



NOVEMBER/DECEMBER 2025

Xplor



WHY SO
BLUE?

WINTER'S A GREAT
TIME TO MAKE
NEW FRIENDS

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GOVERNOR
Mike Kehoe

CONSERVATION COMMISSION

Edward C. Clausen
Margaret F. Eckelkamp
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Raymond T. Wagner Jr.

DIRECTOR
Jason A. Summers

XPLOR STAFF

ARTIST Matt Byrde
PHOTOGRAPHERS Noppadol Paothong
David Stonner
DESIGNER Marci Porter
ART DIRECTOR Ben Nickelson
EDITOR Matt Seek
SUBSCRIPTIONS Marcia Hale
MAGAZINE MANAGER Stephanie Thurber

All content created by Missouri Department of Conservation staff unless otherwise noted.

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We recycle.
You can, too! Share
Xplor with friends.

The forest underfoot: Missouri is home to over 300 kinds of mosses and more than 400 kinds of lichens. Mosses are tiny, low-growing plants. Lichens are two creatures — fungi and algae — that live together to help each other survive. Here, you can see **haircrop moss, pincushion moss, and reindeer lichen.**

ON THE COVER
Blue Jay

STRANGE BUT TRUE

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

SHORT-EARED OWLS are found nearly worldwide. As you might expect from such a far-reaching raptor, the big-eyed birds wander widely. One wayward shortie stopped to rest on a ship in the Pacific Ocean that was 676 miles from land!



Baby **DRAGONFLIES**, which live underwater, have an ... um ... interesting way to move around. By sucking water into their hind ends and forcefully squirting it out, they can jet forward at speeds up to 4 inches per second.



A **PADDLEFISH'S** spoon-shaped snout detects electrical signals put out by living creatures. This helps the funky-looking fish find its favorite food: drifting clouds of itty-bitty insects and crustaceans called plankton.

Missouri's largest moth, the **CECROPIA MOTH**, spends the majority of its yearlong life hidden away in a cozy cocoon. The finger-sized caterpillars spin silk-lined cocoons in late summer and don't emerge as adult moths until the following spring.



How sweet it isn't. Like all members of the cat family, a **BOBCAT** lacks the receptors on its tongue that allow it to taste sweet flavors. No wonder cats are finicky. If you tasted only sour, salty, and bitter, you'd be a picky eater too!

BALD EAGLES, like many raptors, sometimes "stoop" to get food. When an eagle spots prey, it folds its wings and dives straight down. *Whoosh!* In this streamlined pose, the bullet-shaped birds can reach speeds of 100 miles per hour.



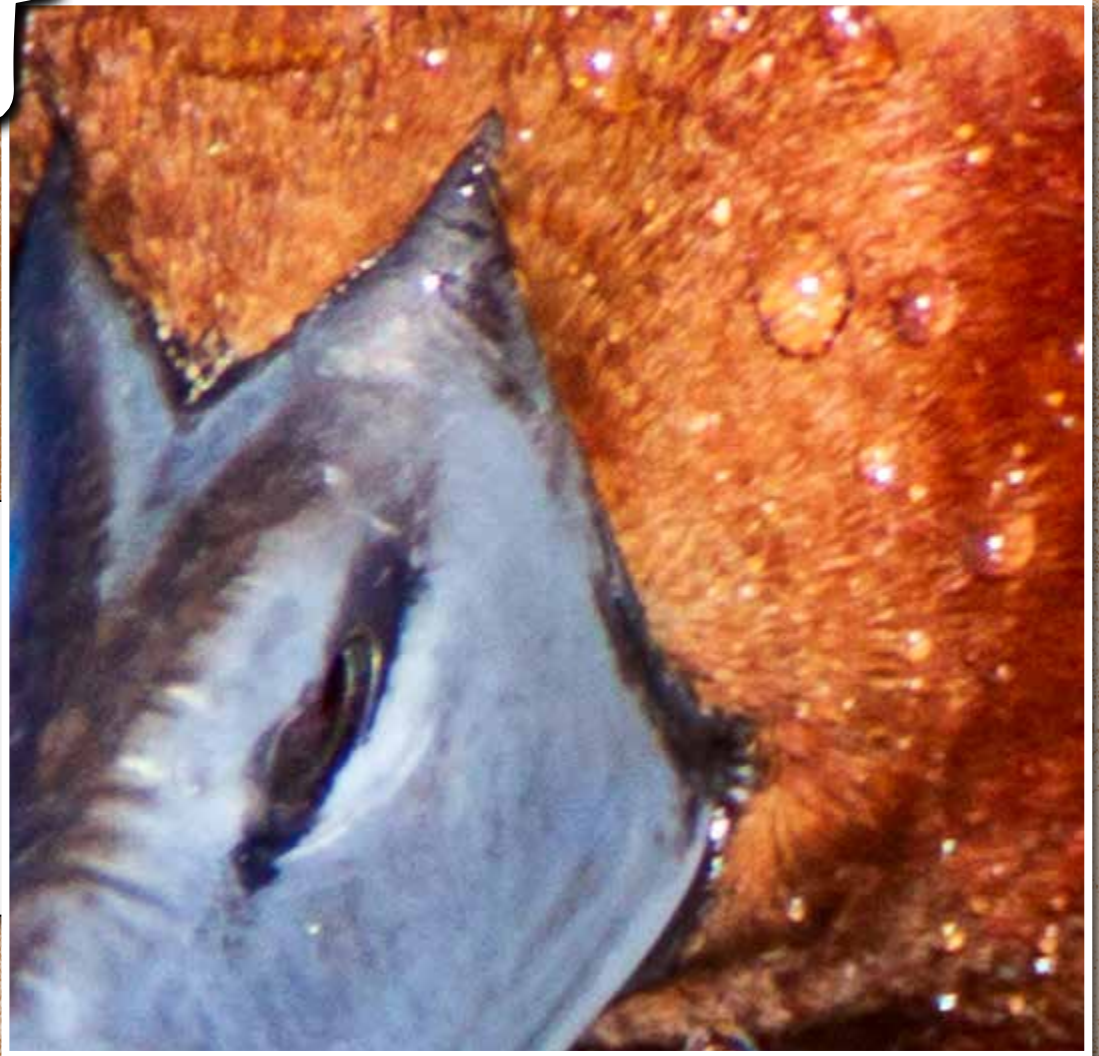
The next time your tummy growls, think of a **WHITE-TAILED DEER**. When a whitetail gets hungry, it doesn't have just one stomach to fill. It has four! The extra chambers help a deer get as many nutrients as possible from tough-to-digest plants.



WHAT IS IT?

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

- 1 My head is as red as a fire.
- 2 But females don't share my attire.
- 3 I meow to show my desire.
- 4 Open water is what I require.



TWO TRUTHS, ONE LIE

Which fascinating fact is actually a fib?



Answer on Page 21

- 1 With a lofty launch site and a strong tailwind, a flying squirrel can glide nearly 200 feet — about as far as five school buses parked end-to-end.
- 2 Under ultraviolet light — which humans can't see but many other animals can — a flying squirrel's belly fur glows as pink as radioactive cotton candy.
- 3 Flying squirrels pack on fat to insulate themselves against winter's chill. Males nearly double their weight, which makes them too heavy to glide.

HOW TO

MAKE A PLASTIC BOTTLE BIRD FEEDER

Putting up a bird feeder is a fun way to keep your beak-tipped buddies well fed all winter. Here's how to make one by upcycling two plastic bottles.

HERE'S WHAT YOU NEED

- 2-liter plastic bottle
- 1-liter plastic bottle
- Short bolt and nut
- Drill with a bit the same diameter as the bolt
- Needle-nose pliers
- Utility knife or kitchen shears
- Cord
- Birdseed (black-oil sunflower seeds are best)
- Funnel
- A grown-up to help



HERE'S WHAT YOU DO



1 Ask a grown-up to cut the bottom off of a 2-liter plastic bottle using a utility knife or kitchen shears.



2 Drill holes around the edges of the 2-liter bottom you just cut off. These will keep birdseed from getting soggy by allowing rainwater to drain.



3 Drill a hole in the center of the 2-liter bottom and another hole in the center of the cap on the 1-liter bottle.



4 Drill two holes on opposite sides near the bottom of the 1-liter bottle.



5 Ask a grown-up to cut two 1-inch-square openings just below the neck on opposite sides of the 1-liter bottle.



6 Push the bolt up through the center of the 2-liter bottom. Push the 1-liter lid over the bolt. Thread on the nut and tighten it with needle-nose pliers.



7 Thread cord through the holes at the bottom of the 1-liter bottle.



8 Use a funnel to fill the 1-liter bottle with birdseed. If you pour the seed slowly, the funnel won't clog up as much.



9 Twist the cap tightly onto the bottle and then quickly flip it over. Seed should dribble out and fill up the 2-liter bottom.

HANG YOUR FEEDER

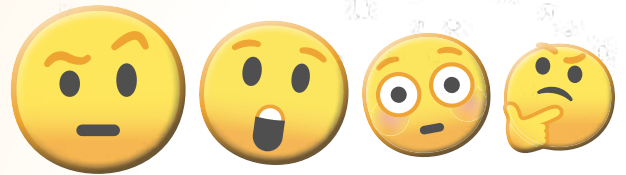
Tie your feeder to a tree branch or a shepherd's hook in a location where you can watch it. Placing the feeder within 3 feet of a window is the best way to keep your feathered friends from crashing into the glass. Birds are more likely to notice the window, and even if they don't, they aren't likely to be flying fast when they take off and land at the feeder.

Purple finch



What's Up With That?

Sometimes nature is, well, weird. Here's a look at some of Missouri's animal oddities that might leave you scratching your head.



Bald BIRDS

Fun fact: Bald eagles aren't truly bald. But this northern cardinal sure is. Feathers give a bird its shape, keep it warm, and help it fly. Birds molt, or grow new feathers, regularly to replace ones that are worn-out or damaged. Most birds molt their feathers a few at a time. But some, like this cardinal, molt them all at once. Don't worry. In about a week, he'll be back to his fetching, fully-feathered former self.



INVASION of the BODY HATCHERS

This tomato hornworm's days are numbered. Weeks earlier, a mama wasp used her knifelike tail to lay dozens of eggs inside the doomed caterpillar. The eggs hatched into rice-sized larvae and began eating the caterpillar's insides. To keep their squirming nursery alive, the larvae avoided the caterpillar's vital organs. Eventually, the baby wasps wiggled out and spun cocoons on the caterpillar's back. This made the hornworm stop eating. Once the adult wasps emerge from their cocoons, the caterpillar will starve.



ANT IMPOSTER

Look closely. How many legs does this ant have? Ants, which are insects, should have six legs. This little guy plainly has eight — because it isn't an ant. It's a jumping spider. Ants bite and sting, which makes some predators think twice about eating them. To avoid snack attacks, certain kinds of jumping spiders pretend to be ants. Not only are the eight-legged imposters shaped and colored like ants, they also raise their second pair of legs and wave them around to imitate an ant's antennae.



IT SNOT What You Think

This slippery, slimy ball of snot is actually a whole city of itty-bitty animals. Bryozoans (*brie-oh-zoh-unz*) are found in the warm, quiet waters of lakes, swamps, and slow-flowing rivers. Most are no bigger than a golf ball, but some can grow as large as a basketball. The creatures that form these jellylike colonies make their living by using tiny tentacles to pluck bacteria, algae, and other microscopic creatures from the water. This helps keep our waterways clean.



A Flash of WHITE

Most ruby-throated hummingbirds sparkle like emeralds in the sun. But not this fascinating fella. This hummer's genetic road map has a detour in it, called a mutation, that prevents his body from making the pigments that would normally cause his feathers to be green. His eyes are pink because without pigments, the only color that shows up comes from the blood vessels behind his eyes.



Pebble PALACE

Caddisfly babies, or larvae, live underwater. Many build tube-shaped homes out of leaves, pebbles, or sand. These rocky retreats offer camouflage, protect the baby's squishy body, and add weight so the little insect isn't swept downstream by swift currents. Near the end of their lives, the larvae rise to the surface and transform into air-breathing, moth-like adults. Caddisflies need clean water to survive. Finding them is a good clue that a stream is healthy.

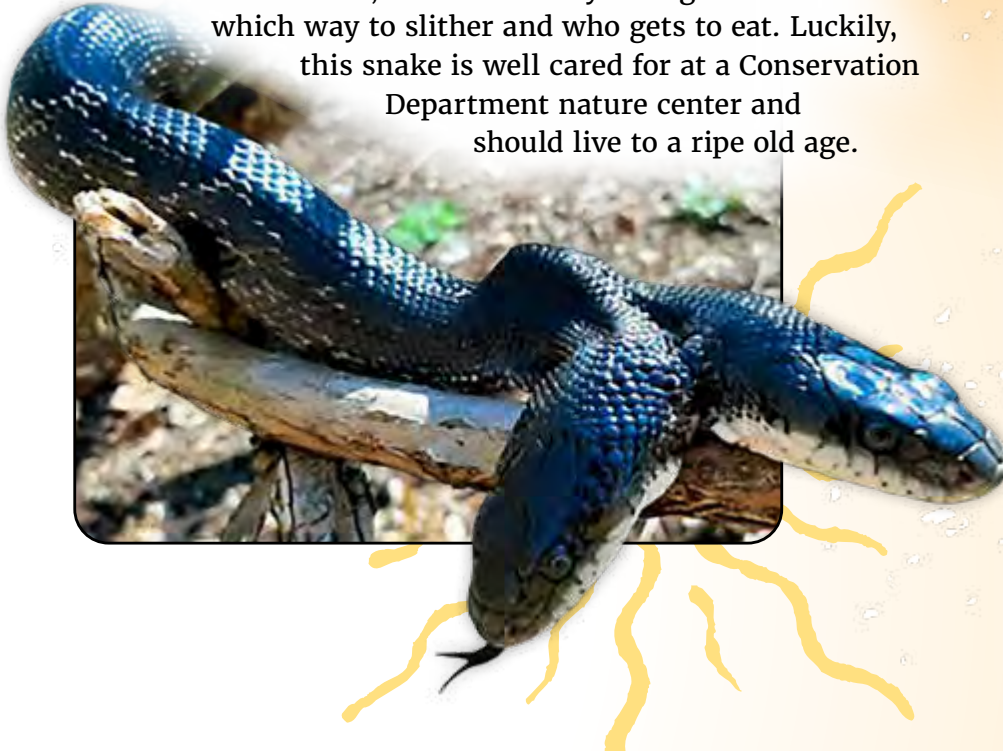


BABIES On Board

A mama crayfish is a nursery and mini van all rolled into one. In late spring, the mama mudbug lays a few hundred tiny black eggs and glues them to her tail with a waterproof paste. She waves her little legs — called spinnerets — to move water over the eggs. Once they hatch, the babies cling to mom's tail for several more weeks. Eventually, they swim off to explore nearby areas, but they dart back under mom's tummy if they feel threatened.

Seeing **DOUBLE**

What has four eyes, two brains, one stomach, and no legs? A two-headed snake, of course. About one in every 100,000 western ratsnakes are born with two heads. But in the wild, a two-headed snake has little chance for survival. It can't escape into nooks and crannies that a one-headed snake could fit into. And with two heads trying to make decisions, there are always disagreements on which way to slither and who gets to eat. Luckily, this snake is well cared for at a Conservation Department nature center and should live to a ripe old age.



Cotton Candy **KATYDID**

Katydids are often heard but rarely seen. That's because the earsplitting insects are master mimics — they're colored and shaped to look nearly identical to the leaves on which they live. But pink katydids are born without the skin pigment that makes them leafy green. Although they look pretty in pink, it's good that this condition is rare. Pink katydids stick out like bubble gum on a bedpost, and most wind up getting chewed by a bird.



Doo-Doo **DISGUISE**

Someday, this caterpillar will turn into a beautiful giant swallowtail butterfly. But as a baby, it looks like, well, poop. And that isn't an accident. You see, birds gobble up caterpillars the same way baseball fans snarf down hotdogs. But what self-respecting bird would eat something that looks like this? The caterpillar's disguise is so convincing that it doesn't even try to hide. It usually rests in plain sight on top of leaves — exactly where you'd expect to find bird droppings.

WHITE-TAILED DEER



ARMS RACE

Antlers are thought to be among the fastest-forming bones in the world. During peak growth, a buck may add a quarter of an inch to his antlers each day.

SORT OF SAFE

Usually, neither buck gets hurt during sparring matches, but the strongest, pushiest one earns the chance to mate with more does.



ANTLERS AWAY!

In late winter, antlers begin to wobble like loose teeth. By February, most bucks have dropped, or shed, their well-worn headgear.

FROM TRASH TO TREASURE

Lost antlers don't go to waste. Squirrels, mice, and rabbits gnaw on the discarded bones to get calcium and other nutrients.



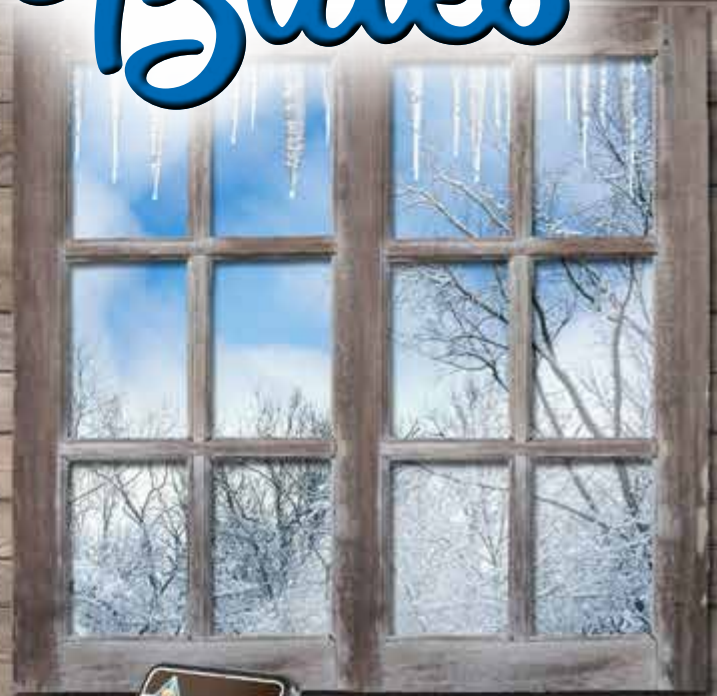
Blue Jay Gets the *Winter Blues*

Hey. I'm Jay.

What? You thought I'd be named Mike or Liam? Wrong! I'm your basic loud but lovable blue jay.

Want to hear a secret? My feathers aren't blue. Really! Pigments in my flappers are brown. Special cells on the surface reflect blue light, which makes them look — you guessed it — blue.

Since we're on the subject, I'll tell you a story. It's about the winter I truly turned blue. But not on the *outside* — on the *inside*.



A Troubling Discovery

Here's something you may not know about blue jays: We *loove* acorns. In fact, I gather thousands every fall and hide them all over the neighborhood. That way, I have plenty to eat during winter.

Jays are supposed to be smart. But sometimes I forget where I buried an acorn, and it sprouts into an oak tree the following spring. You're welcome, squirrels!

Anyway, I was out searching for lost snacks when I noticed something that made the feathers on my neck stand up ...



BARN SWALLOW NEST



WARBLER NEST



RUBY-THROATED HUMMINGBIRD NEST

All the Birds Had Vanished!

The first clue came from the swallow nest tucked under the barn. It was empty. No cause for alarm, I thought. Maybe the swallow family had simply swooped away to run errands. But then I noticed no one was home at the warbler nest, either. And when I checked the tiny hummingbird nest, **THERE WEREN'T ANY TINY HUMMINGBIRDS INSIDE!**

Friends, I was shook. What kind of spooky movie was I in? I flew home to search for answers ...

Scrolling for Clues

Fear stuck in my throat like a worm-wrecked acorn. Deep breaths, Jay. Smell the flowers. Blow out the candles.

I flicked on my phone. The quickest way to solve the mystery, I decided, was to search for clues on social media. I pulled up Wrenstagram and began scrolling through my bird buddies' accounts. What I saw shocked me.

My friends hadn't vanished. They'd gone on vacation. *Without me.*



Wrenstagram



NectarNerd
Ruby-throated hummingbird



951 pecks

2m

☀️ 500 miles of open ocean + 20 hours of flight + 3,816,000 wingbeats = 1 hungry hummer! I just flew to Mexico, 🇲🇽 and boy are my wings worn out. Time to buzz off and find some flowers.

🌸🌻🌺 #SUGARRUSH

Wrenstagram



BugEater
Barn swallow



2,291 pecks

6d

🌎 The Amazon River is an all-you-can-eat buffet! I flew over 3,000 miles just to get to Brazil, 🇧🇷 and I've already stuffed my beak with enough bugs to gain back the weight I lost. LOL. 🪰

🐛🪰🪲 #SORRYNOTSORRY

Wrenstagram



WanderingWarbler
American redstart



1,316 pecks

3w

🌊☀️🌴 Palm trees. Waves. Sandy beaches. Reggae. What's not to love about Jamaica? 🇯🇲 A change in latitude really changed my attitude! This warbler could get used to island life.

#WEBEJAMMING

My pals were having the time of their lives. When I realized this, a new fear parked itself in the pit of my stomach. FOMO — fear of missing out.



Feeling the FOMO

Why did my friends ghost me? How could they leave me behind? Would they ever return?

My cousin the crow caught me moping by the bird feeder. I'd gone to drown my sorrow in seeds. But every perch was packed with strange birds I didn't know. Could things get any worse?

I must have looked bluer than usual because my cousin said, "Hey Jay, why so blue?" (He's a real funny guy.) When I told him, he just shook his head and handed me a magazine.

AMERICAN CROW



PURPLE FINCH

WHITE-CROWNED SPARROW

The Migration Explanation

Mind. Blown.

Did you know that some animals move from one place to another when the seasons change? It's not vacation. It's called migration.

According to my magazine, over 300 kinds of birds live in Missouri, and over half of them migrate. They fly here in the spring to find food and places to nest. And when bugs and nectar dry up — or they finish raising babies — they fly south.

My friends didn't ditch me! They migrated.



Wrenstagram



JayBird25

264 posts 6.1k followers

Just a blue bird looking for some winter buds. HMU if you like acorns or shrieking at cats. 🐱🐱



You know what else I learned? Birds who nest up north come to Missouri in winter. This, I discovered, explained all the new faces at the feeder.



PurpleFinch requested to follow you.



The-OG-WCSP liked your post.



SnowBrrrd commented:
That blue looks good on you!



JayBird25

1d

Best winter ever thanks to these feathered fellas! You don't need to migrate to find a good time. Just stay put, be yourself, and let new friends find you. It worked for me. 🤪👍 #NOMOFOMO #FLOCKSROCK #XPLOR

XPLOR MORE

WHOSE HOME IS THAT?

Animals need water to drink, food to eat, and somewhere to rest and raise babies. Places that provide these things are called habitats. Missouri has several kinds of habitats, like prairies, glades, marshes, and forests. Many animals can survive in more than one kind of habitat. Others do well in only one specific habitat.

Instructions

Who lives where in this forest habitat? Write the number of the right home in the circle below the right animal. **Hint:** Two of these animals don't live in forests.



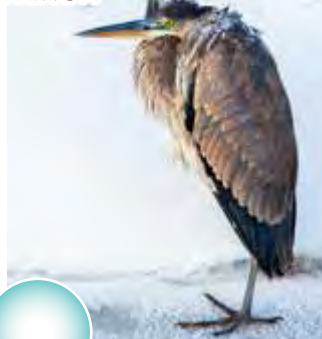
EASTERN SCREECH-OWL



EASTERN GRAY SQUIRREL



GREAT BLUE HERON



MOURNING CLOAK





WHITE-TAILED DEER



COMMON MUSKRAT



PILEATED WOODPECKER



EASTERN RED BAT



Answers: Owl - 1; Squirrel - 4; Heron - X; Mourning cloak - 5; Deer - 6; Muskrat - X; Woodpecker - 3; Bat - 2

GET OUT!

FUN THINGS TO DO
AND GREAT PLACES
TO DISCOVER NATURE



On your next holiday road trip, be sure to pack a pair of binoculars. Weedy roadsides offer **BIRDS OF PREY** ideal hunting grounds. Look for red-tailed hawks, American kestrels, and other raptors perched in trees and atop utility poles along the highway.



When food grows scarce up north, some birds say “See ya!” and fly south to Missouri. It pays to keep a close eye on your **BIRD FEEDERS IN WINTER**. An uncommon visitor — like a red-breasted nuthatch, red crossbill, common redpoll, pine siskin, or evening grosbeak — might stop by for a snack.

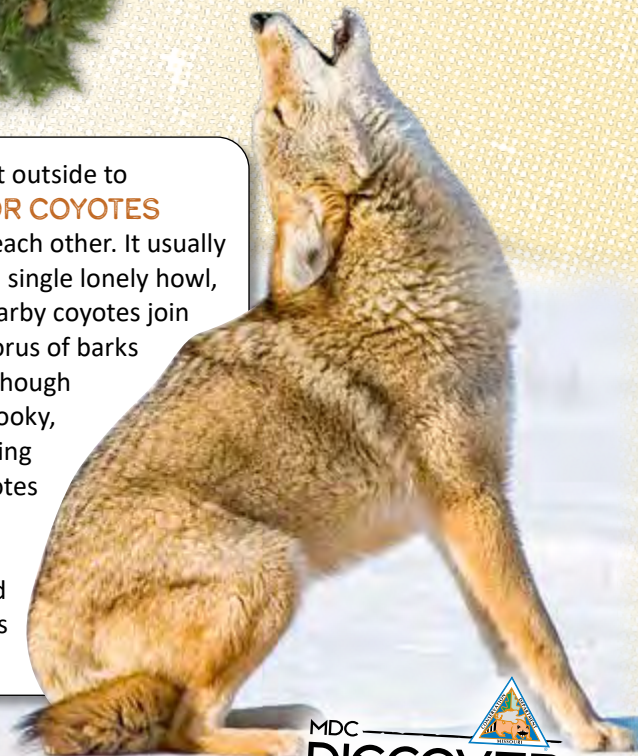
CEDAR WREATHS smell great and are easy to make. Just clip enough cedar branches to fill a grocery bag. Bend a wire coat hanger into a circle. Tie the branches to the hanger with twine, making sure the green end of each new branch covers up the brown end of the last branch you tied. Once the hanger is covered, tie on a red bow, and your wreath is ready.



With a thick sleeping pad and an extra-warm sleeping bag, winter is the perfect season to **CAMP WITHOUT A TENT**. There aren't any bitey bugs to bother you, and the crisp, clear air makes it seem like you could reach out and grab a handful of stars.



At sunset, sit outside to **LISTEN FOR COYOTES** chatting to each other. It usually starts with a single lonely howl, and then nearby coyotes join in with a chorus of barks and yips. Although it sounds spooky, there's nothing to fear. Coyotes howl to say, “I'm lonely” or “Let's find some rabbits to eat.”



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 —



REDHEAD

It's easy to see why this duck is called a redhead. But only males have flame-red feathers. Females and young ducks sport brown heads. In winter, redheads form large flocks that raft together in lakes, rivers, and deep marshes. Most male ducks show off to attract a mate, but redheads take it to the next level. Drakes bend backward until their beaks touch their tails. Then they snap forward while giving a catlike *mee-ooow!*

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?

RACCOON



MASKED BANDIT

A "mask" of black fur around the eyes cuts down glare from moonlight to help a raccoon see better.

WORKING THE LATE SHIFT

Raccoons are nocturnal. During the day, they rest in hollow trees, burrows, chimneys, and abandoned buildings.

MAKING TRACKS

Although you're not likely to spot raccoons in the daytime, you can often see where they've been by looking for their five-fingered footprints.

NIMBLE DIGITS

Raccoons use their sensitive fingers to feel for food underwater, pluck berries from brambles, and open trash cans.

NOT A PICKY EATER

Nearly anything is on a raccoon's menu, including fish, crayfish, frogs, insects, eggs, berries, acorns, crops, pet food, and discarded human food.

ONE LIE

— FROM PAGE 3 — Lie: 3 (Flying squirrels gain little weight during winter and are able to glide year-round.)

To subscribe, cancel your subscription,
or update your address, visit
mdc.mo.gov/xplor.

FREE TO MISSOURI HOUSEHOLDS

GO FIND IT!

Raccoons are found throughout Missouri in forests, farmlands, and urban areas. To learn more about these ring-tailed bandits, steal away to mdc.mo.gov/field-guide.



RACCOON