

MISSOURI DEPARTMENT OF CONSERVATION



NOVEMBER/DECEMBER 2026

xplor



SPEEDRUNNING
IN SURVIVAL MODE

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Hardcore headgear: Male white-tailed deer, called bucks, use their hard, pointy antlers to push other bucks around. The strongest, pushiest deer get more girlfriends. In late winter, the antlers become wobbly, like loose teeth, and eventually fall off.



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ON THE COVER
Greater Roadrunner

STRANGE BUT TRUE

Your guide to all the
UNUSUAL, UNIQUE,
AND **UNBELIEVABLE**
stuff that goes on in nature

Winter weather can be rough for an **OPOSSUM**. Missouri's only marsupial has ears and a tail that are practically hairless. Without fur to trap heat, the ends of these body parts can become damaged by frostbite.



BUMBLEBEE QUEENS

often spend winter underground. If spring storms flood their burrows it's no problem. The fuzzy queens can breathe underwater for at least a week, something biologists discovered only recently.



Newlywed **BALD EAGLES** build relatively small nests. But each year, the couple adds more sticks to their nursery. After several years, nests can grow enormous. One in Ohio was 12 feet tall and weighed over 4,000 pounds.



PRAIRIE VOLES

— mouselike mammals with stubby tails — eat grass.

While snipping their snacks, they build tangles of tunnels across prairies, pastures, and backyards.

The paths are used not only by voles but also by mice, shrews, and other small creatures.

Many **LICHENS** produce mild acids. The chemicals react with minerals in rocks, causing the rocks to break down into smaller bits that become part of the soil. In this way, tiny lichens help turn big boulders into forests.



Most birds have hollow bones. This reduces weight to make flying easier. But a **COMMON LOON'S** bones are mostly solid. This helps the fish-eating fowl dive quickly so it can chase its finned food underwater.



Female **AMERICAN EELS** spend most of their lives in rivers. But when it's time for them to become moms, they swim thousands of miles downstream, far out into the Atlantic Ocean, and have their babies in the Sargasso Sea.



WHAT IS IT?

DON'T KNOW? Jump to Page 21 to find out.

- 1 At birth, I'm quite a small fry,
- 2 just a belly and a couple of eyes.
- 3 I live where I'll never be dry ...
- 4 but wear a bow that crosses the sky.



TWO TRUTHS, ONE LIE

Which fascinating fact is actually a fib?

Answer on Page 21



Virginia opossum

- 1 Male and female Virginia opossums have a fur-lined pouch on their bellies. They stuff the pouch with food to snack on later.
- 2 Mama opossums are pregnant for only 12 days. When the helpless, half-baked babies are born, they're the size of kidney beans.
- 3 Opossums have 50 teeth when fully grown — more chompers than any other mammal native to Missouri.

HOW TO

MAKE DEER JERKY

It's easy to turn the deer you harvested into a delicious and nutritious snack.

HERE'S WHAT YOU DO

1

Place the meat in the freezer for an hour. This will make it easier to slice.

2

Slice the meat into thin strips, no thicker than a quarter of an inch.



Pro Tip: Cutting the meat with the grain (so the muscle fibers run lengthwise) will make the jerky chewier. Cutting against the grain (so the muscle fibers face the knife blade) will make the jerky more crumbly.

HERE'S WHAT YOU NEED

- 2 pounds of deer meat (Any lean cut of meat will work. Most people use meat from the deer's leg such as round steak or rump roast.)
- Sharp knife and a cutting board
- Meat tenderizing hammer
- $\frac{1}{3}$ cup teriyaki sauce
- $\frac{1}{3}$ cup soy sauce
- $\frac{1}{3}$ cup Worcestershire sauce
- 1 teaspoon red pepper flakes (optional)
- Zip-top plastic bag
- Aluminum foil
- Shallow cake pan or cookie sheet
- A grown-up to help you

3

To make the jerky more tender, pound out each strip with a meat tenderizing hammer. This also helps the meat absorb the flavors of the marinade.



4

Mix together the teriyaki, soy, and Worcestershire sauce. If you like spicy jerky, add a teaspoon of hot pepper flakes. Pour the marinade in a zip-top bag and add the meat. Seal the bag and slosh everything around to mix things up. Leave the bag in the refrigerator overnight (or for at least 3 hours).





5

Set your oven to its lowest temperature, ideally no higher than 200 degrees. Lay strips of meat over the oven rack. Place a shallow cake pan or cookie sheet under the meat to catch drips. Use a wad of **aluminum foil** to prop open the door of the oven. Air must flow through the oven to help dry out the meat.

6

Leave the meat in the oven for 4 to 6 hours. You'll know it's finished when it bends but doesn't break, like leather. Be sure the jerky isn't juicy. If you see any wetness, the meat should cook longer.

7

Let the jerky cool before putting it in storage bags. Jerky will last for a week unrefrigerated as long as you store it in a cool, dry place. It will keep up to six months if you store it in the freezer.





SNUG IN A SNAG

EVEN AFTER DEATH, TREES
CONTAIN LOTS OF LIFE.

IF A BIG TREE dies in your yard, sometimes it's best to cut it down. You don't want it to topple over and crash into your house, a person, or a pet. But if a big tree dies in the forest, often it's best to leave it be.

Biologists call a dead tree that's still standing a snag. Lots of animals call it home. Snags provide nurseries, hiding places, and food to a variety of critters, from itty-bitty bugs to big black bears.

Let's peek in on a few cavity creatures who think dead trees are the bee's knees.



CAVITY CRAFTER

Woodpeckers raise their babies in holes they hammer into trees. When excavating a nest cavity, the chisel-beaked birds search for soft wood that is already dead or rotting. As you might guess, snags are perfect. After the woodpecker family moves out, other critters move in.

Squirrels, bats, screech-owls, wood ducks, and bluebirds are just a few of the animals that make their homes in abandoned woodpecker holes.



PILEATED
WOODPECKERS

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SNACK STORAGE

Snags offer a handy place to stash snacks. **Squirrels, chipmunks, and red-headed woodpeckers** hide acorns in hollow snags. **Nuthatches, titmice, and chickadees** wedge seeds into a snag's cracks and crevices. In fact, chickadees hide so many seeds in the fall, their brains actually grow bigger in winter. The extra brain space helps them keep a mental map of where they hid their snacks. In spring, when food is more plentiful, their brains shrink back to normal size.



BIG BROWN BAT



EASTERN CHIPMUNK



EASTERN
BLUEBIRD



RED-HEADED
WOODPECKER



WOOD DUCK



BLACK-CAPPED CHICKADEE

LEAP OF FAITH

Most ducks nest on the ground, but mama **wood ducks** raise their babies in holes high up in trees. About a day after they hatch, the fuzzy ducklings follow mom to the front door of the treehouse and bail out. *Wheeeee!* The little fluff balls furiously flap their stubby wings, but they can't fly yet. Luckily, ducklings are nearly as light as cotton balls, so they tumble down and bounce off the ground without getting hurt.



JOE McDONALD/THE IMAGE BANK VIA GETTY IMAGES



SNUGGLE BUDDIES

Southern flying squirrels can't pack on fat for winter like most mammals. They have to stay lean to glide from tree to tree. So when temperatures plummet, they crowd inside cavities to keep warm. The body heat from several forest flyers can raise the temperature inside a snag by up to 30 degrees, and the more snuggle buddies there are, the toastier it gets. Fifty flying squirrels have been found packed inside a single tree!

HIDEOUT FOR BABY BANDITS

In April and May, mama **raccoons** give birth to babies, called kits. Like many mammals, the newborns — usually three or four per mom — are completely helpless. They can't even open their eyes until they're about three weeks old! To keep her babies safe from owls and bobcats, mom hides them away, often in a hollow snag. The kits stay in the den until they're about 9 weeks old, when mom begins teaching them how to climb trees and find food.





SNUG AS A BUG IN A SNAG

Some mama **beetles** tunnel into trees and lay their eggs inside. When the baby beetles hatch, they're hungry. The white, wormlike larvae wiggle beneath the bark, munching on wood as they go. *Nom, nom, nom.* Their eating sprees leave behind squiggly paths, called galleries, that become visible when sections of bark slip off of a snag.



NOW YOU SEE ME. NOW YOU DON'T.

After a hard night of hunting, an **eastern screech-owl** just wants some shut-eye. To hide from hungry hawks and fussy songbirds, the sleepy owl crawls inside a tree cavity and closes its big yellow eyes. The camouflage pattern on its feathers makes the little owl all but invisible against a barky background.



BEDROOM FOR A BEAR

To pack on fat for winter, **American black bears** gobble down acorns, insects, and whatever else they can get their grubby paws on. At the peak of their feast-fest, they may gain 40 pounds in a week! When they're sufficiently chubby, they waddle to a cozy spot — like a hollow snag — curl up inside, and take a *looong* winter nap. While snoozing, black bears go nearly 100 days without eating, drinking, or going to the bathroom.



BROWN-HEADED NUTHATCH

BRING BACK THE BIRDS!

In 2020, biologists caught brown-headed nuthatches in Arkansas and released them into pine forests in Missouri's Ozarks. The birds had been absent for over 100 years.

ITTY-BITTY BIRD

From the tip of its beak to the end of its tail, a brown-headed nuthatch is just 4 inches long and weighs only as much as two U.S. nickels.





SEED STASHER

Nuthatches often store pine seeds to snack on later, hiding them under a loose piece of bark or in a tree cavity.

SQUEAKY BEAKS

Brown-headed nuthatches call to each other with wheezy squeaks that sound like a rubber ducky being squeezed.

COOL TOOLS

Brown-headed nuthatches sometimes use wood chips like crowbars, prying up bark to expose yummy insects underneath.

MO CRAFT

HABITAT EDITION

Missouri is crawling with creatures! With over 3,300 kinds of animals and plants roaming around (or rooted in place), a nature walk can feel like stepping inside a video game. No computer is needed for this game, though. Simply go outside, explore, and gain hearts for each wild character you find. When you've collected 100 hearts, you win!

LEVEL 01: FOREST



BARRED OWL
♥♥♥

MILLIPEDE
♥♥



GRAY SQUIRREL
♥

WHITE-TAILED DEER
♥♥



PILEATED WOODPECKER
♥♥

SPOTTED SALAMANDER
♥♥♥♥♥



THREE-TOED BOX TURTLE
♥♥♥

GRAY FOX



This wild dog is wary, active at night, and scurries up trees like a supersized squirrel to hide from people and predators. They're found statewide but are more common in the Ozarks.

OAK TREE



Oaks provide leaves to munch, acorns to crunch, and shelter for a bunch of critters. About 20 species grow in Missouri. Because they're easy to find in nearly any forest, they're worth only one heart.

LEVEL 02: PRAIRIE

SCISSOR-TAILED FLYCATCHER



MILKWEED



MONARCH BUTTERFLY



GRASSHOPPER



BULLSNAKE



COYOTE



EASTERN MEADOWLARK



WILD TURKEY



Chunky turkeys prefer to run from danger rather than fly. Even so, it's often hard to find these secretive birds. Your best bet is from March through May, when male turkeys gobble to get girlfriends.

BUMBLEBEE



Look (or listen) for these fuzzy flower farmers buzzing from blossom to blossom. About six different kinds of bumblebees are commonly found in Missouri. Female bees push pollen into "baskets" on their hind legs.



PURPLE CONEFLOWER



This wildflower's drooping purple petals look like a ballerina's tutu. Its scientific name, *Echinacea*, means "hedgehog" and refers to the flower's prickly center cone. Look for it blooming from May through October.



AMERICAN BADGER



Badgers use sharp, 1-inch-long claws and powerful muscles to dig up a dinner of voles, gophers, and ground squirrels. At full speed, the furry dirt-drills can disappear underground in under a minute.



LEVEL 03: GLADE



PRAIRIE
DOCK



LICHEN
GRASSHOPPER



TEXAS BROWN
TARANTULA



EASTERN
MILKSNAKE



PAINTED
BUNTING



EASTERN
HOG-NOSED
SNAKE



STRIPED BARK
SCORPION



GREATER ROADRUNNER



Only cartoon roadrunners go *beep, beep*. Real roadrunners make a cooing call that sounds like a dove or pigeon. The long-legged birds use speed to catch collared lizards, small snakes, and other prey.

EASTERN PRICKLY PEAR



Prickly pears are twice as pokey as other pointy plants. In addition to their long spines, these cute little cactuses are also armed with clusters of tiny, barbed prickles. Watch where you sit!

EASTERN COLLARED LIZARD



These colorful lizards are Missouri's fastest reptiles, reaching speeds of 15 miles per hour when chasing prey or escaping predators. To scurry in a hurry, they stand upright and run on their hind legs.



WOOD DUCK



Missouri's most dazzling duck nests in hollow trees, woodpecker holes, and human-made nestboxes. If you surprise a female wood duck, listen for her shrill call — *ooh-eeek, ooh-eeek* — as she flies away.

RED-EARED SLIDER



Look for this common turtle stretched out on a log, soaking up sunshine. But look fast! Sliders are named for their talent of sliding quickly into the water when approached. *Plap!*

LONGEAR SUNFISH



Named for the long black flap covering its gills, this colorful fish is found in clear, rocky streams south of the Missouri River. They avoid strong currents, so look for them in deeper, slower pools.

LEVEL 04: STREAM



RIVER
OTTER



FISHING
SPIDER



DRAGONFLY



HELLBENDER



RAINBOW
DARTER



NORTHERN
CRAYFISH



FRESHWATER
MUSSEL



LEVEL 05: WETLAND

RED-WINGED
BLACKBIRD



CENTRAL
NEWT



MALLARD



NORTH
AMERICAN
BULLFROG



NORTH AMERICAN
SNAPPING
TURTLE



WATER LILIES



MUSKRAT



BALD CYPRESS



These trees breathe with their knees. Bumpy stumps called “knees” stick out of the water around a cypress tree’s trunk. The knees act like snorkels to carry air down to the tree’s waterlogged roots.

GREAT EGRET



This large white heron has long black legs and a bright yellow beak. It wades silently through the water, hunting for fish, frogs, and other small prey that it — *SPLASH!* — jabs with its dagger-shaped beak.

DIVING BEETLE



To breathe underwater, diving beetles trap air bubbles under their wing covers. Fierce predators, these inch-long insects often attack small fish and tadpoles. When swimming, they kick both hind legs at the same time.



LEVEL 06: URBAN

EASTERN
BLUEBIRD



PILLBUG



PEREGRINE
FALCON



ROSY MAPLE
MOTH



STRIPED
SKUNK



EASTERN
MOLE



RED MAPLE



BIG BROWN BAT



This bat is well-named. It's one of Missouri's biggest bats, and it's covered with brown fur. Big browns hunt bugs at night, so look for them fluttering around leafy backyards or near streetlights at dusk.



RACCOON



Highly adaptable and super smart, these masked mammals live nearly everywhere and eat nearly anything. They sometimes make people mad by rummaging in trash cans and eating pet food that's left outside.



EASTERN GARTERSNAKE



Although they live in a variety of habitats — including backyards — this splendidly striped serpent is often found near water. They can grow over 50 inches, but most stretch only 2 feet long.



XPLOR MORE



BIRD FEEDER BINGO



Keeping a bird feeder filled with seed is a win-win. Birds get a free meal, and you get to watch your feathered friends flit down for a feast. To make feeder-watching even more fun, play "Bird Feeder Bingo." Who in your family will rise to the top of the flock and who will wind up a feeder-watching flop?

☐ White-breasted nuthatch	☐ European starling	☐ American goldfinch	☐ Downy woodpecker	☐ White-throated sparrow
☐ Northern cardinal	☐ Red-bellied woodpecker	☐ White-crowned sparrow	☐ House sparrow	☐ Northern mockingbird
☐ Blue jay	☐ Squirrel	FREE	☐ Pine siskin	☐ Common grackle
☐ Cooper's hawk	☐ Mourning dove	☐ Carolina wren	☐ Purple finch	☐ Tufted titmouse
☐ Eastern bluebird	☐ Chickadee	☐ Dark-eyed junco	☐ Red-breasted nuthatch	☐ American crow



SNIFF
SNIFF





INSTRUCTIONS

Cut out the bingo cards. Keep the cards by a window where you can see a bird feeder. When you spot something that's on the card, put an "X" in the corresponding box. When you get five X's in a row, yell "Xplor!"

WARNING!

In "Bird Feeder Bingo" if you say "bingo" instead of "Xplor," you must erase one of your X's and continue to look for items until you have five in a row again.



GET OUT!

FUN THINGS TO DO
AND GREAT PLACES
TO DISCOVER NATURE



In December, **SNOW GEESE** **FLY SOUTH** in huge, noisy flocks. Along the way, they swirl down to feed in fallow fields and wetlands, blanketing the ground. When startled, the flock bursts into flight, turning the sky above into an upside-down snowstorm. National Wildlife Refuges like Loess Bluffs, Swan Lake, and Mingo are great places to see a blizzard of geese.



A warm winter afternoon is the perfect time to **HOOK A RAINBOW** — a rainbow trout, that is. You don't have to travel far to find these flashy fish. Many city lakes are stocked with trout in early November. For rules and where to go, cast a line to short.mdc.mo.gov/Zd5.

SHARE THE HARVEST

helps deer hunters donate venison to feed families in need. Simply take your deer to a participating meat processor and let them know how much venison you want to donate. For details, visit mdc.mo.gov/share.



Venison chili



CEDAR WAXWINGS are named for the waxy red nubs on their wing feathers. In winter, they gather in flocks to feed on cedar, dogwood, and hawthorn berries. Find them by following their high, thin whistles. To learn their calls, visit allaboutbirds.org/guide/cedar_waxwing.



In December, female **RED FOXES** start looking for boyfriends. At night, lovestruck vixens give a shrill yowl, which some people think sounds like a spooky scream. Your best chance to hear it is just after dark in brushy, open land or along the edges of forests.



Looking for more ways to have fun outside? Find out about Discover Nature programs in your area at mdc.mo.gov/events.



WHAT IS IT?

— FROM PAGE 3 —



RAINBOW TROUT

Rainbow trout are named for the long, colorful stripes that adult fish have on their sides. Baby trout, however, aren't so colorful. They're mostly pink, with big, round bellies called yolk sacs. A yolk sac provides all the food a newborn needs for the first two to four weeks of its life. Once its yolk sac is used up, the tiny trout, which is now called a "fry," begins eating insects.



GO FIND IT!



Cut out this critter card and take it with you outside.
How many of the things on the card can you find?

GREAT HORNED OWL



FAKE HORNS

The pointy things atop this owl's head aren't horns. They aren't ears, either. They're tufts of feathers.

AFTER DARK DUET

Owl couples call to each other just after sunset. The female hoots *hoo HOO, hoo, hooo*, and her mate answers with deeper hoots.

SECONDHAND HOMES

Great horned owls often lay their eggs in a nest that was built by another animal, such as a hawk, heron, or squirrel.

MOCKED BY THE FLOCK

Songbirds often swoop and squawk at owls to alert their feathered friends to the predator's whereabouts.

GREAT BIG APPETITE

Great horned owls aren't picky eaters. Rodents, rabbits, raptors, and everything in between are on the menu.

ONE LIE

— FROM PAGE 3 — Lie: 1 (Only female opossums have a pouch, and they don't stuff it with snacks. They use it to carry their babies.)

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or update your address, visit
mdc.mo.gov/xplor.

FREE TO MISSOURI HOUSEHOLDS

GO FIND IT!

Great horned owls are found statewide in a variety of habitats, from forests to city backyards. For more on these midnight mouse munchers, swoop down to mdc.mo.gov/field-guide.



GREAT HORNED OWL