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## **ON THE COVER**

Bald Eagle

by Noppadol Paothong

# GET OVII

FUN THINGS TO DO AND GREAT PLA(ES TO DIS(OVER NATURE



CHORUS FROSS in February. Their calls sound like when you run your thumbnail across the top of a pocket comb.

Keep an eye out for the FIRST BLOOMS OF THE YEAR — Ozark witch-hazel and harbinger (har-bin-jer) of spring.



REGIFT YOUR CHRISTMAS TREE. Take off the decorations, and ask a grown-up to help you tuck your cleaned-up shrub near your bird feeder. Or sink it in your pond. The birds or fish will appreciate the extra cover.



February 2 is
GROUNDHOG DAY,
but it's also WORLD
WETLANDS DAY.
After you've checked
on the groundhog
(no shadow means
an early spring), visit
your nearest marshy
area to watch for
wild geese and ducks
returning north.





## DON'T KNOW?

Jump to Page 20 to find out.



- 1 I'm named for a coat.
- 2 But my cap's what you see.

- 3 I have leaves and branches.
- 4 But I'm not a tree.







That's not a typo these top-tier players are worth celebrating.

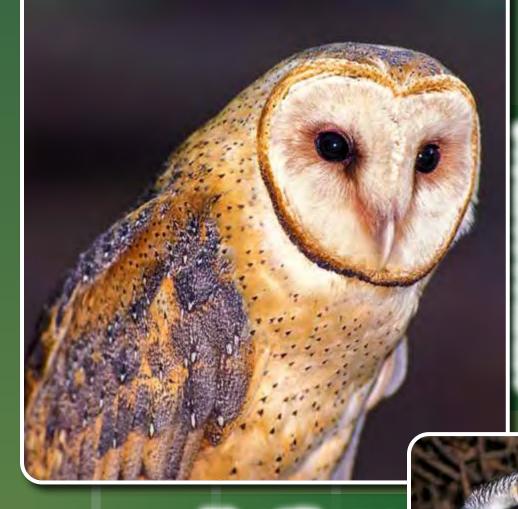
by Bonnie Chasteen

February means football for a lot of folks. Fans break out the party snacks and gather on that special Sunday to root for their favorite team.

This year, *Xplor* invites you to celebrate Missouri's superb owls alongside your favorite team members. Let's find out what makes owls some of nature's most valuable players.

## Barred Owl

You might hear this dark-eyed owl hooting its love song in February and March. Listen for the telltale *Who cooks for you? Who cooks for you all?* call in woods near streams, rivers, and swamps. In the winter, it hunts rabbits and other rodents. In summer, it adds frogs, snakes, insects, and even fish to its menu.



## Barn Owl

These spooky-looking owls have such keen hearing they can pinpoint prey in total darkness. Although they often nest in old barns and grain elevators (which attract tasty mice), they will also nest in tree cavities. To hunt, they cruise over open, grassy areas searching for rodents, birds, reptiles, and even bats.

## Northern Saw-Whet Owl

At 8 inches tall, this is Missouri's smallest owl. It's also the most nocturnal — you won't see it during the day. It hunts over open country at night, targeting shrews, bats, small birds, and insects. In March, it migrates to northern forests to make more little saw-whets for next year's big game.

### Predator Power

Owls are night-flying birds of prey. This means they're predators, and their role in nature is to kill and eat smaller prey animals.

Sounds more like a hunger game than a football game, and it is. Plant-eating critters like mice, rabbits, and squirrels have lots of babies several times a year, every year. You can imagine what would happen if there were no owls or other predators to eat them. Prey critters would soon eat up all the seeds, nuts, roots, and plants they could find. Owls

help keep nature in balance.



## Short-Eared Owl

When the "shorty" is curious or alarmed, it will raise earlike tufts — actually spikes of feathers — on either side of its head. It may visit Missouri in winter, but it's not common. The shorty lives on prairies and in marshes, where it eats voles and mice.

## Long-Eared Owl

Like the short-eared owl, but with taller "ears" — aka feather spikes. It's also an uncommon winter visitor. It hunts only at night, but you might spot it snoozing on a pine branch (look for it near the trunk) during the day. It's also a grassland hunter, searching for mice, rats, and rabbits.

## Field Equipment

From beak to talon, an owl is geared for offense and defense. Supersized eyeballs in a disc-shaped face and big, cup-shaped ear holes help owls detect prey, even in the dark. With superior sight and hearing, they can guide their spine-crushing talons straight in for the kill.

Talk about a touchdown! Their hook-shaped beaks take care of the rest, turning big rabbits into bite-sized bits in no time flat.





## Eastern Screech-Owl

This stocky little owl isn't much bigger than a robin, pointy ear tufts and all. But it's death on mice, shrews, and even small birds. Blue jays and other songbirds are known to mob screechers during the day, so if you hear birds fussing around a tree, you might have a chance at spotting a sleepy screechowl. At night, listen for its eerie, trilling call.

## Great Horned

This big owl's "horns" are actually — you guessed it — feather spikes. It has almost no sense of smell, and it is one of the few predators that will catch and eat skunks. *Eeew!* It courts in late January and February. Listen at night for its call, a deep Hoo-h'HOO, HOO, HOO.



## Snowy Owl

This is a bonus player for the Missouri team. It lives on the Arctic tundra, where it eats lemmings, a kind of small rodent. When lemmings get scarce, the snowy owl heads south. You might spot one sitting atop a fence post, scanning fields and waterways for mice and waterbirds.

# YEAR OF EPIC Yaventures

There's tons of fun to be had all year long outside. Here are 50 adventures — some easy, some challenging — for you to try from now through December. How many can you tick off the list?

by Matt Seek

## JANUARY

- 1 Encounter an eagle. Every winter, thousands of bald eagles follow migrating flocks of waterfowl to Missouri. With keen eyes and a pair of binoculars, you can spot the iconic birds perched in trees along rivers, lakes, and wetlands.
- 2 Hike 100 miles. Missouri's conservation areas offer hundreds of miles of hiking trails. Start now, hike a little every week, and see how many miles you can cover by December 31. To find nearby trails, download the free MO Outdoors app.
- 3 Build an igloo in your backyard.
- Search for sheds. Most white-tailed deer drop their antlers from late December through February. A buck's loss can be your gain. Search for shed antlers on south-facing hillsides, crop fields, and brushy stream banks.



5 See a snow goose tornado.

To experience the rush and roar of thousands of snow geese bursting into flight, visit a national wildlife refuge like Loess Bluffs or Swan Lake.

6 Build a house.

Eastern bluebirds begin raising babies in early March. Persuade a pair to nest in your yard by building a birdhouse. For construction plans, visit audubon.org/news/how-build-bluebird-nest-box.

7 Catch a chorus.

A spring peeper is barely bigger than the end of your thumb. But

when a bunch of the tiny frogs sing together, it gets loud! To catch the chorus, explore puddles, wet fields, or flooded ditches at sunset.

Attend an air show. Head to a pasture, woodland, or cemetery at sunset and listen for the call of a male woodcock: *peent*. When the *peenting* stops, scan the sky for the chubby brown bird spiraling high into the air.

When he's just a speck in the sky, he'll fold his wings and dive, landing in nearly the same spot from which he took off.



Marvel at a mass migration.

Flock to one of Missouri's wetlands in March and you'll see thousands of migrating ducks, geese, and shorebirds fueling up for their journey north.

10 Go on a wildflower walk.

Animals aren't the only ones waking up from winter. In March, early bloomers like spring beauty, Dutchman's breeches, and bird's-foot violet color the forest floor.

Bash some trash.

Pick a wild place near your house and promise to keep it trash-free for the rest of the year.

12 Snag a dinosaur. Paddlefish were around long before dinosaurs lumbered over the Earth. And they're still here thanks to careful conservation. Snag one of these 100-pound behemoths from March 15 to April 30.

Score a grand slam. Catch a trout from at least five of Missouri's Blue Ribbon streams to score a "Trout Grand Slam" — and earn certificates and pins to prove it. For details, cast your browser to short. mdc.mo.gov/ZLR.



Hug a tree. Better yet, plant one for Missouri's Arbor Day, which falls on April 2.

Crappie (crop-ee) taste yummy. And it's easy to catch a stringerful of these silvery panfish.

Just flip a small jig or minnow-baited hook into a crappie-filled lake. Once you hook one, keep casting to the same spot, and you'll likely land more.

Hike to the roof of Missouri. At 1,772 feet, Taum Sauk Mountain is the highest hill in the Show-Me State.

Forage for fungi. In mid-April, morel mushrooms pop up on forest floors. While it's tons of fun to find them, frying them up to eat is even better. Just be sure to ask a grown-up before you chow down. Some mushrooms are deadly poisonous.

## MAY

Bring back the buzz.

Native bees are disappearing across the nation. To give these hardworking insects (and the plants they pollinate) a hand, build a bee hotel. For plans, buzz off to short.mdc.mo.gov/Zc2.

19 Explore a mini desert. Hot, rocky glades are home to some of Missouri's most interesting animals, including fleet-footed roadrunners, colorful collared lizards, and craftily camouflaged grasshoppers.

20 Learn to identify 50 birds.

May is the perfect month to hone your skills as migrating songbirds mob the Show-Me State.



21 Go on a big bug hunt. Hercules beetles can grow as long as your finger. Praying mantids may stretch the length of your hand. But to bag Missouri's biggest insect, rise before sunrise and check your porch light. If you're lucky, you'll find a saucer-sized cecropia moth fluttering about





22 Move your bedroom outside. Up for a challenge? Then see how many nights you can sleep outside. Just pitch a tent in your backyard. There's no need

to rough it. Going inside to eat, watch TV, or shower isn't against the rules.

23 Join a Stream Team. Missouri's 110,000 miles of streams provide water, recreation, and habitat for people, plants, and animals. Pitch in to keep streams healthy at mostreamteam.org.

24 Cook supper over a campfire.

25 Peruse a prairie. Every June, prairies across Missouri turn into a rainbow of wildflowers. Pack a picnic lunch, bring a butterfly net, and explore one of these multi-colored grasslands.

26 Catch some croakers. If you don't mind getting muddy, grab a buddy, and head to a pond. Shine a flashlight at the first frog you find, sneak close, and grab it! Frog season opens at sunset on June 30. For details, hop over to **short**. mdc.mo.gov/ZZm.



drops, so does the temperature. As you munch your PB and J, you'll be serenaded by yipping coyotes, see bats flit about in the twilight, and watch nighthawks perform death-defying dives.

30 Canoe an Ozark stream. The scenery is beautiful, riffles and rapids provide plenty of thrills, and spring-fed pools offer refreshing relief from the summer sun.



## AUGUST

Make a wish. On August 12, the Perseid meteor shower will flood the heavens with up to 80 shooting stars each hour.

32 Train a hummingbird.

Hold your finger close to a hummingbird feeder.
With patience — and a steady hand — one of the fearless birds will buzz in and perch on your finger while it sips nectar.

33 Troll for mini-sharks.

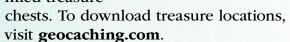
When the moon is bright and the wind is calm, twitch a topwater fishing lure across a pond. In no time, the surface will erupt as hungry largemouth bass lunge up to swallow your lure.

34 Go on a backyard lion hunt. Ant lions dig

small, cone-shaped pits in fine, dry soil beside houses, under decks, or in flowerbeds. When an insect stumbles into the pit, it can't climb out. The ant lion waits at the bottom, ready to snare the unlucky bugs.



Hunt for hidden treasure. Ahoy there, matey!
Use the GPS on your smartphone to find trinket-filled treasure



Tag butterflies. Monarch butterflies flutter through Missouri every September on their way to wintering grounds in Mexico.

grounds in Mexico. Help scientists track their movements by netting monarchs and placing identification tags on their wings. For details, flutter over to monarchwatch.org.



- Pedal across Missouri. The Katy Trail is Missouri's longest state park, stretching 240 miles between Machens and Clinton. Late September, when trees start to show spectacular fall color, is a great time to bike the trail.
- Predict winter weather. Some folks claim you can forecast winter's weather by splitting open a persimmon seed. If the inside looks like a spoon, expect plenty of snow to shovel. A knife predicts frigid winds. And a fork forecasts mild weather.





- Attend an art show. The Show-Me State hits its showiest in mid-October when oaks and hickories paint our state with a dazzling palette of color. For leaf-peeping forecasts, visit mdc.mo.gov.
- **Explore a swamp.** Fall is perfect for a romp through the swamp at Mingo National Wildlife Refuge. Cypress trees turn fiery red, river otters are easily seen, and swarms of waterfowl flood the swamp.
- 41 Tell a spooky campfire story.
- Elk, black bears, and white-tailed deer are the Show-Me State's largest mammals. Deer are easy to see nearly anytime and anywhere. But to spot an elk or bear, your best bet is to drive through Peck Ranch Conservation Area. For details, visit short.mdc.mo.gov/ZJJ.



## NOVEMBER

- 43 Feed your feathered friends.
- Visit a nature center. Whether you want to hike a trail, tickle a box turtle, climb to the top of a fire tower, or learn to cook a wild turkey, the Conservation Department's nature centers offer an adventure each time you visit.
- 45 Take a night hike. Conquer your fear of the dark by going on a night hike. Use the full moon to light your way and listen for coyotes howling and raccoons chattering.
- As Show off your catch or harvest.

  Post a photo on Instagram or Twitter (make sure your account can be viewed by the public) and tag it with #mdcbragboard.

## DECEMBER

Train a chickadee.

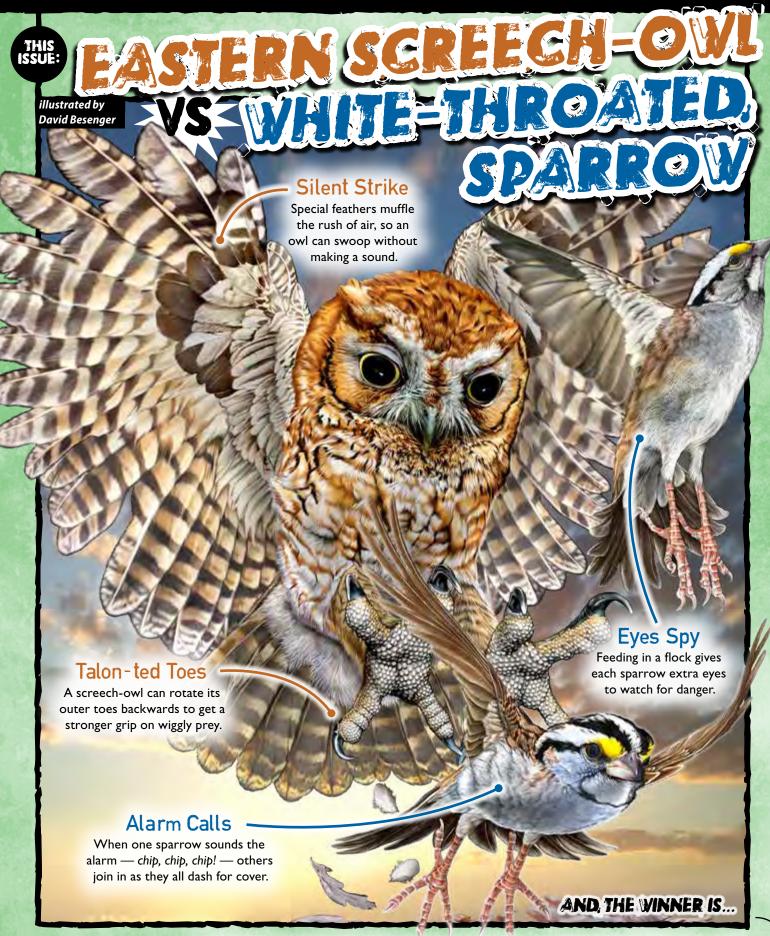
Hold out a handful
of birdseed and sit
quietly next to a bird
feeder. If you're patient, a
fearless chickadee may nab a
few seeds from your hand.

48 Discover a champion.

Missouri's tallest tree, a scarlet oak at Lake Wappapello, stretches higher than four school buses stacked end to end. It's a "champion tree," the largest of its kind in Missouri. Even bigger trees might lurk afield, and you can join the hunt to find them. For details, branch out to **short.mdc. mo.gov/Z4i**.

- 49 Make snow ice cream. Just mix fresh snow, milk, sugar, and a bit of vanilla extract.
- Prowl for owls. Hoo's hiding out there in the dark? The longest night of the year, December 21, is the perfect time to find out. Bundle up, pack a thermos of hot chocolate, and head out after sunset to listen for owls.

## THE STRUCGLE TO SURVIVE ISN'T ALWAYS A FAIR FIGHT





To attract mates, WOODPECKERS drum loudly on hollow trees. Typically, the smaller the woodpecker, the faster it drums. Sparrow-sized downy woodpeckers hammer in bursts of 17 thumps each second.



One big honking family: CANADA GEESE that flock together in winter are often related. Goose couples usually stay together for life, and young geese stick with their parents through their entire first year or longer.

In winter, PAINTED TURTLES hibernate underwater. Their heartbeats and breathing slow waaaay down, but they still need oxygen. They get it from water using a body part biologists call the cloaca. Most people have another name for it: rear end.

YOUR GUIDE TO ALL THE AND UMBELIEVABLE
STUFF THAT GOES ON IN NATURE

Most critters don't have time for fun. They're too busy trying to survive. But not PRAIRIE FALCONS.

These birds of prey like to play by dropping dried cow manure from high in the air and then swooping swiftly down to catch it in their talons.

First place for funkiness: According to scientists who study such things, the spray from a SPOTTED SKUNK

smells even worse than the spray from its much larger and more-common cousin, the striped skunk.



An EASTERN CHIPMUNK often sleeps atop the pile of nuts it gathered for winter. In the fall, its bumpy bed is near the roof of its burrow. But by spring, the hungry 'munk has eaten its stash, and the bed has dropped to the floor.

RIVER OTTERS typically talk to each other with chirps, chuckles, grunts, and growls. But when one is angry or scared, it can let loose a blood-curdling scream that can be heard across water from a mile and a half away.

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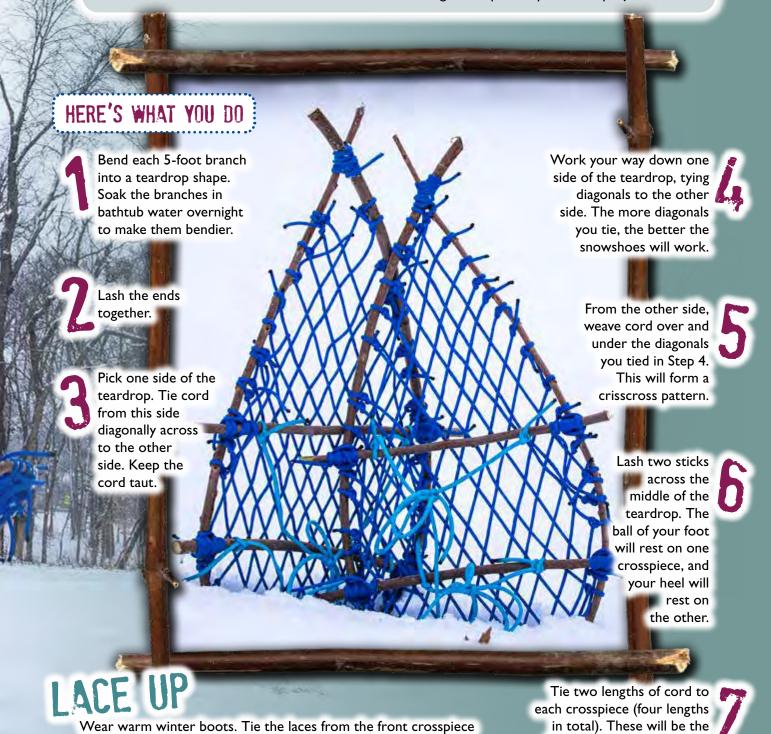






## HERE'S WHAT YOU NEED

- Handsaw to cut the branches
- Two straight green branches about 1 inch in diameter and 5 feet long. Willow, maple, or birch branches work well.
- Four short green branches about 1 foot long
- About 100 feet of cord or thin rope
- Pocketknife
- · A grown-up to help with the project



over the toe of your boot. Tie the laces from the back crosspiece

around the point where your foot meets your shin.

laces you use to secure the

snowshoes to your boots.

Girl and boy birds rarely look alike. Females usually have feathers with drab colors or camouflaged patterns. This helps them stay hidden while they're sitting on nests. Males often sport brighter colors and bolder patterns. Flashy feathers help males stand out so they can defend their home habitats or catch the eye of a female. For some birds, boys and girls look so different, they seem like separate species.





















FROM PAGE 3

In February, the bright red "caps" of British soldier lichen pop into view. This algae-fungi mashup is named for the red coats British soldiers wore during the Revolutionary War. Most lichens look like scaly, graygreen plants, but they're not. They form

when the right fungus meets the right alga. The fungus gives the alga water, and the alga returns sugar made from sunlight. Together they grow and make more of their combined kind. Learn more at mdc.mo.gov/field-guide.





These females can't find their mates. Can you match each girl bird to her flashy fella? Hint: Though their colors may be different, boys and girls usually have similar-looking beaks.





2. Cerulean warbler



3. Painted bunting



4. American redstart



5. Downy woodpecker



6. Summer tanager





9. Red-winged blackbird



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FREE TO MISSOURI HOUSEHOLDS



When the snow flies, deer hang out in cozy, tree-sheltered areas where they can nibble twigs and avoid the wind. They start getting ready for winter in the fall. They eat lots of acorns to pack on insulating fat. They also shed their light summer coats for heavy winter coats. This includes a top, water-resistant layer over a short, woolly layer

next to their skin. Together, these layers keep them dry and warm. Learn more at **mdc.mo.gov/field-guide**.