

An aerial photograph of a river winding through a lush, green forest. The river is a light brown color, contrasting with the vibrant green of the trees. The forest is dense and covers most of the landscape. The river flows from the top right towards the bottom left, with some meanders. The overall scene is a natural, undisturbed landscape.

MISSOURI CONSERVATIONIST

VOLUME 87, ISSUE 8, AUGUST 2026
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ON THE COVER

The bluffs and streams at Piney River Narrows Conservation Area.

DAVID STONNER

24mm lens, f/2.8
1/80 sec, ISO 100

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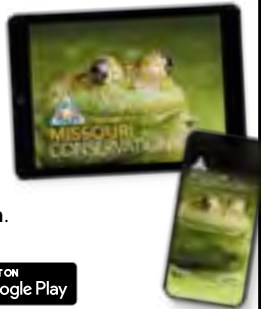
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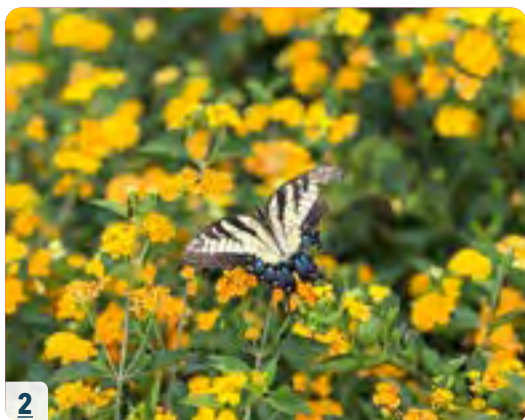
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Inbox



1



2



3



4



Want to see your photos in the *Missouri Conservationist*?

Submit your photos online via [flickr.com/groups/mdcreaderphotos-2026](https://www.flickr.com/groups/mdcreaderphotos-2026/), mdc.mo.gov/magazine-reader-photos or by emailing readerphoto@mdc.mo.gov

1 | Troop 1229 at sunrise on Smithville Lake by **Kellie Wilson**, via website submission

2 | Eastern tiger swallowtail by **Lindsey Poland**, via email submission

3 | Prickly pear cactus by **Cameron Priester**, via website submission

4 | Central newt by **Zachary Snyman**, via email submission

➔ In the December issue, we plan to feature even more great reader photos. Send in your best year-round pictures of native Missouri wildlife, flora, natural scenery, and friends and family engaged in outdoor activities. Please include where the photo was taken and what it depicts.



Letters to the Editor

Submissions reflect readers' opinions and may be edited for length and clarity. Email Magazine@mdc.mo.gov or write to:
 MISSOURI CONSERVATIONIST
 PO BOX 180
 JEFFERSON CITY, MO 65102

NO AI REQUIRED EDITORS' NOTE

Advancements in artificial intelligence (AI) are making it increasingly difficult for everyone to distinguish between human-created products — such as photos, text, and illustrations — and those with little to no direct human contribution. In short, the line between what is "real" and what is AI is becoming more blurred.

We take great pride in bringing nature closer to your home through the printed pages of our magazine, and we do that through showing what is real. None of the content we print in this magazine is AI-generated.

We do accept work from you, our readers, for publication in the *Missouri Conservationist*. From text to photos, your submissions offer a glimpse into how you see nature from your corner of the Show-Me State. Just as we expect our contributing staff to uphold the highest standards in offering truly real content, we ask the same of you. We must rely on your integrity and trust that what you are submitting is original, untouched by AI.

We recognize photography is especially affected by AI. This computerized manipulation erodes trust between photographer and viewer and undermines the value of the photo. Photography is more than a technical exercise — it's a language all its own, imparting feelings without words. If a photo doesn't make us stand in awe and stir our curiosity, it has failed its ultimate purpose — reaching its viewers.

We believe nature is amazingly beautiful all on its own, no AI required.

Up Front



✱ I recently met Richard Louv, author of *Last Child in the Woods*. Richard was born in Missouri, so we naturally connected on our shared roots. We realized that long before we cared about conservation, we cared about a place.

The article *Resource Assessment and Management* (Page 16) reminds me of one of those places — the creek on my great-aunt and uncle's farm. We only lived a few miles away but to go to the creek was special. Observing ripples in the water as I skipped rocks, watching a small rock dam change the creek's flow, or noticing sycamore bark change course as it floated by all fueled my curiosity about nature.

For many conservation professionals, they formed a connection to the outdoors at a favorite fishing spot, family farm, or hiking trail long before they chose conservation as a career.

As I grew older, I began to understand that healthy streams resulted from healthy forests and grasslands. Healthy landscapes sustain fish and wildlife populations, providing opportunities to hunt, fish, and simply enjoy outdoor experiences. It also highlights the connection between our communities and healthy lands, water, fish, forests, and wildlife.

Before we can ask someone to care about conservation, we need them to fall in love with a place. Remember how those places and experiences make you feel and help give everyone the opportunity to make those same connections.

Healthy streams may grow healthy fish, but they may also grow those who will care for them after we are gone.




JASON SUMNERS, DIRECTOR

JASON.SUMNERS@MDC.MO.GOV

INSET PHOTO:
 Director Sumners and his son, Caleb, making memories at another favorite spot — the creek at Caleb's grandpa's farm.



Missouri Conservation Commissioners

Have a Question for a Commissioner?

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



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**Raymond T.
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**Frank H.B.
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**Edward C.
CLAUSEN**

Nature LAB^{at} WORK

by Angie Daly Morfeld

The Missouri Department of Conservation team is diverse and dedicated to conserving, protecting, and improving our fish, forest, and wildlife resources.

Joe DeBold WILDLIFE DAMAGE BIOLOGIST

✳ As a wildlife damage biologist for MDC, Joe DeBold could be described as a mediator, solving conflicts that arise between humans and wildlife as they attempt to coexist. DeBold works out of the Burr Oak Woods Conservation Nature Center in Blue Springs.

A TYPICAL DAY

DeBold said many inquiries come in each day from the public, either by phone or email, regarding beavers, muskrats, otters, coyotes, and other critters. “Every day is different,” DeBold said. “And there are no typical 8 a.m. to 5 p.m. work hours. A wildlife damage biologist is on the wildlife schedule, not people’s schedule. Day and night work detail.”

NOTABLE PROJECTS

DeBold identifies the removal of the peregrine falcon from Missouri’s endangered species list as most notable in his career.

Historically, peregrine falcons nested in small numbers on bluffs along the Mississippi, Missouri, and

Having an issue with a nuisance animal?

Visit short.mdc.mo.gov/Z5L. Or call your local wildlife damage biologist (regional office numbers listed on Page 29).



Beaver conflicts are common in Missouri. Their dams can cause flooding, and their chewing can cause tree damage.



Oak tree with beaver damage

Gasconade rivers. By the late 1800s, only a few pairs remained in the state. Due to restoration efforts coordinated by federal, state, and private wildlife entities, including MDC, populations of peregrines have been established. In cities, peregrines now nest on ledges of tall buildings and other tall structures, including bridges, in lieu of cliff nesting sites. They also use nest boxes placed in these locations. Peregrines are also returning to former nest sites on suitable bluffs.

“We recovered an endangered species,” said DeBold, who previously served as MDC’s falcon recovery leader. “And they are useful in my role as a wildlife damage biologist. We have seen the falcons demonstrate a biological tool in locations where there’s a nuisance pigeon problem, usually at industrial sites.”

HOW YOU CAN HELP

Research and learn about animal behavior. The best way to do this is by watching animals in their native habitat while hiking, camping, fishing, hunting, or just enjoying nature, DeBold said. Ultimately, this will help you navigate future conflicts with wildlife.

Education

- Bachelor’s degree, Western Illinois University: agricultural science
- Master’s degree, Western Illinois University: wildlife ecology

In Brief

News and updates from MDC

MDC IS GOING TO THE FAIR

DISCOVER NATURE AT THE MISSOURI STATE FAIR AUG. 13-23

➔ MDC will be at the Missouri State Fair in Sedalia all 11 days, giving you a chance to discover nature in the heart of the fairgrounds.

Visit the MDC Conservation Building from 9 a.m. to 7 p.m. to see live fish and other native animals such as snakes, turtles, and amphibians. Ask MDC staff conservation-related questions, get educational materials, and have fun. Visit new MDC pop-up booths from 10 a.m. to 2 p.m. to learn about a variety of popular topics.

Join MDC on Friday, Aug. 14, for Missouri Department of Conservation Day — a full day of fun and excitement sponsored by MDC.



Stop by the **MDC outdoor pavilion** for these live demonstrations:

- ▶ **Campfire Cooking:** Learn how to cook at the campsite on Aug. 13 at 11 a.m. and 1:30 p.m.
- ▶ **Fish Fry:** Learn to clean and cook fish and grab free samples on Aug. 14 and 15 at 11 a.m. and 1:30 p.m.
- ▶ **Invasive Species Expo:** Learn how to remove invasive plants and animals on Aug. 14 on the MoDOT lawn, next door to the MDC pavilion.
- ▶ **Blind Pony Hatchery Truck:** Chat with staff from the Blind Pony Hatchery and see the vehicle they use to stock fishing spots on Aug. 18 from 10 a.m. to 2 p.m.
- ▶ **Floating Wetlands:** Learn how floating wetland structures keep your pond clean and provide essential habitat on Aug. 18 from 10 a.m. to 2 p.m.
- ▶ **Conservation K-9s:** Meet the dogs who are specially trained for conservation work on Aug. 19 and 20 at 11 a.m. and 1:30 p.m.
- ▶ **Historic Sawmill:** See a working scale-model sawmill in action on Aug. 21 at 11 a.m. and 1:30 p.m.
- ▶ **Foraging and Wild Edibles:** Learn how to forage for edible plants, seeds, and fruit on Aug. 22 at 11 a.m. and 1:30 p.m.

Visit with a variety of special guests at the new **MDC pop-up booth** from 10 a.m. to 2 p.m.:

- ▶ **Aug. 13:** Wooden spoon carving
- ▶ **Aug. 14 and 15:** Dark Sky Missouri: Light pollution and nocturnal wildlife
- ▶ **Aug. 16:** Missouri Stream Teams
- ▶ **Aug. 17:** Preventing wildlife from damaging your property
- ▶ **Aug. 18:** Selecting native plants for specialty gardens
- ▶ **Aug. 19:** Black bears of Missouri
- ▶ **Aug. 20:** Get more from your hunting harvest with Outdoor Skills of America
- ▶ **Aug. 21:** Bloodsuckers of Missouri
- ▶ **Aug. 22:** Wooden spoon carving



Conservation K-9s will be at the MDC outdoor pavilion on Aug. 19 and 20 at 11 a.m. and 1:30 p.m.

For more information, visit mostatefair.com



NOMINATE TREE STEWARDS FOR ARBOR AWARD

MDC and the Missouri Community Forestry Council (MCFC) are accepting nominations for the 2026 Missouri Arbor Award of Excellence.

The annual award recognizes communities, institutions, businesses, organizations, and individuals that make significant and long-lasting efforts to care for trees in their communities. It shines the spotlight on individuals or groups who have improved trees in their community. Any significant program, project, or event over the last two years that contributes to the care or maintenance of trees could qualify for an award.

"Trees bring so much value to our communities, but their overall health depends on people practicing good tree stewardship," said MDC Community Forestry Coordinator Russell Hinnah. "I encourage you to think about recent projects and events involving trees in your community and nominate them for the 2026 Arbor Award of Excellence."

Winners receive a framed award, a full registration scholarship to the MCFC conference in September in Springfield, an extra ticket to the award banquet during the conference, a community forestry reference book, and a \$50 gift card.

Nominations are due Monday, Aug. 24. For more information and nomination forms, visit short.mdc.mo.gov/ZCg.

Ask MDC

Got a Question for Ask MDC?

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

Q: What species is this moth?

→ It is a polyphemus (*Antheraea polyphemus*) moth.

With a wingspan of up to 15 centimeters — second in size only to the cecropia moth — polyphemus moths occur in forests and woodlands across Missouri. The ground color varies greatly — some specimens are bright reddish-brown while others have a yellowish hue. The hindwings feature a yellow, black, and bluish eyespot.

Adult moths emerge from their cocoons in late afternoon, and mating commences that evening. The "calling time" for polyphemus moths — when females emit pheromones to attract males — occurs from about 10 p.m. to 4 a.m. Females soon lay small, pale, oval eggs, singly or in small groups, on the undersides of host-plant leaves. The eggs hatch in one or two weeks. The caterpillars — magnificently chubby, almost translucent, and fluorescent green when mature — feed upon a wide variety of shrubs and trees. Oaks, maples, and birch are especially favored. Many polyphemus caterpillars descend to the ground and pupate in the leaf litter. Some spin their cocoons in a leaf and fall to the ground in autumn.



Polyphemus moth

And a few noticeably cling to trees through the winter.

Cocoons are oval, wrapped in a leaf, and shrouded in a tough outer layer of silk. Adult moths are nocturnal and fly from mid-April through August.

Q: Does Missouri have greater roadrunners?

→ In Missouri, greater roadrunners are found in glades, open woodlands, and occasionally in parking lots or along roadsides. They were first reported in 1956 near Branson. By the 1970s, some had spread as far north as the Missouri River in Osage County, but several cold, snowy winters drove them back. They rebounded by the 1990s and have been seen as far north as Jefferson City. They are permanent residents in southwest Missouri.

Considered omnivores with a taste for fruit and

seeds, these birds are remarkable predators, running down and snatching up insects, small reptiles and mammals, spiders, scorpions, and even small birds.

Greater roadrunners are a species of conservation concern in Missouri, and MDC tracks confirmed breeding occurrences. Record roadrunner sightings, including signs of nesting or young with a parent, at ebird.org.

Q: Why doesn't Missouri experience wildfires like western states, such as California and New Mexico?

➔ There are two main differences: humidity levels and vegetation composition.

Out west, the air is drier. Humidity levels are often 12-15 percent and can even remain in single digits for long periods. In comparison, Missouri experiences humidity levels of 70-80 percent.

Also, Missouri's hardwood forests are composed primarily of oak and hickory trees. These deciduous trees have dense canopies of glossy, green leaves that are slow to catch fire. These trees lose their leaves annually, which means that when the leaves

are burning, they're on the ground and not capable of producing the fire behavior seen in the western states.

In comparison, western states have coniferous pine forests. Pine resin is flammable. Furthermore, many pine forests have been harmed by western pine beetles that thrive in stressed trees, leaving them vulnerable to drought and subsequent fire. Pine needles need not drop to the ground, meaning the trees are more capable of extreme canopy fires.

Finally, most western fires are started by dry lighting, meaning strikes that occur without rain or moisture. Western topography and climate also produce winds that can whip fires into larger conflagrations. In Missouri, lightning is almost always accompanied by rainfall.

Missouri does experience forest fires. Each year, MDC works with fire departments to help put out wildfires that can consume tens of thousands of acres. However, Missouri forest fires tend to be ground-burning — relying on dry leaf litter as the combustible material.

Every 30 to 40 years, Missouri does experience a canopy fire. But it's not common.

Psst!
**WE WANT TO
HEAR FROM
YOU**



To better understand our readers and deliver the best content, we need to hear from you! Please take a few minutes to respond to the *Missouri Conservationist* reader survey.

Scan the QR code with your smartphone or visit short.mdc.mo.gov/4w8. The survey should only take approximately 5 minutes.



What IS it?

Can you guess this month's natural wonder?

*The answer is on
Page 8.*





PICKLED “HENS” — ITALIAN STYLE

It's prime time to forage for hen of the woods mushrooms! Found growing in the fall at the base of oak trees in large circular bouquets of spoon-shaped caps, this mushroom resembles a ruffled chicken. Hen of the woods is an edible mushroom typically simmered and served as a vegetable with cream sauce, added to soup, or chilled after cooking and used on salads. This recipe offers a different take on preparing this delicious mushroom and can be served as an appetizer or colorful side dish.

Serves 6–8

INGREDIENTS:

8 cups hen of the woods mushrooms, cleaned and separated
 ¼ cup fresh lemon juice
 1 onion
 2 green peppers
 1 red pepper
 1 yellow pepper
 6 garlic cloves, either chopped or whole
 6 anchovy fillets, mashed or crumbled
 6 cups water
 2 cups vinegar
 1½ cups sugar

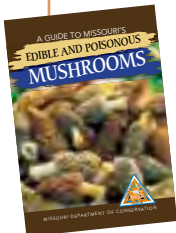


PLACE hen pieces in pot and cover with water. Add lemon juice. Bring to a boil and simmer for about 10 minutes. Rinse in cool water, drain, and set aside.

in a bowl. Add garlic and anchovies and stir well. Put everything, including mushrooms, into a large pot and add water, vinegar, and sugar. Bring to a boil and simmer for about 10 minutes. Remove from heat and cool. Put into clean jars and refrigerate for a week or so before eating.

This recipe is from *Cooking Wild in Missouri* by Bernadette Dryden, available for \$16 at most MDC nature centers and online at www.mdcnatureshop.com.

CUT onion and peppers into bite-sized pieces and place



To be safe, always be certain of your mushroom identification before consuming. For more information, consult *A Guide to Missouri's Edible and Poisonous Mushrooms* at short.mdc.mo.gov/ZNf.



WHAT IS IT?

COMMON MILKWEED SEED POD

Common milkweed is an important food plant for monarch butterflies. This native wildflower is a sturdy, upright perennial with broad leaves and milky sap. The fruits are large seedpods — technically follicles — elongated and covered with slender warty projections. When dry, these split to release hundreds of seeds, each attached to a “parachute” of white, silky, flossy hairs that can carry them on the wind.



MDC HONORS DAN AND CONNIE BURKHARDT AS MASTER CONSERVATIONISTS

The Missouri Conservation Commission and MDC honored Dan and Connie Burkhardt of Frontenac with the Master Conservationist Award during the commission's May 29 meeting in Washington.

"Dan and Connie Burkhardt's impacts on conservation in Missouri — most notably to conserve and improve sections of the Katy Trail — are far reaching through their dedication to protecting and preserving our natural resources," said Commission Chair Margy Eckelkamp.

"Their conservation restoration efforts along the Katy Trail are numerous and include the preservation of buildings of historic interest along waypoints, planting burr oaks, partnering with Forest ReLeaf on an annual tree camp for children, honeysuckle hacks, Burkhardt Grove featuring native Missouri trees, and the Peers Prairie," Eckelkamp added.

The Burkhardts created the Katy Land Trust in 2010 after putting their land in Warren County into a conservation easement to protect and conserve it — and to educate Missourians about the shared responsibility needed to conserve land for public use. The focus of the trust is to protect the agricultural, scenic, and natural resources along Katy Trail State Park (SP). From that, Magnificent Missouri formed to conserve and increase appreciation of Katy Trail SP and the last 100 miles of the Missouri River Valley as a premier regional asset.

"The Burkhardts serve as visionaries, motivators, educators, documentarians, philanthropists, team builders, and as selfless conservationists whose clear focus is on bettering the places we call home," said MDC Director Jason Sumners. "Their tireless efforts to preserve, promote, and improve our state will have lasting impacts for generations."

He added that the Burkhardts carry many torches for conservation and carry them together.

"From the Katy Land Trust to Magnificent Missouri, their efforts to conserve land and water for public use have inspired many to think bigger than themselves," Sumners said.

"The projects Dan and Connie support and have supported will have lasting impacts on our natural resources and will be enjoyed by Missourians and visitors to our great state for generations to come."

One of their more notable projects is the Ted and Pat Jones Welcome Center on Katy Trail SP in Treloar. The Burkhardts purchased the historic mercantile, restored the building, and then donated it to the state to create the only state-park-operated welcome center on the trail.

They also created and opened the Peers Store as a "conservation outpost" of the trail. The couple purchased the historic store and created a memorable stop on the trail, featuring live music, art, refreshments, and the picturesque Peer's Prairie.

They have also worked tirelessly to raise funds — including their own financial resources — to support the preservation and development of Rock Island Trail State Park. The couple also supports other conservation organizations such as the Johnny Morris Institute of Fisheries, Wetlands and Aquatic Systems, and the Missouri Conservation Heritage Foundation.



Dan and Connie Burkhardt received the Master Conservationist Award at the May Conservation Commission meeting from MDC Director Jason Sumners and Commissioners Ray Wagner Jr., Ed Clausen, Margy Eckelkamp, and Frank Kruse.

The Master Conservationist Award honors living or deceased citizen conservationists, former MDC commissioners, and employees of conservation-related agencies, universities, or organizations who have made substantial and lasting contributions to the state's fisheries, forestry, or wildlife resources, including conservation law enforcement and conservation education-related activities in the state.

NEW HUNTING BOOKLETS AVAILABLE

Missouri deer, turkey, waterfowl, and dove hunters can get the most current information on upcoming fall hunting from the *2026 Fall Deer & Turkey Hunting Regulations and Information* booklet and the *Migratory Bird and Waterfowl Hunting Digest 2026–2027*.

The *2026 Fall Deer & Turkey Hunting Regulations and Information* booklet has detailed information on fall deer and turkey hunting seasons, limits, permits, managed hunts, regulations, conservation areas to hunt, post-harvest instructions, chronic wasting disease updates, and more.

The *Migratory Bird and Waterfowl Hunting Digest 2026–2027* has detailed information on waterfowl hunting along with hunting doves and

other migratory game birds such as rail, snipe, and woodcock. It also has information on needed permits and duck stamp requirements, hunting seasons and limits, hunting areas, regulations, and more.

Booklets are available where permits are sold and are also online at **short.mdc.mo.gov/Zjw**. Purchase your hunting and fishing permits from local vendors or at **mdc.mo.gov/buypermits**.



CAMERA TRAPS



CATCHING
WILDLIFE
IN THE ACT

by Tim Kjellesvik

Nature is full of mysterious happenings that we often only see evidence of after the fact. Like the bark that's suddenly rubbed off a sapling in your backyard in late October. Or the appearance of an odd burrow dug in the soft soil near your garden. What about that strange howl from the backwoods at night? What's happening out there when we're not around?

Long known as an effective observation tool for biologists, camera traps are an underused resource for wildlife enthusiasts. By using remote cameras to capture images and videos of activity, they open a window to the secretive side of nature. But they're not really "traps" at all. They're simply intentionally placed trail cameras set up to surveil wildlife.

The primary component of a camera trap is the trail camera, often referred to as a trail cam. Understanding how trail cams work helps you deploy them effectively, unlocking a whole new level of wildlife watching.





REMOTE
CAMERAS
OPEN A
WINDOW
TO THE
SECRETIVE
SIDE OF
NATURE.



Camera traps
reveal nocturnal
activity with
photographic
evidence.

WHAT IS A TRAIL CAMERA AND HOW DOES IT WORK?

A trail camera is a specialized camera designed for outdoor placement to remotely monitor activity. That movement gets recorded as photos and/or videos. Today's trail cams pack a lot of technology into a small, affordable package. Despite their internal complexity, most are comprised of the following, similar components:

Lens: The camera's lens focuses light onto a sensor. What the lens sees is called the "frame" of the picture. Everything "in frame" will be in the photo or video. Keeping the lens clear from obstruction is important for getting the best pictures.

Passive Infrared Sensor (PIR): The PIR sensor detects changes in heat in the environment, like the warm body of an animal passing by. PIR sensors have a general detection range of 60–100 feet, depending on the model of trail camera. Avoiding things that heat up differently, like bare patches of dirt or metal surfaces, can reduce falsely triggered photos.

Flash: These can be infrared (IR) or a white flash, like a regular camera. The flash allows the device to take pictures and video at night and other low-light conditions. Typically, low-light media requiring flash will be in black and white. Removing reflective objects or even close-up obstructions allows the flash to penetrate farther into the darkness, giving the camera better nighttime reach.



Pick the right power option for your camera trap's conditions.

Power: The standard power source for trail cameras is the common AA battery, but many cameras are equipped with jacks to accept additional power from solar panels and larger, external batteries. These advanced power solutions are great for cameras in remote/distant locations, as they reduce the need to visit the device to replace dead batteries.

Storage: Most trail cams record media to a removeable SD card. Newer models, however, are increasingly equipped with internal memory to negate the need for removeable memory cards, which tend to corrupt and cause issues with camera performance.

Media: All trail cameras will take photos. Some will also shoot videos. It's up to you to decide what kind of evidence you want your camera trap to produce. Additionally, some cameras have a time-lapse mode that will take images at pre-determined increments of time, whether anything has triggered the PIR sensor or not. Time-lapse is great for monitoring larger areas, like yards or fields, where a critter may not come close enough to trigger the camera.

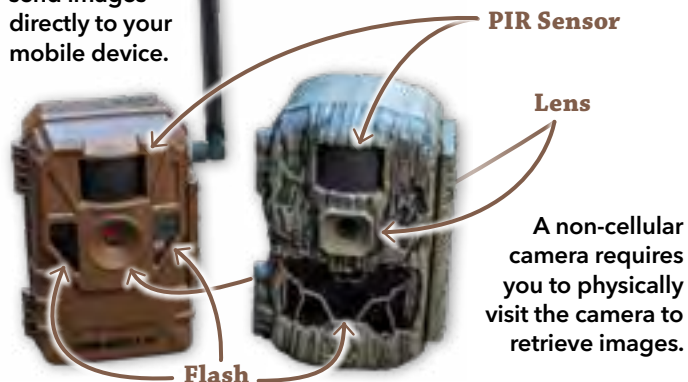
Cellular or Non-Cellular: Another major distinction in trail cameras is how you get the media they've captured. Cellular trail cams, or cell cams, send photos and videos wirelessly to your mobile device. Non-cellular trail cameras record media to memory within the device. They also require physically visiting the camera to retrieve media. Cell cams are convenient but require a monthly or yearly data plan to send media wirelessly to your phone.

Which is best for your situation? If you want a low-intrusion camera trap, especially one at a distance that you don't want to frequently visit, the additional cost of a cell cam is well worth it. If your camera trap is nearby and easily accessible, a non-cell cam is probably best.

Adjust camera settings to suit your outdoor conditions and to capture desired images.



A cellular camera can send images directly to your mobile device.



TRICKS OF THE TRADE

Despite all the tech packed into today's trail cameras, they're only as good as the way you use them. Here are some general principles of good camera setup:

- ✓ Avoid southerly orientations where sunlight could cause glare on the lens.
- ✓ Mount the camera on something solid that doesn't sway with the wind to avoid false triggers.
- ✓ Clear away things that move (tall weeds, branches, etc.) from the camera's frame to reduce false triggers.
- ✓ Preview a test photo before you leave the setup to ensure the framing captures everything you want.
- ✓ In most cases in Missouri, mounting the camera at about belly button height on an adult will capture all but our tallest wildlife, which is elk. If you happen to be seeking elk, chest height is a good rule of thumb.
- ✓ Know the laws of the land where you're setting up the camera trap. Some publicly managed ground, like conservation areas and MDC-managed lands, prohibit the use of trail cameras.



For ideal camera setup, consider factors such as frame composition, a sturdy mount, and potential sunlight glare.



LOCATION, LOCATION, LOCATION

Chances are, you already have a few places in mind where you're thinking about setting up your camera. Before heading out, here are a few more things to consider:

GAME TRAILS

Ever notice the subtle paths through a grassy field? Perhaps the grass is worn thin or laid down in one direction. Or maybe there's a path in the timber where the soil is compacted. These are great places for a camera trap to capture what critters are passing through.

To allow your camera enough time to recognize the movement, wake up, and capture the photo before the subject scurries through, bump the camera back about 10 feet off the trail, and orient it at a 45-degree angle. This widens the view the camera has of the trail, giving it more time to react.

EDGE HABITAT

Many animals use transition zones, like field edges and fence lines, for travel. Catch them on their commute along these routes. If you find you're ending up with empty photos, it could be the critters are moving too quickly through the frame. Bump the camera back a bit to give the PIR trigger more time to detect the animal and take the photo.

WATER SOURCES

Water is a universal need for wildlife, which often means you see a good cross-section of biodiversity congregating there. Creeks, ponds, springs, seeps, bird baths, and even puddles can be a draw. Boost your odds by pointing your camera in a manner that covers animal tracks in the wet soil.

DOWNED TREES

Whether they're hunting or trying to avoid being hunted, many critters opt to use natural bridges in the forest to avoid making noise in the leaf litter. Downed trees are great camera traps, targeting animals taking a more silent path through the woods.



Woodchuck

IN THE CANOPY

Ever find a vacant bird nest and wonder what occupied it? Satisfy your curiosity with a well-placed camera trap. If the nest happens to be in a tree, you might need to lower the PIR sensitivity to reduce unwanted, empty images from false triggers caused by moving branches.

HUMAN ATTRACTIONS

Many animals have adapted to human encroachment and make their homes among us. Secretive as they may be perusing our trash cans or snacking through our gardens, they're not immune from detection with a camera trap.

DENS AND BURROWS

Finally, let's not forget our ground-dwelling friends. A wide variety of Missouri's wildlife, like foxes, ground squirrels, and even the rare American badger, make their homes underground. Point your camera trap at a mysterious opening in the soil and finally reveal who's making a home there.

GET CREATIVE

The more you use camera traps, the better you'll become at understanding wildlife behavior and patterns. Leverage that understanding to expand your sets. The variables are endless and the photos captured could be incredible.

There's no substitute for being outdoors, but camera traps offer a rare glimpse into the hidden, more secretive side of nature that happens when we're not there. Instead of wondering what stripped the bark off your sapling or dug the burrow near your garden, you're now equipped to do your own sleuthing. Who knows what wildlife you'll catch in the act? ▲

Tim Kjellesvik works with hunting, cell cam, and shooting sports mobile apps for GSM Outdoors. Watch him on Drury Outdoors TV and podcast.

**THE MORE YOU
USE CAMERA
TRAPS, THE
BETTER YOU'LL
BECOME AT
UNDERSTANDING
WILDLIFE BEHAVIOR
AND PATTERNS.**



Raccoon





RESOURCE ASSESSMENT AND MONITORING

Crew leader Tyler Niemeier uses a kick net to sample for macroinvertebrates in riffle habitat in Tenmile Creek in southeast Missouri.

PHOTOGRAPH BY BRITTANY HARRIED



CELEBRATING 25 YEARS OF PROTECTING MISSOURI'S WATERSHEDS, STREAMS, AND AQUATIC LIFE

by Brittany Harried

MDC manages Missouri's aquatic resources and works to improve aquatic habitat and water quality all over the state. In 1998, leadership recognized the need for standardized sampling and a reliable database to prioritize, manage, and report the conditions of Missouri's watersheds, or areas of land that drain into creeks, streams, and rivers.

Two years later in 2000, the first pilot studies for the Resource Assessment and Monitoring (RAM) Program began. Fast forward to 2026 and the RAM Program is still sampling across Missouri and has collected data from more than 2,800 sites.

"This past and ongoing work allows us to determine the effectiveness of our management programs, the seriousness of present and future environmental threats, and to collect status and trend information on Missouri's wadeable streams, or streams just below 5 feet deep," said Sherry Fischer, science unit supervisor, who oversees the RAM Program.



WHAT IS RAM?

A RAM crew uses a seine net to sample fish in Tombstone Creek in northwest Missouri.

The RAM Program uses standardized sampling methods to build a baseline set of data for Missouri's stream fish and macroinvertebrate communities, including small animals lacking a backbone but large enough to be seen with the naked eye, such as worms, snails, mollusks, crayfish, leeches, and many types of insects. Also included are water quality and habitat data.

All this information is used to assess long-term trends in the health of Missouri's streams. This data provides information on Missouri's aquatic communities and populations, identifies links between these populations and watershed quality, tracks changes in stream health in relation to restoration efforts, and allows for comparisons within and between watersheds.

"Additionally, it allows us to answer questions such as 'Are we conserving Missouri's aquatic resources?' and 'Where should we focus funding to complete this goal?'" Fischer said.

The RAM Program shares data upon request with partner agencies, including nongovernmental organizations, universities, and private partners. The program also reports to citizens

and legislators about the status, condition, and trends of Missouri's aquatic resources.

"This data also allows us to prioritize watersheds for conservation, preservation, management, and rehabilitation," Fischer said. "We can also step in when comprehensive community sampling is required to respond to a major stream disturbance, like large-scale pollution."

Sites are randomly selected from across the state each year to provide representative samples. Samples may be pulled from any of the state's 68,000 headwaters (small streams, springs, and wetlands that join to form rivers), spanning 801,569 miles, and 29,000 warmwater, wadeable sites, spanning 236,121 miles.

"In addition to the randomly selected sites, we also sample a small number of reference sites, which were identified early in the program," Fischer said. "These reference sites were selected to be representative of a healthy stream within the watershed and are resampled so that we can make comparisons of stream health trends over time."

RAM: A TYPICAL SEASON

Field crews are hired in the spring and start scouting randomly selected sites from late-April to mid-May. At the end of May, all crews attend training to learn how to use equipment and follow standardized protocol when sampling a site. The field season officially starts on June 1. Crews travel through Sept. 15, sampling sites scouted and selected in the spring.

At each site, water quality is assessed using hand-held meters that measure temperature, dissolved oxygen (the amount of oxygen in the water), pH, water clarity, and conductivity (the measure of how an electric charge can pass through water). Water is filtered to collect a chlorophyll sample, which comes from single-celled algae that indicates the productivity of the stream. Water samples are also processed for nutrients and minerals, such as nitrogen, phosphorus, dissolved organic carbon, calcium, magnesium, and sodium.

To assess fish communities, electrofishing and seine nets are used to target different habitat types and groups of fish. Electrofishing uses electricity, conducted through the water to temporarily stun fish, which are then scooped up with dip nets. This method is most effective in areas with a lot of structure — boulders, root wads, and dense vegetation. Fish collected are identified in the field, if possible, while unknown fish are preserved and identified later in the lab.

Crews also assess a site's physical habitat. This includes information about the stream channel (depth and width), substrate size (sand, gravel, boulder) and embeddedness, canopy cover, riparian vegetation structure (proportion of large trees, shrubs, and grasses), human influence (presence of roads, dams, buildings, and agriculture), large woody debris, fish cover, and slope and sinuosity (a measure of a stream's curviness).

Starting on Sept. 15, sites sampled earlier in the season are now sampled for macroinvertebrates. Aquatic kick nets with a fine mesh are used and different habitat types are targeted at each site, allowing a better understanding of the whole macroinvertebrate community.

"Macroinvertebrates have varying sensitivities to water pollution, so we can tell a lot about water quality by the individuals we find," Fischer said. "Streams throughout the state also have very diverse and distinct habitat types, which determine where and how we sample."

TOP: A RAM crew uses backpack electrofishing units to sample fish in Tombstone Creek in northwest Missouri. **MIDDLE:** Lucas Roettger takes a slope measurement in Tenmile Creek in southeast Missouri. **BOTTOM:** Brianna Connell holds a black buffalo caught in a stream in New Madrid County.



Gap ringed crayfish



Left: Water scorpions,
Right: Giant water bugs



RAM DATA

Once all the stream fish and macroinvertebrate community, water quality, and habitat data are collected, calculations are conducted integrating different parts of the data to indicate the condition of the sample sites. This information is necessary for documenting and evaluating long-term changes in stream conditions, recognizing problems, and evaluating solutions.

Further calculations indicate the total number of species and the composition of the communities, habitat conditions, habitat complexity, and disturbance.

Species distribution information is added to databases within the department and used by biologists to prioritize conservation efforts for sensitive or threatened species. This information is shared with the Missouri Department of Natural Resources to aid in their watershed planning, protection, and reporting efforts. Additionally, students and professors at universities, scientists at federal agencies, and nongovernmental organizations request access to RAM Program data to inform projects, assess the health of Missouri's streams, and prioritize aquatic conservation efforts.

OPPORTUNISTIC DISCOVERIES

By randomly selecting sites to sample each year, the RAM Program often samples streams with little known information or streams that have never been surveyed. As a result, species are documented that were once thought to be extirpated or were not known to be present in the sample area.

For example, in 2024 in southeast Missouri, a field crew collected golden topminnows, which had been rarely documented in Missouri prior to 1998 and were thought to be extirpated.

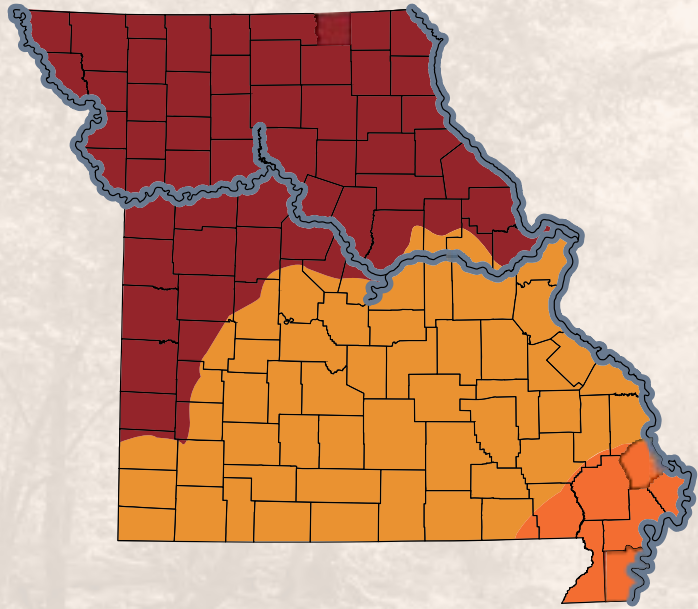
During the 2025 field season in northwest Missouri, a field crew collected Topeka shiners, which are state and federally endangered, from a watershed where they were historically abundant but thought to be recently extirpated. This finding has resulted in additional monitoring of this population and has informed state efforts for the management of this species.

The RAM Program also encounters and documents other aquatic organisms beyond fish and macroinvertebrates.

During the current 2026 field season in southeast Missouri, a field crew encountered a western alligator snapping turtle, which is a species of conservation concern. The crew submitted the site location, habitat data, and photos to MDC's natural history biologists and state herpetologist.

AQUATIC FAUNAL REGIONS

Prairie Ozark Lowland Big River



FOUR REGIONS OF MISSOURI

Missouri has four distinct regions, each with its own habitat type, that result in differences in the fish and macroinvertebrate communities.

In the Prairie Region of Missouri (north of the Missouri River and a portion extending south towards southwest Missouri), streams are characterized by having more turbid water with sand or silt bottoms, although many prairie streams in west-central and northeast Missouri have gravel bottoms.

In the southeast corner of the state, the Mississippi Alluvial Valley (MAV), also referred to as lowlands or the Bootheel, was once covered by swamps and forests but has been extensively ditched for draining and converted to row crop agriculture. Streams in the MAV tend to have soft bottoms, a lot of vegetation, and may be turbid or clear.

In the Ozark Region of Missouri (south of the Missouri River and between the prairie and MAV regions), streams have a strong gradient with faster flow, and clear, cool water with gravel substrate and submerged vegetation in backwaters and side channels.

In the Big River Region of Missouri (Missouri and Mississippi rivers), there are many fish species that occur only in these big rivers or are more abundant here. These big rivers drain a large area of land before reaching Missouri, and as a result, reflect water conditions over this large land area, making them unique compared to other large and mid-sized rivers in Missouri.



This western alligator snapping turtle was found at a RAM sampling site in 2026.



Sharp horns snails



Logperch



Missouri saddled darter



Bleeding shiner



Longear sunfish



Dobsonfly larva



Longnose gar



Shortnose gar

COOPERATION WITH LANDOWNERS

Most wadeable streams in Missouri flow through private lands, so many of the randomly selected sample sites each year require access permission.

"Without cooperation from landowners, who care deeply about protecting, managing, and conserving Missouri's aquatic resources, we would not have access to many stream sections across the state," Fischer said. "We are very grateful to these landowners who have allowed field crews to access streams from their property." Landowners are usually happy to learn more about their streams from the results the RAM Program provides.

HOW ARE MISSOURI STREAMS?

Missouri is proud of its streams, so much so that one of the state's slogans is "Great Rivers State."

So, you may be wondering, how are our Missouri streams doing?

"Overall, our streams are healthy," Fischer said. "We do have some areas across the state where we see concerns due to changes in stream habitat, land use changes, and pollution. Streams receive pollution and input from many different sources, so it's critical that we consider all the impacts happening in a watershed. If something is happening on the land, it's going to impact stream resources."

If you'd like to learn more about streams and get involved, visit mostreamteam.org. ▲

Brittany Harried is the RAM stream community ecologist. She is based out of the Central Region Office, located in Columbia.

FIELD DRESSING YOUR HARVEST

A GUIDE TO HANDLING YOUR DEER TO YIELD GOOD, QUALITY MEAT

by Eric Edwards | illustrations by Matt Byrde

With over 40 years of experience hunting deer in Missouri, I always feel a great sense of accomplishment each time I harvest a deer. As I walk up to ensure the animal has expired, I immediately fulfill my tagging requirements and then take a few moments of reflection.

But in the back of my mind, I know a great deal of work lies ahead — field dressing my harvest. The key to acquiring good, quality, great tasting meat from wild game is proper care and handling after an animal has been harvested. Three things

to always remember — keep the meat cool, clean, and dry.

The quickest way to cool the meat is to remove the entrails and open the body cavity to let the body heat of the animal dissipate. This is known as the traditional method. Another way is to remove the meat from the deer and leave the hide, skeleton, and entrails in the field. This second method — known as the gutless method — is used more out west on big game animals but is a very efficient and effective way to take care of your harvest.



TRADITIONAL METHOD

① With the traditional method, start by placing the animal on its back with its head uphill, if possible. A lot of times, getting the animal to lay on its back is difficult. This is where rope will come in handy. Tie one leg to a nearby tree, if you can, to help stabilize the body.

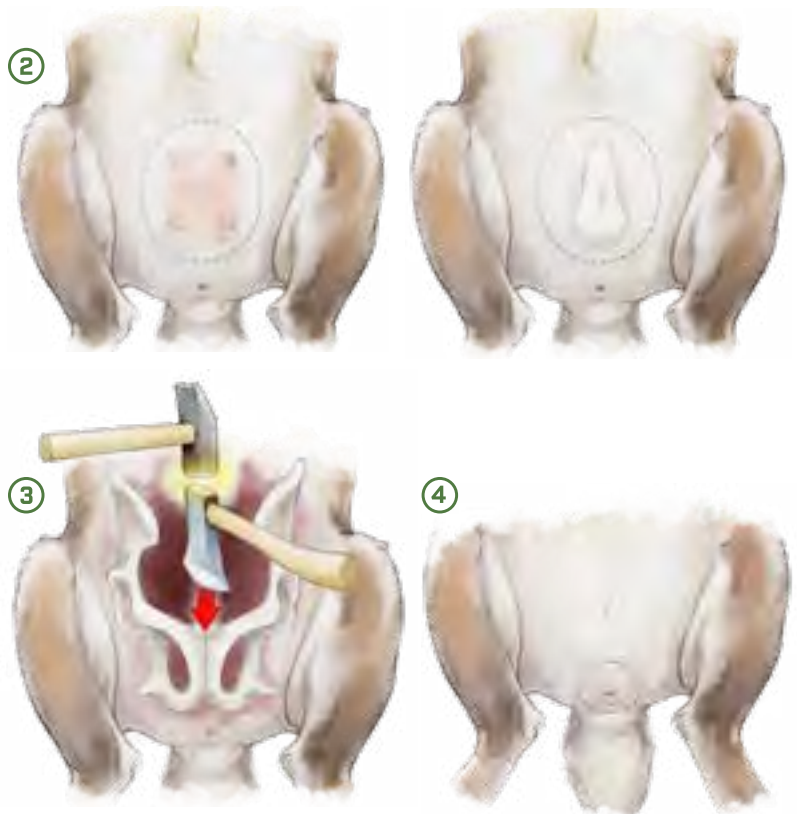
② If you harvested a doe, start by removing the milk sac. Remember, this is not a deeply connected part of the deer, so make your knife cuts shallow and think of it more as skinning. If you harvested a buck, remove the penis and testicles. Again, no deep cuts are needed in this process. Start by grabbing the organ and lift up, cutting the skin on the uphill side and working your way down to the anus. When you get back to center of the deer's hind legs, cut the skin through the meat straight down until you reach the pelvic bone. This is a large solid piece of bone, so it will be hard to miss.

③ You'll need to split the pelvic bone, which sometimes can be done with a knife on a young deer; however, it's much easier to use a hatchet and hammer. Place the hatchet on the pelvic bone, facing toward you on the downhill side. Use a hammer to get the hatchet through the bone. Again, this is a spot where shallow is better as the bladder is right under the pelvic bone, so be sure to drive the hatchet straight back toward the rear end of the animal and not down. Some use a small saw to get through the pelvic bone; however, this leaves bone marrow and bone dust on the meat, which can make the meat taste undesirable.

④ Next, use your knife to cut completely around the deer's anus from the outside.

EQUIPMENT

- **A pair of rubber gloves.** While not necessary, rubber gloves are highly recommended to keep your hands clean.
- **A good sturdy, sharp knife with a 3-5 inch blade.** A sharp knife will make the process much quicker and easier and will prevent unnecessary strain on your arms and hands.
- **A hatchet and hammer** to get through the pelvic bone. Some people prefer a small saw. Either one works, but sawing leaves bone marrow and bone dust on the meat.
- Good, strong, **quarter-inch rope.**



- ⑤ Now, find the breastbone on the deer. You can feel it with the hide on. Using your thumb, press down on the breastbone and follow it, moving from the head of the deer towards the stomach.



- ⑥ Once you can't feel the breastbone, stop, back up a half inch, and use your knife to cut through the skin. Be careful not to cut too deep. You want to keep the meat clean, and you can ensure that by not puncturing the entrails. Once through the skin will be the diaphragm, a thin membrane. Make sure you're making small movements. Place two fingers in front of the breastbone and under the membrane. With your knife blade facing up, lift the membrane as best you can, slide your knife between your fingers, and cut the membrane, being very cautious to move slow and not puncture any entrails. If your knife is equipped with a gut hook, this makes the process significantly easier. However, it is still possible to go too deep, so move slowly and deliberately. Continue to cut through the membrane until you reach the pelvic bone. (If you are going to shoulder mount your deer, skip this next step as it will ruin the cape for mounting).



- ⑦ Now you'll need to open the chest cavity. Do this with a good sharp knife by finding the end of the breastbone while straddling the deer, facing toward the head. Just off center of the breastbone, use your knife to cut through the cartilage that connects the ribs to the breastbone. Once through the rib cage, continue to cut all the way up to the jaw of the deer. If needed, you could use a hatchet and hammer or small saw.



- ⑧ Reaching up as far as you can inside the deer, find the windpipe in the deer's throat. Once you feel it, you'll know it. The windpipe is soft, round, and feels like it has ridges on it. Carefully take your knife and sever the windpipe all the way through. Use a rib spreader or short, solid stick to prop open the chest cavity. This will let the body heat escape more rapidly and will also help in the next step. Along the inside walls of the rib cage will be more thin membrane that you'll need to cut.



- ⑨ After you have cut as much membrane free from the ribs as you can, set your knife to the side. With both hands reach up as far as you can, grab the windpipe, and pull toward the downhill side. Keep grabbing and pulling wherever you can feel resistance along the bottom of the deer's spine.



- ⑩ Eventually if everything is cut loose, you should be able to pull/roll all the entrails out of the deer. Use your knife to remove any fat or pieces left behind. If you tied the deer to a tree for stabilization, untie it, then go to the head of the deer and lift the head as high as you can. If you can get your arms wrapped around the deer just below the front shoulders and stand it up, even better. This removes any excess blood that is left behind from field dressing.



To watch a video of the traditional method, visit short.mdc.mo.gov/opf.

GUTLESS METHOD

The gutless method is an efficient way to take all the meat off an animal while leaving the unused parts of the deer on the landscape, which is preferred especially if you're in a chronic wasting disease zone. Remember, if you need to take your deer in for testing, you will still need to remove the head and about 6 inches of the neck to submit for testing.

EQUIPMENT

- **A pair of rubber gloves.** While not necessary, rubber gloves are highly recommended to keep your hands clean.
- **A good sturdy, sharp knife with a 3-5 inch blade.** A sharp knife will make the process much quicker and easier and will prevent unnecessary strain on your arms and hands.

Place the deer on its stomach with its legs folded under, if possible. Locate the spine and cut through the hide from the tail to the head (*figure 1*). If you are going to taxidermy your animal, you'll need to stop just behind the front shoulders.



fig. 1

Once you have cut the hide from tail to head, begin peeling or skinning the hide off that side of the animal (*figure 2*).



fig. 2

Once you've skinned the hide, a foot or so down from the spine, remove the backstrap. To do this, use your knife to cut through the meat along the spine from the front shoulder to the tail. Then use your knife to cut back under the backstrap, feeling the rib bones as you cut, staying just on top of them and letting them be your guide (*figure 3*).

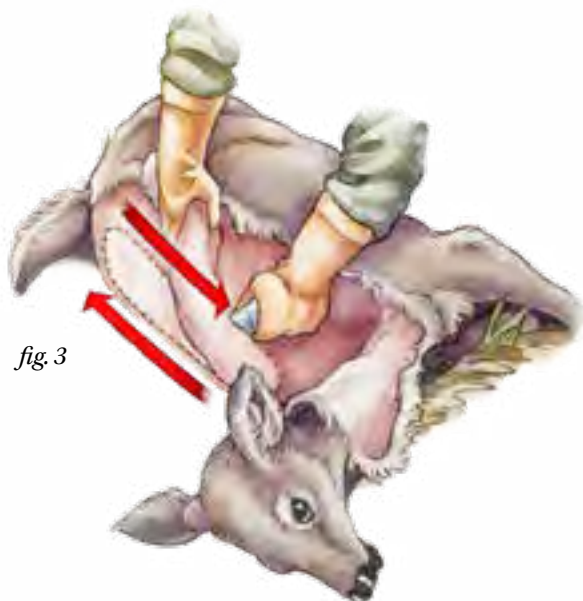


fig. 3

Once the backstrap is removed, lay the deer on the side that still has the hide on it. Finish skinning the deer down to the elbow joints on the front and rear legs. Grab the front leg and lift it up, use your knife and begin cutting off the front quarter (*figure 4*). Start in the arm pit of the deer and cut the shoulder free from the body.



fig. 4

Next, remove the rear quarter much the same way (*figure 5*). This is a bit more difficult as you'll need to cut down to the pelvic bone and find the hip joint. You'll see a rounded bone inside of a socket in the pelvic bone. Use your knife to cut connective tissue inside the joint. Continue lifting the rear leg and cutting where you feel resistance.



fig 5



To watch a video of the gutless method, visit short.mdc.mo.gov/opg.

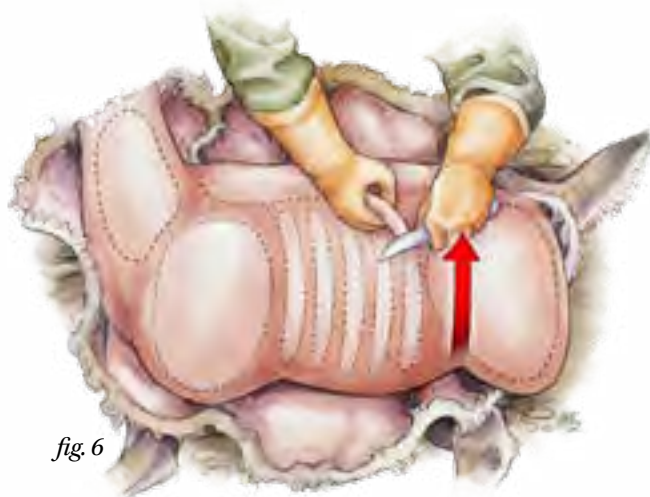


fig 6

Next, remove rib meat and neck meat before rolling the animal over and follow the same procedure for the other side (*figure 6*).



fig 7

Once both sides are complete you should be able to reach in behind the last rib and remove the inner loins that run along each side of the spine (*figure 7*). Your deer has been taken from the carcass and is ready to be deboned.

To learn more about deer hunting and related topics, visit our *Events* page online at mdc.mo.gov/events. ▲

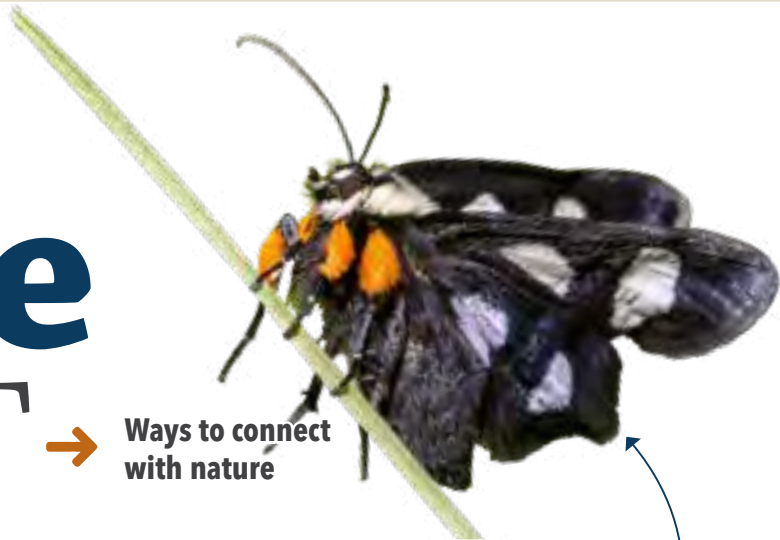
Eric Edwards coordinates the recruitment, retention, and reactivation of hunters and anglers for MDC.

Get Outside

in AUGUST



Ways to connect with nature



An Eight-Spotted Encore

Eight-spotted foresters are taking one more flight across Missouri's woodlands. These spiffy, fast-darting, black-and-white flyers are one of the few moths that fly during the daytime. They take their first tour in spring, and they come back for an encore flight in August. To learn more, see Page 32.

Jammin' in August

If you enjoy making — or eating — jams and jellies, August is your month. **Mulberries, elderberries, black cherries, and gooseberries** are ripe for picking. They all make excellent jams and jellies.

Clockwise from top left: mulberries, elderberries, black cherries, and gooseberries.

Hail to the Hawthorn

In 1923, downy hawthorn (*Crataegus mollis*) was approved as Missouri's official state flower. The downy hawthorn is a small native tree with showy, white 1-inch flowers that bloom in clusters from late April through early May. Red, round fruits form in late August through September. This species is just one of dozens of hawthorns that occupy almost every kind of soil across the state.



Downy hawthorn fruit

Natural Events to See This Month

Here's what's going on



Eastern hellbenders move to breeding sites.

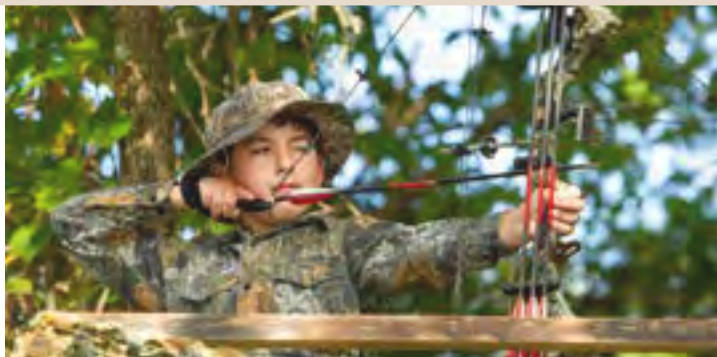


American badgers breed.



Spotted orbweavers reach adult size.

EIGHT-SPOTTED FORESTER: ONDREICKA; CHERRIES: GORDANA SERMEK; GOOSEBERRIES: 40INASTYA; MULBERRIES: 社+海珍; STOCK.ADOBE.COM;
DOWNY HAWTHORN FRUIT: T. DAVIS SYDOR, THE OHIO STATE UNIVERSITY, BUGWOOD.ORG



VIRTUAL

HUNTING SERIES: Bow Hunting

Thursday • Aug. 20 • 5:30-6:30 p.m.

Online only

Registration required by Aug. 20. For more information, call 888-283-0364 or visit short.mdc.mo.gov/oTd.

All ages

This beginner's course is designed to help you prepare for bow hunting. We will discuss gear, proper clothing, stands, calls, and techniques to improve your chances of success. We will also cover best bow hunting practices, safety, and how hunting for deer with a bow differs from hunting for deer with a rifle.

Summer's Final Song

Let's be honest — August in Missouri is hot! It's so hot, even the birds don't want to sing. But fear not! There are two birds willing to carry the load and sing summer's final song.

Red-eyed vireos, which are hard to spot, sing a monotonous series of two-, three-, or four-syllable whistles, with alternating up- and down-slurred phrases. Their call is a burry vray or tjay.

Indigo buntings sing a series of whistled couplets — sweet-sweet, tew-tew, chew-chew — each slightly lower in pitch. Their call is a sharp spit.



Red-eyed vireo



Indigo bunting



Rattlesnake master blooms.



Plain pocketbook mussels breed.

→ CONSERVATION NEAR YOU

Craving more local conservation connections? Find events near you at mdc.mo.gov/events, or catch the latest on social media. Reach out to your closest regional office and learn about events from MDC staff. Outdoor fun awaits. Get out there!



Get Social

Join the conversation and connect with us on social media. Search "MO Conservation" to follow us on Twitter (X), Facebook, YouTube, Instagram, Pinterest, and Flickr.



Conservation Headquarters

573-751-4115

PO Box 180, Jefferson City, MO 65102-0180

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Central

573-815-7900

3500 E. Gans Rd.

Columbia, MO 65201

Kansas City

816-622-0900

12405 SE Ranson Rd.

Lees Summit, MO 64082

Northeast

660-785-2420

3500 S. Baltimore

Kirkville, MO 63501

Northwest

816-271-3100

701 James McCarthy Dr.

St. Joseph, MO 64507

Ozark

417-256-7161

551 Joe Jones Blvd.

West Plains, MO 65775



Southeast

573-290-5730

2302 County Park Dr.

Cape Girardeau, MO 63701

Southwest

417-895-6880

2630 N. Mayfair

Springfield, MO 65803

St. Louis

636-441-4554

2360 Hwy. D

St. Charles, MO 63304

Places to Go

OZARK REGION

Piney River Narrows Conservation Area

A nice little place to hang out
by Larry Archer

✱ Tell someone you're going to Texas in August to cool off, and they'll assume you're crazy. Tell someone you're going to Texas County to cool off, and they'll assume you're headed to Piney River Narrows Conservation Area (CA).

Both the Big Piney River and West Piney Creek traverse the 258-acre area, drawing folks looking for relief, said Piney River District Supervisor Nick Girondo.

"West Piney Creek runs through the dead center of the area and makes one border of the natural area," Girondo said. "People are going there just to jump in the creek and swim and play."

The limestone bluffs on the creek's west side, part of the topography that creates the "narrows," also contribute to the creek's comfort level, he said.

"It stays a lot cooler with the orientation blocking that westerly sun in the evenings," he said. "It's just a nice little place to hang out and enjoy the river."

The area's Big Piney River section sees paddlers through the spring, but by August, the real floating begins after the two waterways merge.

"After the rivers come together, Dog's Bluff Access is just kind of catcorner on the other side of the road," he said. "That's really where everybody starts to float. Everybody pretty much puts in at Dog's Bluff."

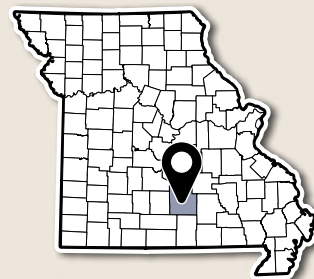


MDC manages Piney River Narrows CA, but the area is owned by the L-A-D Foundation.

DAVID STONNER



An aerial view of Piney River Narrows CA (inset) displays the ridge of dolomite limestone bordered by West Piney Creek to the left and the Big Piney River to the right. The area has bluffs of dolomite and sandstone, where the mixed soils support diverse plant life.



PINEY RIVER NARROWS CONSERVATION AREA

consists of 258 acres in Texas County. From Houston, take Highway 17 west 1¾ miles.

37.3229, -92.0049

short.mdc.mo.gov/o5Y 573-368-2225

WHAT TO DO WHEN YOU VISIT



Birdwatching The eBird list of birds recorded at Piney River Narrows CA is available at short.mdc.mo.gov/o5r.



Fishing Black bass, rock bass, and sunfish.



Hunting **Deer** and **turkey**

Regulations are subject to annual changes. Refer to MDC's regulation page online at short.mdc.mo.gov/Zjw.

Also **bear, dove, quail, rabbit, and squirrel**



Indigo bunting

WHAT TO LOOK FOR WHEN YOU VISIT



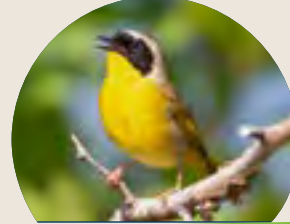
White-tailed deer



Western slimy salamander



Fowler's toad



Common yellowthroat



Eight-Spotted Forester

Alypia octomaculata

Status

Breeding resident

Size

Wingspan: 1-1½ inches

Distribution

Statewide



Adult eight-spotted foresters are butterflylike moths. They fly during the day, drink from flowers, and even have antennae that are thickened at the tips. They are mostly black with two pale yellow spots on the forewings and two white spots on the hindwings. The front and middle pairs of legs have patches of bright orange hairs. Adults are most often found where wooded areas border open areas. The open areas offer flowers from which the adults drink, while the wooded areas provide the grapevines and Virginia creeper the larvae eat and later use as nests for their eggs.



HUMAN CONNECTIONS

The caterpillars are herbivores, grazing on vegetation. Though they can be pests on grape leaves, their grazing on Missouri's innumerable wild grape vines and Virginia creeper is often welcomed. The adults feed like butterflies on flower nectar, serving a role in pollination.



LIFE CYCLE

Adults are commonly seen in spring when they emerge from their cocoons, and again in August when the second brood appears. This species overwinters in the pupal stage, hidden in soil or in crevices in wood. Unlike most other moths, this species flies during the daytime.

Outdoor Calendar

❖ MISSOURI DEPARTMENT OF CONSERVATION ❖

FISHING

Black Bass

Impounded waters and non-Ozark streams:
Open all year

Most streams south of the Missouri River:

- ▶ Catch-and-Keep:
May 23, 2026–Feb. 28, 2027

Bullfrog, Green Frog

June 30 at sunset–Oct. 31, 2026

Nongame Fish Giggling

Impounded waters, sunrise to sunset:
Feb. 16–Sept. 14, 2026

Paddlefish

On the Mississippi River:
Sept. 15–Dec. 15, 2026

Trout Parks

State trout parks are open seven days a week
March 1 through Oct. 31.

Catch-and-Keep:
March 1–Oct. 31, 2026

Catch-and-Release:
Nov. 13, 2026–Feb. 8, 2027



**Only hunters selected through a random drawing may participate in these hunting seasons.*

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.



Free MO Hunting and MO Fishing Apps

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

HUNTING

Black Bear*

Oct. 17–30, 2026

Bullfrog, Green Frog

June 30 at sunset–Oct. 31, 2026

Coyote

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

Open all year

Crows

Nov. 1, 2026–March 3, 2027

Deer

Archery:

Sept. 15–Nov. 13, 2026
Nov. 25, 2026–Jan. 15, 2027

Firearms:

- ▶ Early Antlerless Portion (open areas only):
Oct. 9–11, 2026
- ▶ Early Youth Portion (ages 6–15):
Oct. 24–25, 2026
- ▶ November Portion:
Nov. 14–24, 2026
- ▶ Late Youth Portion (ages 6–15):
Nov. 27–29, 2026
- ▶ Late Antlerless Portion (open areas only):
Dec. 5–13, 2026
- ▶ Alternative Methods Portion:
Dec. 26, 2026–Jan. 5, 2027

Doves

Sept. 1–Nov. 29, 2026

Elk*

Archery:

Oct. 17–25, 2026

Firearms:

Dec. 12–20, 2026

Groundhog (Woodchuck)

May 11–Dec. 15, 2026

Opossum, Raccoon, Striped Skunk

Aug. 1–Oct. 15, 2026

Pheasant

Youth (ages 6–15):

Oct. 24–25, 2026

Regular:

Nov. 1, 2026–Jan. 15, 2027

Quail

Youth (ages 6–15):

Oct. 24–25, 2026

Regular:

Nov. 1, 2026–Jan. 15, 2027

Rabbits

Oct. 1, 2026–Feb. 15, 2027

Sora, Virginia Rail

Sept. 1–Nov. 9, 2026

Squirrels

May 23, 2026–Feb. 15, 2027

Teal

Sept. 12–20, 2026

Turkey

Fall:

- ▶ Archery Portion:
Sept. 15–Nov. 13, 2026
Nov. 25, 2026–Jan. 15, 2027
- ▶ Firearms Portion:
Oct. 1–31, 2026

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, 2026

Woodcock

Oct. 18–Dec. 1, 2026

TRAPPING

Opossum, Raccoon, Striped Skunk

Only foot-enclosing traps and cage-type traps may be used.

Aug. 1–Oct. 15, 2026



Serving nature and you®

Our Mission

The Missouri Department of Conservation protects and manages the fish, forest, and wildlife of the state. We facilitate and provide opportunity for all citizens to use, enjoy, and learn about these resources.

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The velvet ant, which is not a true ant, is considered a wasp and often found in dry, sunny areas.

📷 by **Noppadol Paothong**