographer Noppadol Paothong for their great work on *Blue Sky Ballet*. The *Conservationist* continues to outdo itself on timely and exciting articles. I have been a subscriber since 1947 and am amazed at the wonderful assortment of outdoor subjects used to entertain and inform the public. Thanks again and keep up the good work.

Robert L. Thacker Poplar Bluff

PURSEWEB SPIDERS

I am currently homeschooled and in eighth grade. I enjoy reading the magazines you send us every month from cover to cover. I especially enjoyed the recent article on redlegged purseweb spiders [Hidden Architects, October, Page 11]. My mom and I went to Myron and Sonia Glassberg Conservation Area, one of our favorite hikes near our house. While on the hike we searched for purseweb spiders for about an hour and found none, which was no surprise. I expected they were unusual to find. It would be fun to find one of their homes. Thank you for the awesome magazines every month.

James Jenkins House Springs

I want to thank the *Missouri Conservationist* for the article on spiders. I was a bit scared of them until



Male (left) and female redlegged purseweb spiders

I read your article. I have a new respect for these creatures and am not so scared of them now.

Michelle DiSanto KCMO & Benton County

UP FRONT

I read your *Up Front* article in the October issue of the *Conservationist* [Page 3]. I would call it a masterpiece because I could readily relate to it.

I was walking my German Shepherds early one morning. It was still dark, and I needed a flashlight. I heard a rustle in a nearby tree, and looked over the lake to see a bald eagle flying close by. It flew right across the moon and Venus and disappeared over the tree line. Although all I could see was a silhouette, I know it was an eagle from the distinct way that it flew. He seemed to be in slow motion. So graceful! It was one of those "alive" moments that Mr. Wilder referred to. My heart seemed to leap for joy as I witnessed this unusual event. Maybe you had to be there, but it was something I will remember for a long time.

William Dickinson Jonesburg

CONSERVATIONIST CROSSING BORDERS

We really enjoy the *Missouri Conservationist*. The articles are interesting and well-written, and the photos are incredible. Every time we take the kids to visit Grandma and Grandpa in Columbia, they send us home with the latest issues. Illinois did away with our *Outdoor Illinois* magazine a few years ago due to declining revenues and massive budget shortfalls. This was a disappointment to all who care about conservation. Missouri seems to be doing things right.

Mike Reynolds Cass County, Illinois

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Send a note using our online contact form at mdc.mo.gov/commissioners.



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Share your photos on Flickr at
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email Readerphoto@mdc.mo.gov,
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1

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2



3

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Up Front

with Sara Parker Pauley

✕ Years ago, when traveling through eastern Iowa, I was tempted by the signs on the road directing me to the farm where *Field of Dreams* was filmed. It has since been developed, but at the time was a simple baseball diamond — not much else. Still, I threw a few pitches, snapped some photos, and muttered the iconic line from the film, “If you build it, he will come.”

I thought of that trip recently when touring a western Missouri conservation area in one of our nine priority geographies, the Osage Grasslands, with department staff. We stood on a high vista overlooking a beautiful landscape of rolling hills that was once part of a broader network of prairies spanning nearly one-third of our state. Our team of experts discussed plans underway to restore these precious grassland prairies and thereby secure a home for the wildlife that depend upon such habitat. (See *Seven Wins for Wildlife*, Page 16.)

One tool we’re employing is the conversion of crop and fescue fields using prairies plantings, both on public and participating private lands. And the wildlife is responding. Pollinators, such as the monarch butterfly and the regal fritillary, are thriving on these restored landscapes. Grassland birds — declining faster than any other — such as the Henslow’s sparrow, the eastern meadowlark, and northern bobwhite now have a place to call home. I delighted at the vision of these restored prairies thriving with grassland creatures and mused, “If you build it, they will come.”

Sara Parker Pauley

SARA PARKER PAULEY, DIRECTOR
SARA.PAULEY@MDC.MO.GOV

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Printed with soy ink



Nature LAB

by Bonnie Chasteen

Each month, we highlight research MDC uses to improve fish, forest, and wildlife management.

WILDLIFE MANAGEMENT

Eagle Watch Program

✳ When bald eagles begin nesting in the Marshfield area, auto mechanic Jonathon Wilson spends almost every Saturday and Sunday watching them. “I just get lost in it,” he said.

This is Wilson’s second year volunteering with Missouri’s Eagle Watch Program, started by MDC Scientist Janet Haslerig in 2018. She leads Missouri’s bald eagle monitoring program, an annual effort begun in 2007, shortly after the U.S. Fish and Wildlife Service removed the bird from the federal endangered species list. “After delisting, states were asked to monitor their bald eagle populations,” Haslerig said.

She soon felt the need for help with this task, noting that other states were training volunteers to monitor local eagle nests.

“It seemed like a good way to get people involved as well as reduce competing demands on staff,” she said.

To train volunteers quickly, Haslerig posted videos and documents online. Currently, she has 89 volunteers monitoring 285 nests. “But,” she said, “we have over 500 active nests, so we need more help, especially in the northwest part of the state, where wind energy development is ongoing.”



Eagle Watch volunteers monitor known bald eagle nests to help MDC track the bird’s recovery statewide.

Citizen-science effort needs volunteers to collect information necessary for bald eagle conservation

“During project planning, wind energy developers can make accommodations to reduce potential disturbance to nesting eagles, and local monitors can help document the progress of these reduction efforts,” Haslerig said.

Having trained, dedicated volunteers “is our first line of defense in detecting immediate, local threats,” she said.

Wilson, who enjoys watching the state’s bald eagle numbers grow, emphasized that it’s important to learn how to monitor correctly. “It’s easy to spook an eagle, and sometimes they never come back,” he said.

To sign up for the Eagle Watch program, contact Janet Haslerig at 573-522-4115, ext. 3198 or EagleWatch@mdc.mo.gov.

Eagle Watch Program at a Glance

Purpose

Train citizen scientists to monitor Missouri’s bald eagle population and productivity trends

Objectives

- Increase public awareness and education to ensure the bald eagle’s continued recovery
- Educate volunteers about eagle nesting biology and monitoring techniques
- Locate new nests and verify and update status of existing nests



Volunteers are needed in the state’s four corners

How Monitoring Info is Used

- Populate and update information in the Natural Heritage Database
- Compile data for publication and distribution to the public
- Determine where conservation action may be needed

In Brief

News and updates from MDC

GIVE NATURE-THEMED HOLIDAY GIFTS

MDC'S ONLINE NATURE SHOP MAKES HOLIDAY SHOPPING A BREEZE

➔ Have any nature lovers on your holiday gift list? Visit MDC's online Nature Shop for all your nature-themed gift-giving needs. Offerings include the ever-popular *Natural Events Calendar*, plus a variety of books and more for all ages.

Holiday shoppers can also skip long lines at retail stores and visit one of our nature centers, located around the state in Kirkwood, Cape Girardeau, Springfield, Kansas City, Blue Springs, and Jefferson City. There you'll find an array of reasonably priced, nature-themed holiday gifts. (Masks are required, and other COVID-19 health precautions are in place at these locations.) Offerings include:

✳ **2021 Natural Events Calendar** (\$9) has amazing images of native animals, plants, and places, along with phases of the moon, holidays and days of recognition, daily notes about natural events, and more.

✳ **Cooking Wild in Missouri** cookbook (\$16) features more than 100 recipes for native game, fish, fruits, nuts, and mushrooms.

✳ **Trees of Missouri** (\$8) field guide can help identify more than 170 tree species by leaf arrangement and shape, with easy-to-understand descriptions, range maps, and full-color illustrations.

✳ **A Paddlers Guide to Missouri** (\$8) makes a great gift for canoeists, kayakers, and floaters with color photos, maps, and descriptions of 58 rivers and streams.



✳ **Missouri's Wild Mushrooms** book (\$16) is a great guide for hunting, identifying, and cooking the state's most common mushrooms.

✳ **Missouri Wildflowers** book (\$16) has colorful pictures arranged by flower color and blooming time with descriptions covering plant characteristics, habitat, and range.

Buy these and other items at MDC nature centers, through our online Nature Shop at mdcnatureshop.com, or by calling 877-521-8632. Applicable tax, shipping and handling costs apply.

Give the gift of hunting and fishing permits for hunters and anglers on your list. Buy permits from vendors around the state, online at mdc.mo.gov/buypermits, or through our free mobile apps, MO Hunting and MO Fishing, available for download through Google Play for Android devices or the App Store for Apple devices.



DISCOVER NATURE AT EAGLE DAYS

Did you know thousands of bald eagles visit Missouri each winter, and eagle watching in Missouri can be spectacular? From late December through early February, watch for eagles perched in large trees along rivers, streams, and lakes.

Due to the ongoing COVID-19 pandemic, MDC will not be hosting Eagle Days events this year, but we encourage you to look for eagles on your own. Get out early in the morning to see eagles flying and fishing. Here are some MDC suggestions for winter eagle watching:

- Lake of the Ozarks at **Bagnell Dam Access**, east of Bagnell
- **Eagle Bluffs Conservation Area** on Route K, southwest of Columbia
- **Lock & Dam 24** at Clarksville
- **Lock & Dam 25**, east of Winfield
- **Mingo National Wildlife Refuge**, northwest of Puxico
- **Old Chain of Rocks Bridge** south of I-270, off Riverview Drive, St. Louis
- **Riverlands Migratory Bird Sanctuary**, east of West Alton
- **Schell-Osage Conservation Area**, north of El Dorado Springs
- **Smithville Lake**, north of Kansas City
- **Loess Bluffs National Wildlife Refuge**, south of Mound City
- **Swan Lake National Wildlife Refuge**, south of Sumner
- **Table Rock Lake and Shepherd of the Hills Fish Hatchery**, southwest of Branson
- **Truman Reservoir**, west of Warsaw

Get more information on Eagle Days, including related MDC online events, at short.mdc.mo.gov/ZG7.

Ask MDC

Got a Question for Ask MDC?

Send it to AskMDC@mdc.mo.gov
or call 573-522-4115, ext. 3848.

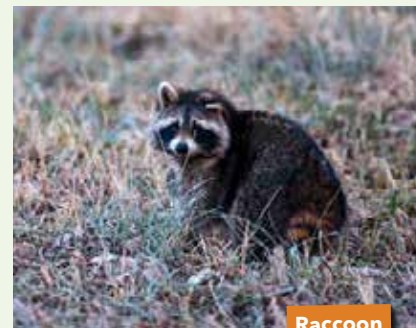
Q: How do raccoons survive the winter?

➔ Raccoons do not excavate their own dens. However, they do create dens in a variety of eclectic places, including hollow trees, caves, crevices in rocky ledges, cavities beneath tree roots, stands of slough grass, or even abandoned farm buildings. They also repurpose dens and nests abandoned by other mammals, such as woodchucks and muskrats.

They don't hibernate, but during periods of snow and ice, raccoons usually den up for a few days, either singly or in groups of up to 23.

This includes both sexes and all ages. Adults seemingly appear to lead solitary lives, but may use communal dens during unusually severe weather, in periods of high population, or in places with an abundant food supply.

In the fall, raccoons eat great quantities of food and put on considerable body fat. This supply of fat is the major source of energy during the winter. By late winter, they may lose as much as 50 percent of their autumn weight. They may venture out in mid-winter to search for food, which is why it is important to keep garbage receptacles, pet food bowls, and other potential sources secured.



Raccoon

Q: How did the 2019 Missouri River flood impact the movement of waterfowl? I didn't see or hear geese flying over the following November and December?

➔ While local Canada geese often use the same water bodies to roost each night, they will fly to different places in search of food. In years when Missouri experiences flooding on major rivers, many farmers are unable to plant their corn and soybean crops. Since geese have adapted to take advantage of grain residue left in those fields after harvest, their typical daily flights in search of food can change in a flood year and this may be what you noticed last winter.

Geese are primarily vegetarians, and snow geese, Ross's geese, and Canada geese are all known to eat domesticated grains. However, both local geese and migrating geese seek out other food sources. Throughout the year,

they eat plants such as grasses, sedges, rushes, forbs, horsetails, cottongrass shoots, willow, roots and tubers, and even berries.

Q: These gulls appear every fall and winter, diving behind the tractor as we till the soil near Canton. They appear to be eating worms and insects, but I don't see any. What are they eating?

➔ Ring-billed gulls are common and abundant in Missouri, particularly near our large rivers and other bodies of water, said MDC Ornithologist Sarah Kendrick. They are the most common inland gull and can be found near reservoirs, lakes, ponds, streams, landfills, parking lots, and shopping malls. Most ring-billed gulls nest in the interior of the continent, near freshwater.

These opportunistic omnivores predominately eat fish and invertebrates, but they dine on anything they can get their bills on, including grain and leftover human food. The gulls you are



Ring-billed gulls



seeing are likely feasting on the worms, arthropods, and even small rodents plowed up by the disc. Learn more about this adaptable species at allaboutbirds.org/guide/Ring-billed_Gull.



Chad Gray

OSAGE COUNTY
CONSERVATION AGENT

offers this month's

AGENT ADVICE

December is here, and if you did not bag a deer yet this season, there is still time. The alternative methods portion of the firearms deer season opens statewide Dec. 26 and runs through Jan. 5, 2021. Permitted methods include atlatl, permitted archery methods, muzzleloaders, centerfire handguns, and air rifles. If using handguns, review the definition that became effective on Aug. 30. Be sure you have the correct permit before going afield. Also, be aware of county specific antler point restrictions and antlerless permit limits. Only two antlered deer may be taken during the archery and firearms deer hunting seasons combined.

FOR MORE INFORMATION, SEE THE 2020 FALL DEER AND TURKEY HUNTING REGULATIONS AND INFORMATION BOOKLET, AVAILABLE WHERE PERMITS ARE SOLD OR AT SHORT.MDC.MO.GOV/ZXV.

What IS it?

Can you guess this month's natural wonder?

The answer is on Page 9.



INVASIVE SPECIES

MISSOURI'S LEAST WANTED

Invasive nonnative species destroy habitat and compete with native plants and animals. Please do what you can to control invasive species when you landscape, farm, hunt, fish, camp, or explore nature.

Heavenly Bamboo

Heavenly bamboo (*Nandina domestica*) is an evergreen shrub with lacy-looking leaves and sprays of red berries that persist through the winter. Its multi-stemmed, canelike clumps resemble true bamboo. Except in the coldest temperatures, the leaves don't drop. They stay green all winter and are often tinged with red. Native to Asia, heavenly bamboo was introduced to America in the early 1800s as an ornamental.

Why It's Bad

Given its effects on native plants and animals, heavenly bamboo is hardly "heavenly." It can form thickets, and its ever-present leaves shade out native wildflowers. All parts of the plant are toxic. The berries contain high levels of cyanide and can poison wild birds and other animals, including pets. It has few pests or diseases to control it.

How to Control It

Researchers have been tracking the spread of heavenly bamboo. So far in Missouri, the outbreaks are minimal, but are occurring in the Ozarks, and it seems only a matter of time before heavenly bamboo becomes a big problem in woodlands and other natural areas. Early detection and elimination are key to minimizing the impact of this invasive species. Heavenly bamboo spreads vigorously from its roots (much like true bamboo). If you try to pull up a plant and even a small piece of root remains in the soil, it can resprout. Cutting down or



Heavenly bamboo is an invasive shrub from Asia that has negative effects on our native plants and animals.

burning the top of an established heavenly bamboo plant results in its resprouting from the stump. Herbicides typically work best on small plants or on young resprouts. Depending on the situation, controlling this plant can include a combination of prescribed burning, hand pulling of seedlings, cutting, and herbicide treatments.



Its berries contain high levels of cyanide and can poison birds and other animals, including pets. The ever-present leaves shade out native wildflowers.

Alternative Native Plants

- ✓ American beautyberry
- ✓ Virginia sweet-spice
- ✓ Carolina allspice
- ✓ New Jersey tea
- ✓ Wahoo
- ✓ Black chokeberry
- ✓ Fragrant sumac
- ✓ Ninebark

For more information visit short.mdc.mo.gov/Z6w

HONOR MISSOURIANS WHO CONTRIBUTED TO CONSERVATION

The Missouri Conservation Commission and MDC recognize citizens who make outstanding contributions to conservation, and are accepting nominations for their Master Conservationist Award and the Missouri Conservation Hall of Fame. The Master Conservationist Award honors living or deceased citizens while the Missouri Conservation Hall of Fame recognizes deceased individuals. Those who can be considered for either honor are:

- Citizens who performed outstanding acts or whose dedicated service over an extended time produced major progress in fisheries, forestry, or wildlife conservation in Missouri.
- Employees of conservation-related agencies who performed outstanding acts or whose dedicated service over an extended time produced major progress in fisheries, forestry, or wildlife conservation in Missouri.

Anyone can submit a nomination, which should include a statement describing the nominee's accomplishments and a brief biography. A screening committee appointed by the MDC director meets annually to consider nominees, with the Conservation Commission conveying final approval.

Get more information on the Master Conservationist Award and nomination form at short.mdc.mo.gov/Zxh. For more information on the Missouri Conservation Hall of Fame and nomination form, visit short.mdc.mo.gov/Zxn.

Nominations must be submitted by Jan. 1, 2021, to Missouri Department of Conservation, Attention Julie Love, PO Box 180, Jefferson City, MO 65102-0180, or emailed to Julie.Love@mdc.mo.gov.



Cathy and Tom Aley of Taney County are the latest recipients of the MDC Master Conservationist award. Get more of their story at short.mdc.mo.gov/ZLW.



ENJOY WINTER TROUT FISHING

MDC staff have stocked about 73,000 rainbow trout in more than 30 urban-area lakes around the state for winter trout fishing. Many of these areas allow anglers to harvest trout as soon as they are stocked, while others are catch-and-release until Feb. 1. Find locations at short.mdc.mo.gov/ZoH.

The daily limit for catch-and-keep is four trout with no length limit. All Missouri residents over age 15 and under age 65 must have a fishing permit. All nonresidents over age 15 must have a fishing permit. To keep trout, anglers of all ages must have a Missouri trout permit.

Buy permits from vendors around the state, online at mdc.mo.gov/buypermits, or through our free mobile app — MO Fishing — available for download through Google Play for Android devices or the App Store for Apple devices.

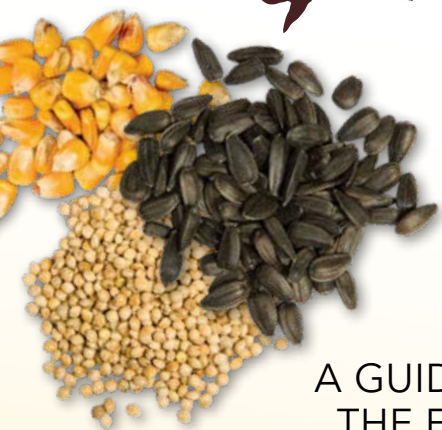
WHAT IS IT? ROUGH COCKLEBUR

The fruit of a rough cocklebur — a brown, hard, woody bur covered with stout, hooked prickles — are considered a nuisance by most people. This annual plant disperses through these spine-covered burs, which stick to clothing, pets, and livestock. Rough cocklebur is tolerant of a variety of soil conditions, ranging from moist clay to dry sand, so it grows easily.





Bird's-Eye View



A GUIDE TO BIRDS AND
THE FOOD THEY LOVE

Birds are truly our feathered friends. Many of them overwinter in Missouri, braving bitter cold days to provide endless hours of entertainment for birdwatchers. If you are interested in attracting more birds to your home to while away a winter's day, it's easy to do. You can simply scatter a smorgasbord of seed on the ground and watch the feathers flock. If you want something fancier, you can make a variety of feeders to place around your home (see Page 15). Once the stage is set, sit back and watch the show. This guide will help you identify your visitors and the best feed to keep them coming back for more. You can also visit short.mdc.mo.gov/Z28 for more information.



But First, Make
This Field Guide



- 1 Cut out the next two pages along the dotted lines.
- 2 Fold each cut-out down the middle.
- 3 Stack the cut-outs so the pages are in numerical order.
- 4 Staple the cut-outs together along the middle between pages 8 and 9.
- 5 Sit with this field guide where you can see birds.



Female northern cardinal

Male northern cardinal



mdc.mo.gov

Backyard Birds



Black-capped chickadee

A Mini Field Guide to the Feathered Foragers at Your Feeder

16

1

Frequent Fliers ... A Few Others to Watch for

Pine Siskin

Pine siskins show up in Missouri when seeds get scarce in northern forests where the birds usually live.



American Goldfinch

American goldfinches are active, acrobatic little birds that sometimes hang upside down to feed.



Red-Bellied Woodpecker

Red-bellied woodpeckers aren't well-named. Although the red on their heads stands out, the blush on their bellies is hard to see.



Dried kernels of **corn** are prized by blue jays. Cracked corn is eaten by doves and sparrows.



Peanuts are treasured by nuthatches, woodpeckers, titmice, and blue jays.



Peanut butter and suet

(animal fat) attracts woodpeckers, chickadees, titmice, nuthatches, and occasionally warblers.

If you forget to fill your feeder, don't worry. Birds are resourceful and will find food elsewhere. But to keep the birds coming back, keep your feeders stocked.

14

3

Treats for Tweets

Birds of a feather may flock together, but that doesn't mean they have the same tastes. Here's a list of treats that's sure to have a variety of birds tweeting at your feeder.

Black-oil sunflower seeds attract the widest variety of birds. Cardinals especially love them.



Doves, juncos, sparrows, and other ground-feeding birds prefer **white millet**. Scatter it on the ground, underneath a feeder stocked with black-oil sunflower seeds.



Nyjer seed (also called thistle) attracts finches and pine siskins.

European Starling

European starlings were brought to New York City from Europe in the 1890s. They are now one of the most common birds in the U.S.



House Sparrow

Like the white-crowned sparrow, house sparrows also have a pecking order. Males with the biggest black patches on their throats get to eat first.



Cooper's Hawk

Cooper's hawks sometimes swoop in to pluck songbirds from feeders. That is nature's way. Hawks have to eat, too.



Northern Cardinal



At the Feeder: Sunflower seeds
In the Wild: Seeds, berries, small insects

Female cardinals are the same size and shape as males but aren't as colorful.

Cardinals are wary birds, often flicking their tails and whistling a sharp "chip" to show they're agitated.

White-Crowned Sparrow



At the Feeder: Millet, thistle, cracked corn
In the Wild: Weed and grass seeds, insects, berries

There's a pecking order when it comes to sparrows. Those with the brightest colors on their heads get to eat first. Sparrows with duller plumage are sent to the back of the line, forced to wait their turn.

White-crowned sparrows often hop backward then forward, dragging both feet on the ground, where they prefer to feed. This fancy footwork helps turn over leaves to expose hidden seeds.

House Finch



At the Feeder: Sunflower seeds, thistle, millet
In the Wild: Seeds, berries

Flocks of finches may stay at feeders a long time, gobbling tons of seeds and preventing other birds from eating.

Purple finches look a lot like house finches. To tell the birds apart, look at the streaks on their sides. Male house finches have brown streaks; male purple finches have rosy streaks.

Male house finches come in many shades, from yellow to orange to red. They get their color from pigments in the wild seeds they eat. Female house finches are brown.

12

Blue Jay



At the Feeder: Peanuts, sunflower seeds, cracked corn
In the Wild: Acorns, insects, berries, small animals, bird eggs

Blue jays are known as the bullies of the bird feeder. You can tell a blue jay's mood by looking at the crest of feathers on top of its head. A calm jay keeps its crest down. When a jay is agitated, its crest comes up.

Jays often shriek "Thief! Thief!" before swooping into a feeder. The call scares away other birds, leaving the feeder competition free.

5

Black-Capped Chickadee



At the Feeder: Sunflower seeds, peanuts, suet
In the Wild: Insects, spiders

When a chickadee spots danger, it gives an alarm call — chickadee-dee-dee — to warn other birds. The more dees, the bigger the danger.

Chickadees are bold, curious birds. With lots of patience and a steady hand, you can coax a chickadee to eat seeds from your palm.

Chickadees hide most of the seeds they take for later. Even with a brain smaller than a raisin, the little birds can remember the precise location of thousands of seeds.

10

Dark-Eyed Junco



At the Feeder: Millet, sunflower seeds, cracked corn
In the Wild: Mostly weed seeds, but a few insects

The "boss" bird in a flock of juncos feeds in the center where it's safest. You might see juncos lunge at each other and flick open their tails. This is how they figure out who is in charge.

Juncos often scratch around in feeders, kicking seed over the edge to birds below, where they prefer to feast.

Juncos are nicknamed "snowbirds" because they appear in Missouri during late fall and winter. In spring, they migrate north to nest.

7

Mourning Dove



At the Feeder: Cracked corn, millet, sunflower seeds
In the Wild: Weed and grass seeds

When a mourning dove takes flight, its wings make a whistling sound.

Doves quickly gobble seeds, storing them in a pouch in their throat called a crop. Once a dove has topped off its crop, it flies to a safe perch to digest the meal.

6

Downy Woodpecker



At the Feeder: Suet, peanuts, sunflower seeds
In the Wild: Insects, acorns

When a downy woodpecker is threatened by another bird, it fans out its tail and swings its beak like a sword.

Male downies keep females from feeding in the best spots. When males arrive at a feeder, females often fly away to hide in a nearby tree.

If a male spots danger when he's alone, he keeps quiet. But when he's with a female, he gives an alarm call to alert her of the threat.

11

Tufted Titmouse



At the Feeder: Sunflower seeds, peanuts
In the Wild: Mainly insects in summer; acorns and seeds in fall and winter

Titmice flit down to a feeder, grab the largest seed they see, and dash away. At a safe perch, they hold the seed with their feet and peck it open. Many seeds are hidden in trees for a later snack.

Tufted titmice couples defend their territories year-round. That's why you usually see only one or two titmice at your feeder at once. If you see more, they're likely young joining mom and dad for a family dinner.

8

White-Breasted Nuthatch



At the Feeder: Suet, sunflower seeds, peanuts
In the Wild: Insects, acorns, seeds

Though small, nuthatches are feisty. They often swing their long, sharp beaks like swords to drive away other birds. When this happens, only woodpeckers hold their ground.

Called the upside-down birds, nuthatches have an interesting way of walking down tree trunks, branches, and feeder perches.

Nuthatches love to swipe peanuts and stash them away to eat before bedtime. Seeds with shells require too much effort to crack right before bed, so they are usually eaten on the spot.

9

Feeders

Birds are on the hunt for food all winter, but by February, wild pickings are slim. Give your feathered friends a hand by making a bird feeder.



Wreath Feeder

Items you'll need:

- Bundt cake pan (Use mini Bundt cake molds if you want to make multiple wreath feeders)
 - 4 cups bird seed (Choose seed that attracts birds you're interested in)
 - Cranberries (optional)
 - 1 ½ packets of unflavored gelatin
 - ½ cup warm water
 - ⅓ cup corn starch
 - 3 tablespoons light corn syrup
 - Thick ribbon
 - Kitchen items: drying rack, medium-sized sauce pan, spatula, and measuring utensils
 - Nonstick cooking spray
1. **Spray** the Bundt pan mold liberally with nonstick cooking spray. Place the cranberries in the pan how you would like them to look on the front of the wreath. Set aside.
 2. **Measure** 4 cups of bird seed in an easy-to-pour container. Set aside.
 3. **Whisk** together the packets of unflavored gelatin and warm water in a medium-sized sauce pan on medium heat until it is dissolved.
 4. **Add** in corn starch and light corn syrup. Whisk until there are no lumps of cornstarch left. The mixture will start to form a thick paste. The paste should be smooth and thick.
 5. **Remove** the pan from the heat once the paste is formed and stir in the 4 cups of bird seed. Tip: spray your spatula with nonstick cooking spray before mixing together.
 6. **Add** the combined mixture into the Bundt pan mold, packing it down and keeping the cranberries in place. Evenly distribute the mixture so the wreath will be balanced when it sets.
 7. **Place** the pan in the fridge. Remove it from the fridge when it's hard to the touch. This should take no longer than an hour.
 8. **Take** it out of the fridge once hardened and gently remove the wreath from the pan by flipping it upside down onto a cooling rack. Let it dry 12–24 hours before adding ribbon or handling it too much.
 9. **Tie** a thick ribbon around the wreath and carefully hang it where the birds will see it.

Suet Feeder

Homemade suet should be used in very cold weather so it does not melt and spoil. Wait until at least December to use it because suet can attract bears and other animals if put out too early.

- 2 parts melted fat (beef fat or lard)
- 2 parts yellow cornmeal
- 1 part natural peanut butter

1. **Melt** the fat in a saucepan until completely liquid. Remove from heat and let sit for several minutes.
2. **Stir** in the remaining ingredients and cook for a few minutes.
3. **Pour** into small containers (tuna fish cans are good), and refrigerate until they start to harden and then store them in the freezer until ready for use.
4. Mixture can also be stuffed into 1-inch holes drilled in small logs to hang from trees.

* As an alternative in warmer temperatures, replace suet (animal fat) with peanut butter. Mix 1 part peanut butter with 5 parts corn meal. The mixture can be stuffed in crevices of pinecones or 1-inch holes drilled in small logs.




Pinecone Feeder

1. **Gather** a bunch of pine cones. Tie yarn or twine around the top of each one.
2. **Cover** the cones with peanut butter. Fill all the little spaces.
3. **Pour** birdseed into a small tub or cake pan. Roll the cones through the seed. Press firmly so plenty of seed sticks to the peanut butter. Keep rolling until each pine cone is completely covered.
4. **Tie** your pine cones to sturdy branches where you can keep an eye on them. When your pine cones are picked clean, reuse them to make new bird feeders.







The bald eagle, most waterfowl, elk, black bear, wild turkey, white-tailed deer, and the peregrine falcon were once rarely seen in the Show-Me State.

WINS FOR WILDLIFE

WITH PARTNERSHIPS AND
CAREFUL CONSERVATION,
THESE CRITTERS HAVE MADE
A STRONG COMEBACK

by Bonnie Chasteen

In most parts of Missouri, it's common to see white-tailed deer, a flock of wild turkeys, or a pair of Canada geese. But not that long ago, they were quite rare in the Show-Me State.

Today, thanks to decades of public and private conservation efforts, deer, turkey, and many other kinds of native wildlife are secure and thriving.

Let's take a closer look at seven critters we count as wins for conservation in Missouri.

1. White-Tailed Deer

In 1925, only about 400 deer remained in Missouri. Whitetails had been abundant in pre-settlement Missouri, but by the late 1800s, unregulated hunting and habitat destruction had depleted the herd. In 1937, the newly formed Conservation Commission made deer hunting illegal. In the following years, conservation agents brought in white-tailed deer from other states and relocated them from parts of Missouri with remnant populations. By 1944, the herd had grown to 15,000, and MDC held a two-day fork-horn, buck-only firearms season.

Over the years, landowners aided this recovery, working with MDC and other natural resource-management agencies to restore much-needed habitat.

In 2019, MDC celebrated 75 years of modern deer hunting. Today, over a million whitetails roam free in Missouri, and hunters commonly check more than 100,000 deer during the November firearms season alone.

While the whitetail is now secure on Missouri's landscape, a new threat has emerged. Chronic wasting disease (CWD) appeared in Missouri in 2012. Easily shared between deer, CWD is always fatal. Fortunately, MDC has one of the nation's most effective CWD-control programs.

MDC has tested nearly 150,000 white-tailed deer for CWD. Annual sampling shows where the disease exists so we can limit its spread and effect on the deer population. Many landowners are also fighting CWD by participating in winter targeted culling after deer season closes.

"These efforts remove additional CWD-positive animals and slow the spread of the disease throughout the rest of the year," said MDC Private Lands Deer Biologist Kevyn Wiskirchen.



Wildlife Restoration Pays

Periodic surveys show that **76%** of Missourians support MDC's efforts to restore animals that once lived or are currently very rare in the state. Missourians regularly vote for the hunting, angling, and other outdoor opportunities these efforts provide with their recreation dollars.

Deer hunting, for example, generates more than **\$1 billion in economic activity** annually. A 2016 study showed that elk-related tourism generated over \$1 million in economic activity, and wildlife watchers create an economic impact of \$1.7 billion. Overall, hunting and fishing make an impact of \$3 billion to Missouri's economy every year.

2. Eastern Wild Turkey



When settlers came to Missouri, wild turkeys were so plentiful that homesteaders didn't even bother raising domestic turkeys. But by 1937, people had killed all but about 2,500 of Missouri's wild gobblers. To begin the process of restoring the state's wild turkey population, MDC bought a large wild area deep in the Ozarks that would become the 23,761-acre Peck Ranch Conservation Area (CA).

In 1954, MDC staff started trapping and relocating turkeys from Peck Ranch CA. They also started raising wild turkeys. In the spring of 1960, Missouri launched a modern turkey-hunting season with a three-day season in 14 counties. Nearly 700 hunters bought permits, and they harvested 94 turkeys.

As former MDC Turkey Biologist Tom Dailey wrote in the April 2010 *Conservationist*, "Missouri's environment was perfect for turkeys, and populations grew exponentially, with birds filling the many areas of good habitat and eventually moving into marginal habitat."

Landowners eagerly helped with Missouri's wild turkey restoration program, supporting MDC staff efforts to relocate and protect the wild birds around the state. Now, the eastern wild turkey is available, and often abundant, in every one of Missouri's 114 counties.

3. Waterfowl

The sound of Canada geese honking overhead can mean the beginning of spring or fall migration. But Missouri nearly lost the sounds of migrating geese and other waterfowl. One reason was the widespread loss of our continent's wetlands. These are marshy places that geese and ducks need to survive. In 1989, the North American Wetlands Conservation Act provided funding for wetland restoration, encouraging people to restore their historic wetlands from Canada down through the U.S. and deep into Mexico. Breeding-habitat programs, which restore and/or protect wetlands and adjoining grassland habitat that are essential for nesting, also helped waterfowl grow their numbers.

Today, federal funds are available for wetland easements and improvements via the NRCS Agriculture Conservation Easement Program — Wetland Reserve Easements, the Continuous Conservation Reserve Program, and the U.S. Fish and Wildlife Service (USFWS) Partners for Fish and Wildlife Program. MDC also provides cost-share funds through the Landowner Assistance Program.

Thanks to these private and public efforts, hunters and bird-watchers alike flock to Missouri's public wetlands, where millions of migrating ducks, geese, and shorebirds stop to feed and rest.

"These partnerships have been a tremendous boost for wetland resources in the state," said MDC Wetland Services Biologist Mike McClure.



4. Elk



These big grazers are related to deer and moose, and they once roamed throughout most of North America. But by 1886, Missouri's elk had disappeared into stewpots and local meat markets. Over the years, a few elk wandered in from other states like Kansas and Arkansas, but no herd ever took hold in the Show-Me State during the 20th century.

In 2011, MDC began a collaboration with the Kentucky Department of Fish and Wildlife Resources to move 108 elk to Missouri over a three-year period. The elk were released in the 346-square-mile restoration zone centered around Peck Ranch CA in Carter, Reynolds, and Shannon counties.

The following benchmarks were established to determine when an elk hunting season could be held: population of at least 200 elk; annual population growth rate of at least 10 percent; and a ratio of at least one bull to four cows. This fall, Missouri reached that benchmark and offered its first-ever regulated elk hunt, beginning with a nine-day archery season in October and a nine-day firearms season in December.

"The elk herd has settled into its new home in Missouri and is doing well," said MDC Deer and Elk Biologist Aaron Hildreth. "We're excited about having elk back on the landscape. We're also looking forward to starting the tradition of elk hunting in Missouri."

5. Bald Eagle

Did you know America adopted the bald eagle as its symbol in 1782? Sadly, this big bird of prey wasn't strong enough to survive habitat loss and pesticides. Chemicals like DDT poisoned the bird's food and weakened its eggs, making it nearly impossible for healthy chicks to hatch. In 1963, with only 487 nesting pairs of bald eagles left, the United States listed it as endangered, making it illegal to shoot the birds. In 1972, a ban on DDT helped improve nesting success.

Here in Missouri, MDC cooperated with USFWS and the Dickerson Park Zoo in Springfield to release 74 young bald eagles. From 1981 to 1990, the eaglets were obtained from captive breeding facilities or healthy wild populations and released in good nesting habitat at Mingo National Wildlife Refuge and Schell-Osage CA.

Thanks to many local efforts across the United States, the bald eagle started to recover nationally by the mid-1980s. As a result, the USFWS removed the bald eagle from the endangered species list on June 28, 2007. However, the bald eagle remains protected under the Migratory Bird Treaty and the Bald and Golden Eagle Protection acts, and it continues to be a species of conservation concern in Missouri.

"In recent years, we have seen an increase in the number of active bald eagle nests and as well as individuals reporting them," said MDC Resource Scientist Janet Haslerig, who heads up Missouri's bald eagle monitoring program. "In 2006, there were 123 active nests, and today we have approximately 500 active nests."

In part, Haslerig credits the increase in reports to Missouri's citizen-science Eagle Watch Program, which she started in 2018 (see Nature Lab, Page 4). To participate, email EagleWatch@mdc.mo.gov.



The Habitat Connection

MDC has been working with public and private partners to restore our state's missing or declining wildlife for more than 80 years.

"Although the peregrine falcon is an exception, where habitat has been restored in Missouri, wildlife restoration has generally followed," said MDC Natural Community Ecologist Mike Leahy. "Especially tough cases are species like greater prairie-chickens that need large-scale, open native-grassland landscapes to survive and thrive."

"Others, like the collared lizard, for example, have done well in scattered pockets of glade and woodland restoration in the Ozarks," Leahy said.

Going further into the 21st century, the Missouri State Wildlife Action Plan will help the state keep common species common while at the same time restoring species that used to live here and can thrive in smaller-scale natural communities.

Visit the Missouri State Wildlife Action Plan at short.mdc.mo.gov/ZqN.

Watch Falcon Cams

Keep tabs on the world's fastest birds of prey as they raise their young. Visit the Kansas City and St. Louis web cameras at short.mdc.mo.gov/ZZJ.

Help Wildlife Where You Are

Follow these tips to protect and conserve wildlife where you live and recreate:

- Don't litter, and help pick up litter when you hunt, hike, fish, or float. Discarded fishing line can tangle, strangle, and hang fishing birds like osprey, kingfishers, and eagles.
- Don't dump your bait or unwanted aquarium pets. Releasing nonnative fish, frogs, and other critters into the water can hurt Missouri native fish.
- Make room for wildlife in your yard. Birds and butterflies need native flowers, shrubs, and trees. Frogs, toads, and turtles need a small wild area with some water, if possible. Cottontails will use a little, out-of-the way brush pile, and squirrels need nut-bearing trees like oaks, hickories, walnuts, and pecans.

6. Black Bear



Missouri was once home to an abundant bear population. But by the early 1900s, habitat loss and unregulated harvest had driven bear numbers so low that people thought they were gone. Then, in the late 1950s and early 1960s, the Arkansas Game and Fish Commission reintroduced bears into their state. As Arkansas bear population grew, sightings became more common in Missouri. Over the last 50 years, Missouri's bear population, which is connected to a larger population in Arkansas and Oklahoma, has grown and expanded in range. Bear sightings are now becoming more common north of I-44.

In 2010, MDC began an extensive bear study with research partners from New York and Mississippi, and it has continued through 2020. Over the course of this study, which will inform MDC's black bear management for the foreseeable future, researchers were able to calculate how quickly Missouri's bear population was growing.

"We determined that there were approximately 540–840 black bears in the state in 2019, and the population was growing at about 9 percent annually," said Laura Conlee, MDC's lead black bear researcher. "At this growth rate, the population would be expected to double in about 10 years."

To learn more about black bears, MDC's Black Bear Management Plan, being bear aware, and a potential future black bear hunting season, visit mdc.mo.gov/bears.

7. Peregrine Falcon

Like the bald eagle, this bird of prey disappeared from Missouri in the mid-1900s — another victim of pesticides. Unlike the bald eagle, the peregrine falcon's restoration story has depended more on human-made structures than on natural habitat, and in 1999, the USFWS removed it from the endangered species list.

"Peregrine falcons are attracted to skyscrapers and smoke stacks," said MDC Urban Wildlife Biologist Joe DeBold, who leads Missouri's peregrine falcon restoration program. "These sites give them easy access to lots of pigeons, waterfowl, and other birds, which they hunt."

Today, several nest boxes appear atop tall buildings or on smokestacks in Kansas City and St. Louis. In the past seven years, biologists have banded 196 young falcons hatched in those nests.

"Partnerships are the reason we can do this," DeBold said. "Without our partners like American Century Investments and Evergy in Kansas City and the World Bird Sanctuary and Ameren Missouri in St. Louis, the nest sites would not be available."

DeBold noted that two natural-habitat nest sites have been documented on the Mississippi River bluffs on the Illinois side of the river.

"However," he said, "at 14 pairs, we've got the highest population ever documented in Missouri."

A proposal for removing the bird from Missouri's endangered species list is underway, "but we want to keep the peregrine listed as a species of conservation concern," DeBold said. ▲

Staff writer and editor Bonnie Chasteen enjoys writing about nature and the people who protect it.



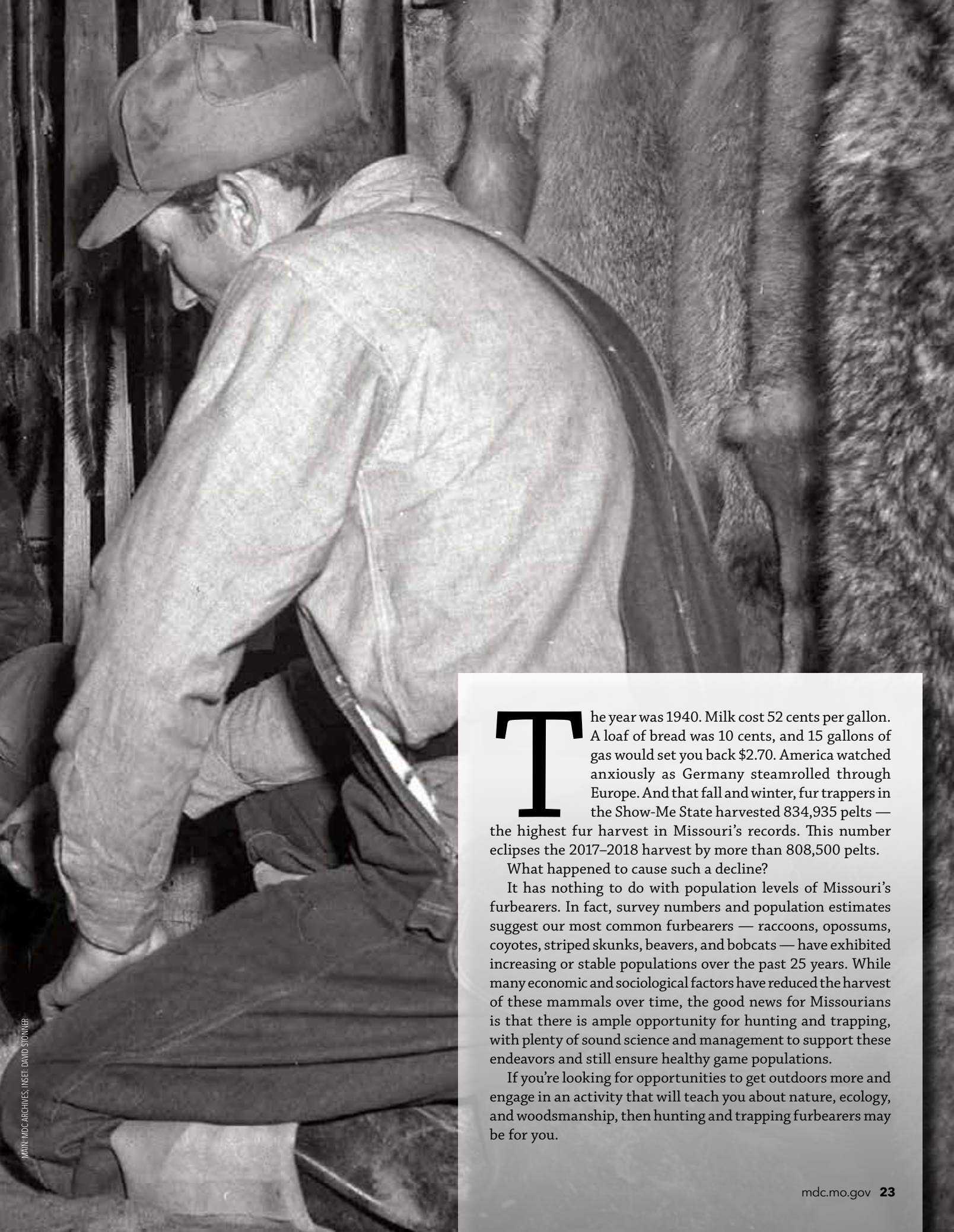
HUNTING & TRAPPING FURBEARERS

AMPLE OPPORTUNITIES AWAIT HUNTERS TO
MANAGE THIS ABUNDANT POPULATION

by Scott Sudkamp



While historic fur harvests were much higher than today, there are still many opportunities to participate in this age-old tradition.



The year was 1940. Milk cost 52 cents per gallon. A loaf of bread was 10 cents, and 15 gallons of gas would set you back \$2.70. America watched anxiously as Germany steamrolled through Europe. And that fall and winter, fur trappers in the Show-Me State harvested 834,935 pelts — the highest fur harvest in Missouri's records. This number eclipses the 2017–2018 harvest by more than 808,500 pelts.

What happened to cause such a decline?

It has nothing to do with population levels of Missouri's furbearers. In fact, survey numbers and population estimates suggest our most common furbearers — raccoons, opossums, coyotes, striped skunks, beavers, and bobcats — have exhibited increasing or stable populations over the past 25 years. While many economic and sociological factors have reduced the harvest of these mammals over time, the good news for Missourians is that there is ample opportunity for hunting and trapping, with plenty of sound science and management to support these endeavors and still ensure healthy game populations.

If you're looking for opportunities to get outdoors more and engage in an activity that will teach you about nature, ecology, and woodsmanship, then hunting and trapping furbearers may be for you.



Above: Ethics and game laws have always required trappers to check their traps regularly. Those laws remain in place, regardless of the weather or conditions.

Below: Historically, landowners have allowed hunting and trapping of predators, such as coyotes. Today, that tradition continues to control furbearer populations.



Missouri's Furbearer History

A key driver of European Americans' early westward expansion into the Great Plains and Rocky Mountains was North America's largest rodent — the beaver. By the mid-18th century, demand for beaver pelts to supply the European markets showed no signs of slowing down. The unique qualities of beaver fur made it an ideal material for conversion to felt, which was then shaped and molded into hats and other items of fashion. The western reaches of the Louisiana Territory had plenty of beaver, while eastern populations were becoming scarce. Native American tribes were happy to trade furs in exchange for manufactured goods, and it became apparent that the easiest means of transport for the tens of thousands of pelts they sold were America's two largest rivers — the Missouri and Mississippi. Frenchmen Pierre Laclede and Auguste Chouteau recognized the importance of a trade center near the junction of these rivers, and in 1764 a settlement and trading post was organized and named St. Louis. Over the course of the next century, St. Louis would establish itself as a hub of the fur trade.

But during that same period, in an era with no regulations to govern harvest, beaver populations plummeted. Likewise, other species such as elk, white-tailed deer, wild turkey, and Canada geese experienced significant population declines due to unregulated hunting. Predators, such as the gray wolf and black bear that were once common throughout much of Missouri, were extirpated from most counties in the state by citizens eager to protect livestock.

By the early 1900s, many citizens had become concerned with the declining populations of many wildlife species, prompting the establishment of fish and game agencies across the nation and wildlife management as a science and practice. In Missouri, voters approved the formation of a state Conservation Commission in 1936. Furbearing mammals were an important resource for many citizens, and through a program of research and harvest regulation, many species that had undergone population declines began to rebound. In fact, there is not a species of game in North America that has gone extinct under modern science-based management, and many are more common now than at any time in the past 100 years. Most of the game animals hunted and trapped today have made remarkable population recoveries under the protections afforded by game laws.

Furbearers Today: What to Expect

There are several reasons to consider hunting or trapping predators and other furbearers. Most of Missouri's furbearers are abundant and widespread. Some, like the red fox and gray fox, have declining populations, but that is due more to the territorial nature of coyotes and their intolerance of other canids than anything caused by regulated harvest. Many others, like raccoons, opossums, and beaver, exhibit a growth trend over the past 30 years, according to sign station surveys and the Archer's Index, two methods used by MDC to independently track statewide furbearer populations.

Burgeoning populations of many popular species makes trapping fun, especially for novice hunters and trappers. For predators, their robust populations often create opportunity



Karl Householder prepares a pocket set to attract the attention of his quarry.

for hunting and trapping on private lands where pursuit of other game, such as deer and turkey, may be more restricted or not permitted at all. Many landowners see removal of species such as coyotes, raccoons, and beavers as a service and are often willing and even happy to grant permission to pursue them.

Many hunters and trappers appreciate the long season framework for several popular species. Muskrats and otters can be trapped into late February, and beaver trapping season extends through the end of March. Coyotes can be hunted at any time during the winter months, with a few special regulations during deer season. For many outdoorsmen and women, the chance to match wits with these species at a time when other seasons are closed is especially appealing.

Dispelling Myths

Karl Householder has been a trapper for more than 30 years. During that time, he's amassed a tremendous volume of knowledge about predators and furbearers — their behavior, how they interact, where they travel, and how they approach scents and lures. Karl invited me along to check his traps last season, so I jumped at the chance to observe a seasoned veteran. With so much skill and knowledge, I expected to have a catch in most, if not all, of the traps he'd set out the day before. So, I was surprised when our total take for the day was just three opossums. This is not an unusual situation, and it serves to



Effective trapping requires careful attention to detail.



Once the trap is set and bedded, it must be carefully hidden.



Even when properly set, a catch is far from a sure thing. But the anticipation is part of the fun.

highlight that hunting and trapping animals that are inherently wary and cagey is not easy, nor is it a sure thing. But like so many lessons in life, the measure of the reward is often judged against a standard that takes into account the degree of effort required to do the task right.

A beginner who thinks they'll just toss out a few traps here and there and then just check them when it's convenient is bound to be disappointed. Successful trapping requires study, discipline, and plenty of effort, and maybe a bit of good luck. Ethics, as well as Missouri law, requires that most traps be checked daily, and that still holds true whether it's raining, snowing, or freezing. Many trappers arise well before sunrise to run their line before work or school. And the hard work doesn't stop with checking traps. There's also the business of properly caring for the animals captured — skinning, fleshing, thinning, stretching, and drying hides to ensure they're in top shape for the fur sale. But to those who live it and love it, the hard work is just part of the process, and were it easy, it would surely be less gratifying.



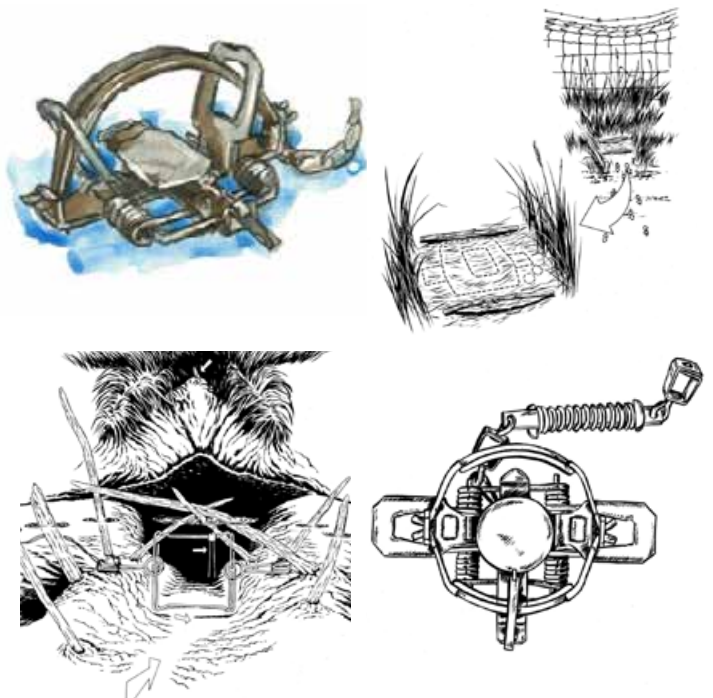
Methods and Techniques

If you think hunting and trapping furbearers is something you would like to try, it's important to understand the different styles of traps and methods used. Many folks are familiar with the concept of foothold traps, but many fallacies and misconceptions surround their use and function. While Hollywood and cartoons have perpetuated the mental image of traps with razor sharp serrated jaws, in reality, modern traps are designed to prevent damage to fur and minimize discomfort to the catch. Features such as padded and laminated jaws are commonly used by many trappers, and animals can often be released if desired.

Another style of trap commonly used is the bodygrip trap. In Missouri, bodygrip traps must be set underwater or, with some sizes, 6 feet or more above ground. They are often triggered as the target swims through them. Due to the necessity of water-only sets, bodygrips are used for species such as beaver, otter, muskrat, and mink.

In addition to trapping, many predator hunters enjoy the challenge of calling and using visual lures to attract the attention of nearby species, such as coyotes and bobcats. Hunters engaged in calling may use mouth calls to attract their quarry, or electronic calls operated by remote control can be employed to focus the predator's attention away from the hunter and offer a shot opportunity.

Traps come in lots of shapes and sizes. Experience will teach you which ones are best for a particular application.





JD Crews and his sons Griff and Grady watch for the telltale movement of a coyote or bobcat sneaking into their calls.

Below: After a successful hunt, Griff and Grady Crews will skin and process the fur to prepare it for market. Hunting and trapping are carefully monitored and regulated to ensure healthy populations.

Bringing It Home

In early January 2020, I joined J.D. Crews and his sons, Griff and Grady, on an evening predator hunt in Vernon County. With daylight fading fast, J.D. instructed us to tuck into the brush along a ditch while he placed the electronic caller out in the grassy hayfield in front of us. He punched the buttons on his remote control, and the sound of a rabbit in distress emanated from the speakers. After changing the call sequence a few times, I caught movement in my peripheral vision and glanced over to see a large coyote trotting in straight at the caller, just 15 yards out. Seconds later, a shot rang out as Grady made a great shot with his .223 predator gun.

The beauty of a western Missouri winter sunset was eclipsed only by the smiles and high fives of a dad and his boys sharing a memory they'll never forget and the visions of a big coyote slung over a shoulder on the way back to the truck. Later that night, back at their home, the boys would get instruction on how to properly skin the coyote and prepare the pelt for sale in a way that would maximize its value. In addition to invaluable time spent afield, these boys were learning the value of hard work and the importance of doing a job right.

Whatever your motivations, furbearer hunting and trapping offers plenty of solitude, abundant opportunity, and a great deal of satisfaction. So, whether you're looking for a way to build a skillset, interact with nature, enjoy more time afield, or connect with the past, give some consideration to hunting and trapping furbearers. You'll come away with great memories, new friends, and maybe even some prime furs. ▲

Scott Sudkamp worked as a wildlife biologist for 20 years in Missouri and Texas. He lives in Vernon County and enjoys hunting and enhancing the wildlife habitat on his farm.



How to Get Started

Hunter Education: Hunter education is required to purchase a firearms hunting permit in Missouri. For more information, visit short.mdc.mo.gov/Z4q.

Trapping: To learn more about trapping, including how to get started and clinics in your area, visit short.mdc.mo.gov/ZpG.

Missouri Trappers Association: Since its creation in 1958, the Missouri Trappers Association (MTA) has been dedicated to the preservation of the heritage and skills of trapping as well as the conservation and utilization of all natural resources of our state and our nation. For more information, visit missouritrappers.com.

Permits and Seasons: For a complete list of trapping seasons, permits required, limits, and more, consult *A Summary of Missouri Hunting and Trapping Regulations* at short.mdc.mo.gov/ZhQ.

Get Outside

in **DECEMBER**



→ **Ways to connect with nature**

Pecan bark



Winter Wonderland

Don't let the cold temperatures keep you indoors. Head out and see what nature has to offer:

- * If there is snow on the ground, look for animal tracks. For tips that will help you on your trek, visit short.mdc.mo.gov/ZJm. As you are tracking, if you come upon what looks like blood, chances are you've come upon an eastern cottontail trail. Their urine can be orange or reddish due to their diet this time of year and can be mistaken for blood.
- * Without their leaves, trees are more challenging to identify. You must examine twigs, buds, bark, nuts, and other clues. Learning this skill is fun, and it's an excuse to get outdoors. For help with your ID, visit short.mdc.mo.gov/Zuv.

Turkey tracks



Otter tracks



River birch bark



A Gift to Nature

Once the holidays are over, there is still one gift you can give — to nature. If you decorated your home with a real tree, return that tree back to nature. You can put it in your backyard and it can become a nesting spot for birds or cover for rabbits and other animals. You can also put it in a nearby body of water where it can be enjoyed by aquatic life. It is the gift that keeps on giving all year long.



Natural Events to See This Month

Here's what's going on in the natural world.



Missouri's rainbow trout spawn in Ozark streams



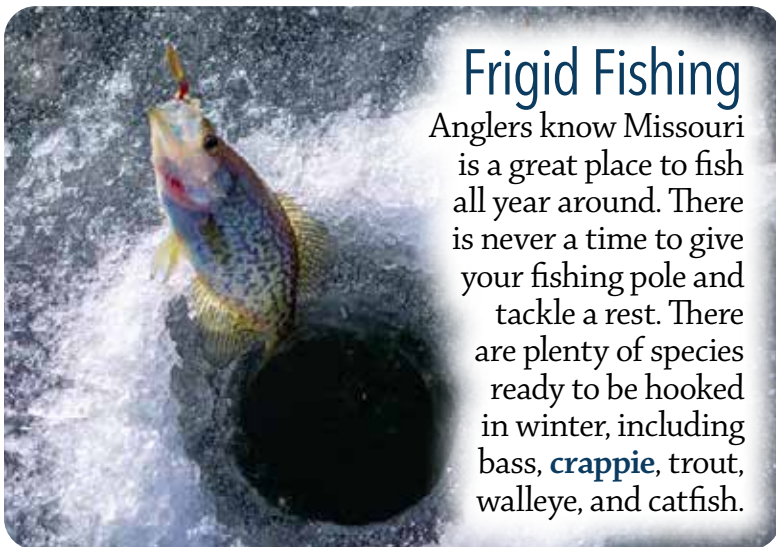
December is the onset of gray squirrel mating season



Snowy owls occasionally visit Missouri in winter

Winter is Aflutter

Mourning cloak butterflies overwinter as adults and may be seen flying on warm winter days. They need a body temperature of about 65 F to be able to fly. Most butterflies bask in sunlight to raise their body temperature, but mourning cloaks can truly shiver, rapidly contracting muscles with only minimal wing movement. This can raise their temperature 15–20 degrees in just a few minutes.



Frigid Fishing

Anglers know Missouri is a great place to fish all year around. There is never a time to give your fishing pole and tackle a rest. There are plenty of species ready to be hooked in winter, including bass, **crappie**, trout, walleye, and catfish.

Flowers in Winter

In December, some wildflowers leave behind clues of their summer glory. Here are a couple of examples:

Look for Adam and Eve orchid, also called putty root. It appears as a green-and-white-striped, pleated leaf lying flat upon the dead leaves on the forest floor. Check back in May to see this native orchid's flowers.

Dittany is a shrublike perennial with tufts of lavender to purple flowers that bloom through November. During the first hard freeze of the season, ribbons of frozen sap, called frost flowers, will form at the base of this plant.



Dittany



Putty root

Putty root leaf



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Places to Go

ST. LOUIS REGION

Weldon Spring Conservation Area

Trail network ideal for holiday fitness maintenance

by Larry Archer

✱ December, with its scores of holiday parties and large family gatherings, has a reputation for being particularly challenging for fitness buffs and weight watchers, but Raenhard Wesselschmidt would stack Weldon Spring Conservation Area (CA) against any gym in its ability to help fight off the holiday heft.

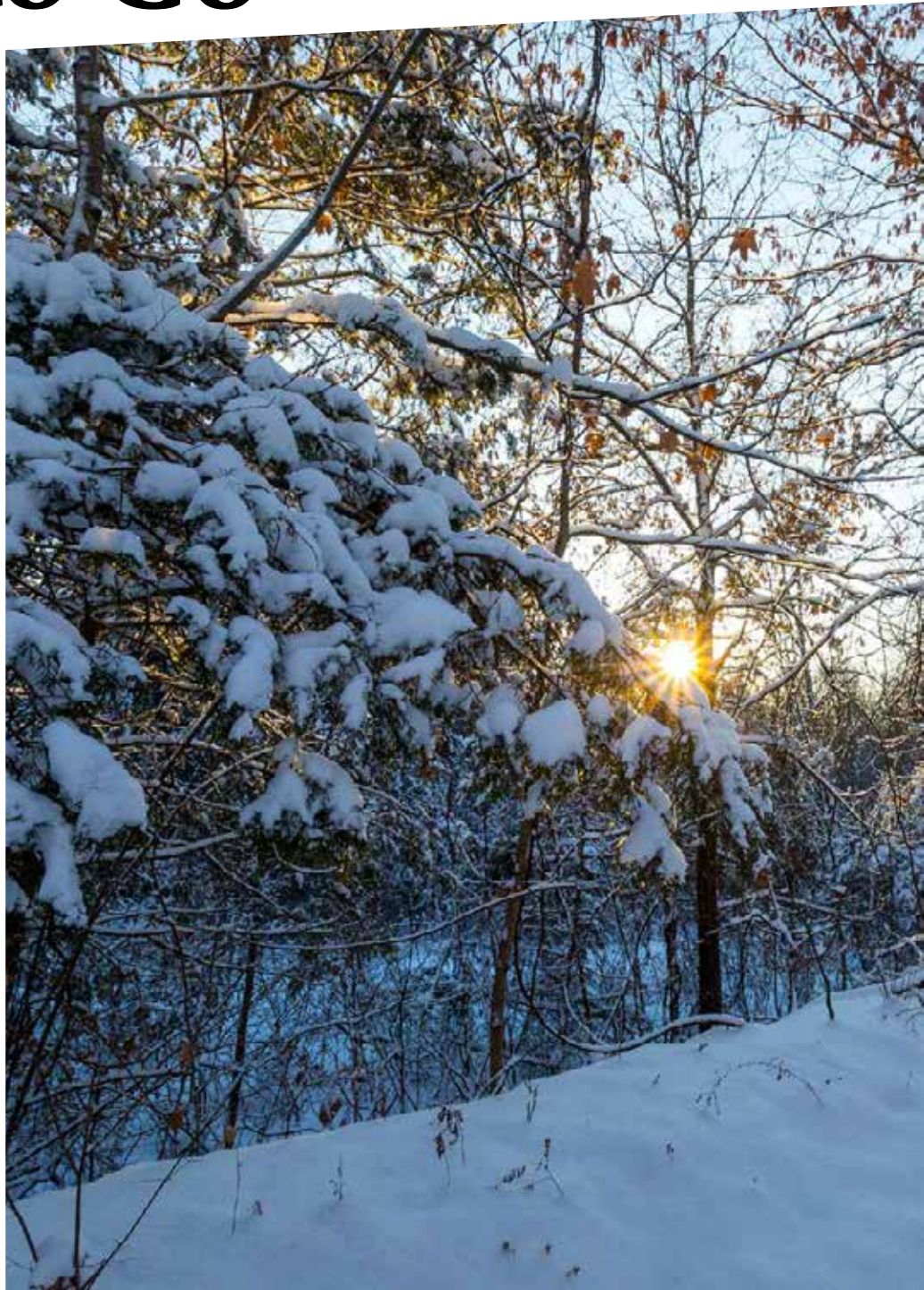
"People like to have a chance to get out," said Wesselschmidt, district supervisor and Weldon Spring CA manager. "It gives people a great opportunity to get out, do some hiking, and get a little bit of exercise after some of those big holiday meals."

Located on 8,398 acres in St. Charles County, Weldon Spring CA has a total of 35 miles of trails. The trails vary in difficulty and trail surface (paved, natural surface, gravel) and include 21 miles that are also open to biking.

"We have a little bit for everybody," Wesselschmidt said. "Whatever your skill level is, it provides an opportunity."

The area also provides access to the adjacent 6,951-acre August A. Busch Memorial Conservation Area and Katy Trail State Park, expanding the hiking and biking opportunities even more.

The area has 35 acres of lakes and ponds that offer waterfowl hunting opportunities, he said.



NORRADOOL PHOTOGRAPH

WHAT
TO
LOOK
FOR
WHEN
YOU
VISIT



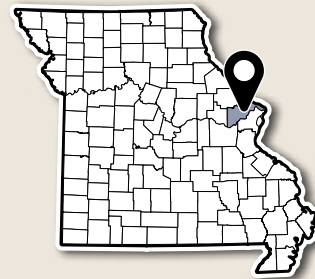
Bobcat



North American
river otter



Beaver



WELDON SPRING CONSERVATION AREA

consists of 8,398 acres in St. Charles County. It is accessible from several parking areas along Highway 94, south of Interstate 64.

38.7059, -90.7052

short.mdc.mo.gov/Zut 636-441-4554

WHAT TO DO WHEN YOU VISIT



Birdwatching Included in the National Audubon Society's Busch/Weldon/Howell Conservation Area Complex-21 Important Bird Area (short.mdc.mo.gov/Zuy). Included in the Great Missouri Birding Trail (short.mdc.mo.gov/ZuC). The eBird list of birds recorded at Weldon Spring CA is available at short.mdc.mo.gov/ZuF.



Fishing Catfish, crappie, sunfish, black bass, white bass



Hunting Deer and turkey

Deer and turkey regulations are subject to annual changes. Please refer to the Spring Turkey and Fall Deer and Turkey booklets for current regulations.

Also **dove, rabbit, and squirrel**



Trails A total of 35 miles of trails of various surface types and difficulty, including 21.5 miles of multipurpose (hiking and biking) trails.



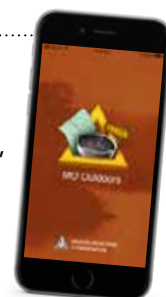
Trapping Special-use permit required.



Waterfowl Hunting Open hunting. Please refer to the *Migratory Bird and Waterfowl Hunting Digest* for current regulations.

DISCOVER MO OUTDOORS

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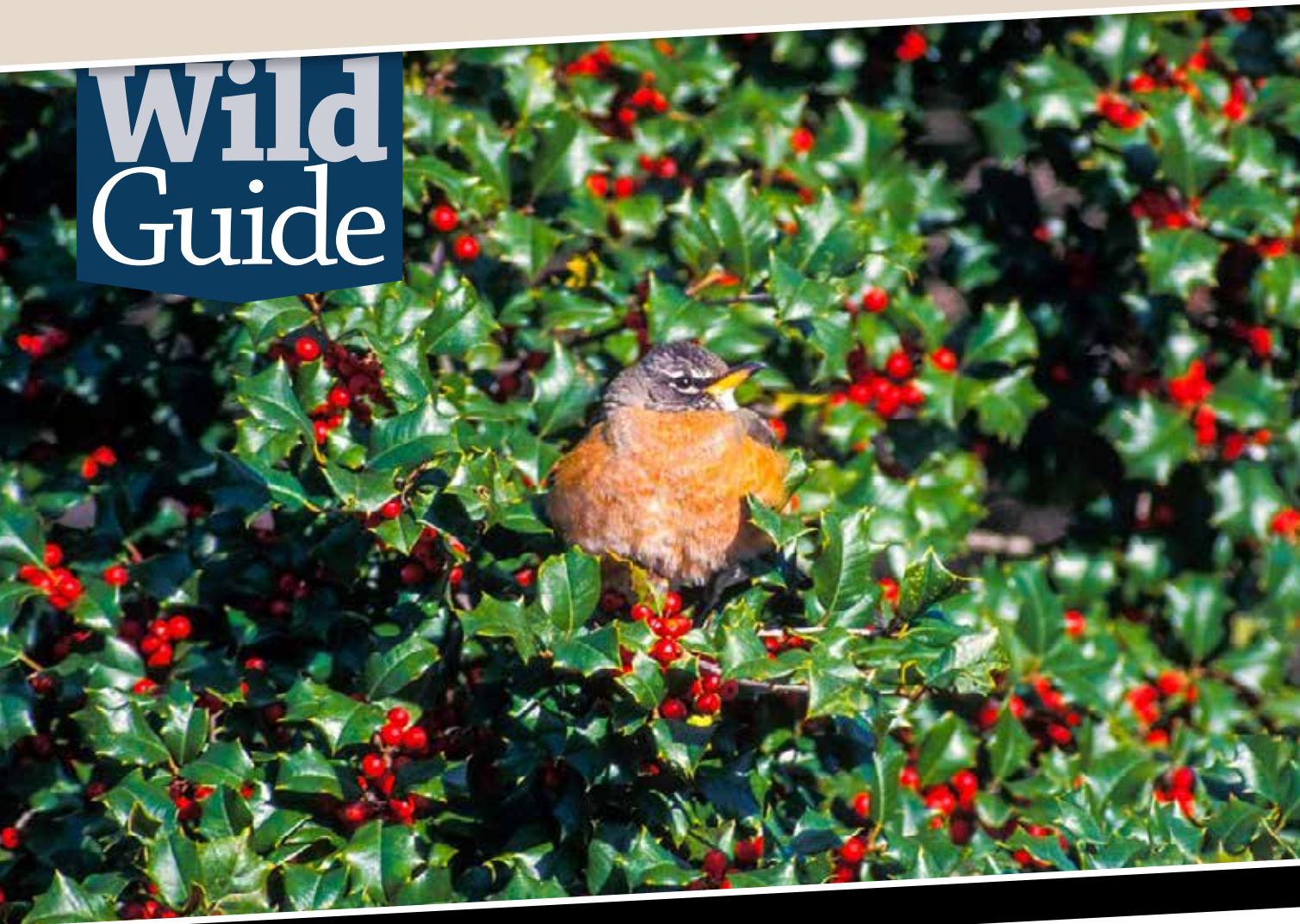
Yellow-bellied
sapsucker



Cedar waxwing



Wild Guide



American Holly

Ilex opaca

Status
Rare

Size
Up to 50 feet

Distribution
Southern and eastern regions



Did You Know?

Because of its attractive, evergreen leaves and bright red berries that persist in winter, this plant is associated with Christmas. In fact, "holly" is an ancient variant of the word "holy." It's a popular landscaping shrub, providing good windbreaks. Its white wood is prized by carvers.

American holly is a small- to medium-sized evergreen tree or shrub that flowers from May to June. Its bright red-orange berries appear in October and often remain over the winter. Because of its exacting habitat requirements and loss of such habitat in our state, this species is rare in Missouri's wild. But hundreds of cultivated varieties are planted by landscapers. To find American holly in the wild, visit Crowley's Ridge in southeastern Missouri, where it grows on that ridge's lower slopes in sandy-gravelly soils that remain moist from seepage. If you are planting American holly as an ornamental, keep its native habitat in mind, and provide it with moist, well-drained sandy soils with plenty of room for growth and partial sun.



ECOSYSTEM CONNECTIONS

Dozens of species of birds use American holly as a food source and shelter. The berries are more palatable to birds after it frosts.



Outdoor Calendar

❖ MISSOURI DEPARTMENT OF CONSERVATION ❖

Lifetime permits make great gifts!

For more information, call 573-522-0107 or email lifetime.permit@mdc.mo.gov



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MO Hunting makes it easy to buy permits, electronically notch them, and Telecheck your harvest. MO Fishing lets you buy permits, find great places to fish, and ID your catch. Get both in Android or iPhone platforms at short.mdc.mo.gov/Zi2.

FISHING

Black Bass

Impounded waters and non-Ozark streams:
Open all year

Most streams south of the Missouri River:

- ▶ Catch-and-Keep:
May 23, 2020–Feb. 28, 2021
- ▶ Catch-and-Release:
Open all year

Nongame Fish Giggling

Streams and Impounded Waters,
sunrise to midnight:
Sept. 15, 2020–Feb. 15, 2021

Paddlefish

On the Mississippi River:
Sept. 15–Dec. 15, 2020

Trout Parks

Catch-and-Release:
Nov. 13, 2020–Feb. 8, 2021

TRAPPING

Beaver, Nutria

Nov. 15, 2020–March 31, 2021

Other Furbearers

Nov. 15, 2020–Jan. 31, 2021

Otters, Muskrats

Nov. 15, 2020–Feb. 20, 2021

Rabbits

Nov. 15, 2020–Jan. 31, 2021

HUNTING

Coyote

Restrictions apply during April, spring turkey season, and firearms deer season.

Open all year

Crow

Nov. 1, 2020–March 3, 2021

Deer

Archery:
Nov. 25, 2020–Jan. 15, 2021

Firearms:

- ▶ Antlerless Portion (open areas only):
Dec. 4–6, 2020
- ▶ Alternative Methods Portion:
Dec. 26, 2020–Jan. 5, 2021

Elk

Firearms:
Dec. 12–20, 2020

New Elk Hunting Season

MDC offered Missourians the state's first elk-hunting season in modern history starting this fall. Learn more at short.mdc.mo.gov/Znd.

Other Furbearers

Nov. 15, 2020–Jan. 31, 2021

Pheasant

Regular:
Nov. 1, 2020–Jan. 15, 2021

Quail

Regular:
Nov. 1, 2020–Jan. 15, 2021

Rabbit

Oct. 1, 2020–Feb. 15, 2021

Squirrel

May 23, 2020–Feb. 15, 2021

Turkey

Archery:
Nov. 25, 2020–Jan. 15, 2021

Waterfowl

See the Migratory Bird and Waterfowl Hunting Digest or visit short.mdc.mo.gov/ZZx for more information.

Wilson's (Common) Snipe

Sept. 1–Dec. 16, 2020

Groundhog (woodchuck)

May 11–Dec. 15, 2020



ILLUSTRATION: MARK RATHEL

For complete information about seasons, limits, methods, and restrictions, consult the *Wildlife Code of Missouri* at short.mdc.mo.gov/Zib. Current hunting, trapping, and fishing regulation booklets are available from local permit vendors or online at short.mdc.mo.gov/ZZf.



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Don't let a little snow keep you indoors. This furbearer doesn't. Virginia opossums are active during the winter, and you can be, too. Get out there and be a winter scavenger. What will you discover?

📷 by **Noppadol Paothong**