



November/December 2016

Xplor

**DUCK
HUNTING**
REALLY IS ALL IT'S
QUACKED UP TO BE.



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Tag along with Maya and Gabe on a duck-hunting adventure.

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Xplor tracks down facts about wildlife in winter.

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A doe in the snow drops by to say, "Yo."

📷 by Jim Rathert



Xplor

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ON THE COVER

Youth Duck Hunter
by Noppadol Paothong

GET OUT!

DON'T MISS THE CHANCE TO DISCOVER NATURE AT THESE FUN EVENTS



Gray wolf

1

Join us for **WHO HOWLED?** and learn fascinating details about the latest wolf research and findings. All ages. Runge Conservation Nature Center in Jefferson City. November 3, 6:30–8 p.m. No registration required. Call 573-526-5544 for more information.

Learn the basics of **TREASURE HUNTING WITH GPS**, and then hit the trails to find hidden treasures. GPS units provided. Ages 8 and older with an adult. Cape Girardeau Conservation Nature Center. November 19, 1–3:30 p.m. Registration begins November 1. Call 573-290-5218 for more information.

2



Explore the basics of **DUTCH OVEN COOKING**. Fixings and equipment provided. Families. Columbia Bottom Conservation Area in St. Louis. November 12, 10 a.m.–noon. Call 314-877-6014 to register.

3



4

Stop by the Springfield Conservation Nature Center for **NATURAL CRAFTS**. We supply the materials, and parents provide the guidance. All ages. December 10, 10 a.m.–3 p.m. No registration required. Call 417-888-4237 for more information.



Bald eagle

Choose from one of six **EAGLE DAYS** programs around the state, and visit 13 other locations where you can watch eagles in the wild. All ages. Visit mdc.mo.gov and search “eagle days” for locations, dates, and times. Early December through early February.

The leaves have dropped and snow is in the air, but there's still plenty to see and do outside. Let's go!

NOVEMBER 1

Work with your family to put up bird-feeding stations.

NOVEMBER 11

Look for old bird nests in the woods.

NOVEMBER 20

Ripe pecans are dropping from their trees. Gather some for a Thanksgiving pie. Search mdc.mo.gov for “pecan” to learn more and find great places to find pecan trees.

DECEMBER 1

Great horned owls are courting. Listen for “hoo, hoo-oo, hoo-oo.”

DECEMBER 5

Bald eagles begin arriving in Missouri.

DECEMBER 24

Look for these woodpeckers at your suet feeders: downy, hairy, pileated, and red-bellied.

WHAT IS IT?

DON'T KNOW?
Jump to Page 20 to find out.



- ❶ As a youngster, I'm bristly and curled.
- ❷ I grow leathery and toothed when unfurled.
- ❸ Soon my leaves start looking like stockings.
- ❹ And at Christmas my green keeps on rocking.

Into the WILD Ozark Spring

If winter has you dreaming of spring, maybe it's time to visit one.



Blue Spring

is Missouri's deepest spring, plunging to an estimated depth of 300 feet. Just how deep is that? The Statue of Liberty, eight school buses stacked end-to-end, or a football field could be submerged in Blue Spring.

LOOK

Peer into a spring, and you might see rainbow trout. Trout weren't originally found in Missouri. They're native to streams along the Pacific Coast of America. The trout you see today were grown in hatcheries and then released into spring-fed streams throughout the Ozarks.



Big Spring is Missouri's largest spring and is tied with two others for the title of world's largest spring. Big Spring releases about 275 million gallons of water each day — enough to fill 5 million bathtubs!

LOOK

Watercress grows along the edge of a stream and stays green for most of the year — even in winter. It once was used to heal sword wounds during the days of kings and castles, and French chefs still use it to spice up soups and salads. You shouldn't eat it, though. Watercress can be mistaken for water hemlock, which is poisonous.





Dip your hand into a spring. How does the water feel? Underneath the Ozarks are layers of limestone rock, which is full of holes. When it rains, water soaks down and flows through the limestone before it bubbles out of a spring. The rock insulates the water, keeping it about 58 degrees year-round. This makes spring water feel warm in winter and cool in summer.



Stay at a spring long enough and you might hear something that sounds like pebbles being rattled around in an aluminum can. This is a belted kingfisher's call. The smoky blue birds perch on branches overlooking streams and watch the water. When a kingfisher spies a fish, it dives — beakfirst — into the drink to snap up its prey.



Belted kingfisher

Where to Go

Although springs bubble up all over Missouri, the most scenic ones are found in the Ozarks. Here are a few of the prettiest to visit.

- 1 Alley Spring
- 2 Bennett Spring
- 3 Big Spring
- 4 Blue Spring
- 5 Greer Spring
- 6 Maramec Spring
- 7 Montauk Spring
- 8 Round Spring



Heads Up!

Don't drink from a spring. Even though the water looks clear and pure, it may contain germs and pollution that could make you sick.

Take a Closer Look

Sculpins love the cold water of springs. But you'll need keen eyes to spot these sneaky fish. Sculpins hug the bottom of the stream and hold as still as a statue, relying on their camouflage to blend in with the background.



Ozark sculpin

DUCK HUNTING



with
Papa —

by Matt Seek · photos by Noppadol Paothong

“On! Your! Feet!”

Gabe’s eyelids snapped open to find the bushy-bearded face of his grandfather smiling over him. Papa was once in the Army. Bellowing like a drill sergeant was his favorite way to wake people up. It certainly worked. Gabe slid from under the cozy blankets and padded downstairs to the too-bright kitchen. The clock above the stove read 4 a.m. Papa stood at the sink, pouring hot chocolate into a thermos.

“It’s a great day for a duck hunt,” he said.



cool
star →

PAPA'S TIP

A good duck hunter keeps a close eye on the weather forecast. Cold fronts usually cause ducks to migrate south. Birds get tired of flying all night and start looking for a place to rest and grab a bite to eat. That's when the hunting gets hot.

PAPA'S TIP

Duck hunting isn't an easy hobby to jump into. There's lots to know and lots of gear. But if you want to give it a try, the best advice is to find an old-timer who will take you out and show you the ropes.



Gliding Through the Milky Way

Darkness swallowed them when Papa clicked off the headlights. From the bank, the marsh looked mysterious and spooky. Maya heard the clink and clunk of her dad loading gear into the boats. Something splashed somewhere out in the water, and coyotes yipped and yowled in the distance.

“Watch your step,” her dad said as he helped her into a wide wooden boat and directed her to sit on a rolled-up mat of grasses. Maya wondered what the grasses were for, but before she could ask, her dad hopped in after her and used a long wooden pole to push the boat out into the inky water.

A galaxy of stars shimmered overhead. The water was as smooth as glass, and Maya had a hard time making out where the sky ended and the marsh began. It felt as though they were gliding *through* the Milky Way, not beneath it.

Maya felt a wave gently rock their boat. Then she saw Papa emerge from the darkness, poling another boat toward them. Rip was perched on the bow like a pirate’s parrot. Gabe sat behind him near an enormous sack of duck decoys. It looked like the boat might sink at any moment, but Papa guided it expertly through the marsh, teasing Maya about how slow her dad was going. In a few moments, he had disappeared ahead of them into the gloom.

Oh-Dark-Thirty

Gabe found his sister, Maya, in the mudroom, wrestling on a pair of chest waders. They looked like rubber boots, except they went all the way up to Maya’s chest.

Rip, Papa’s pony-sized Labrador retriever, wasn’t helping. Whenever Maya took her eyes off a glove or spare sock, Rip snatched it up and pranced off with it.

“You’re worthless,” Papa told Rip affectionately as he wrenched a drool-drenched sock from the dog’s jaws and tossed it back to Maya. Unlike Maya, Papa didn’t seem to mind the slobber.

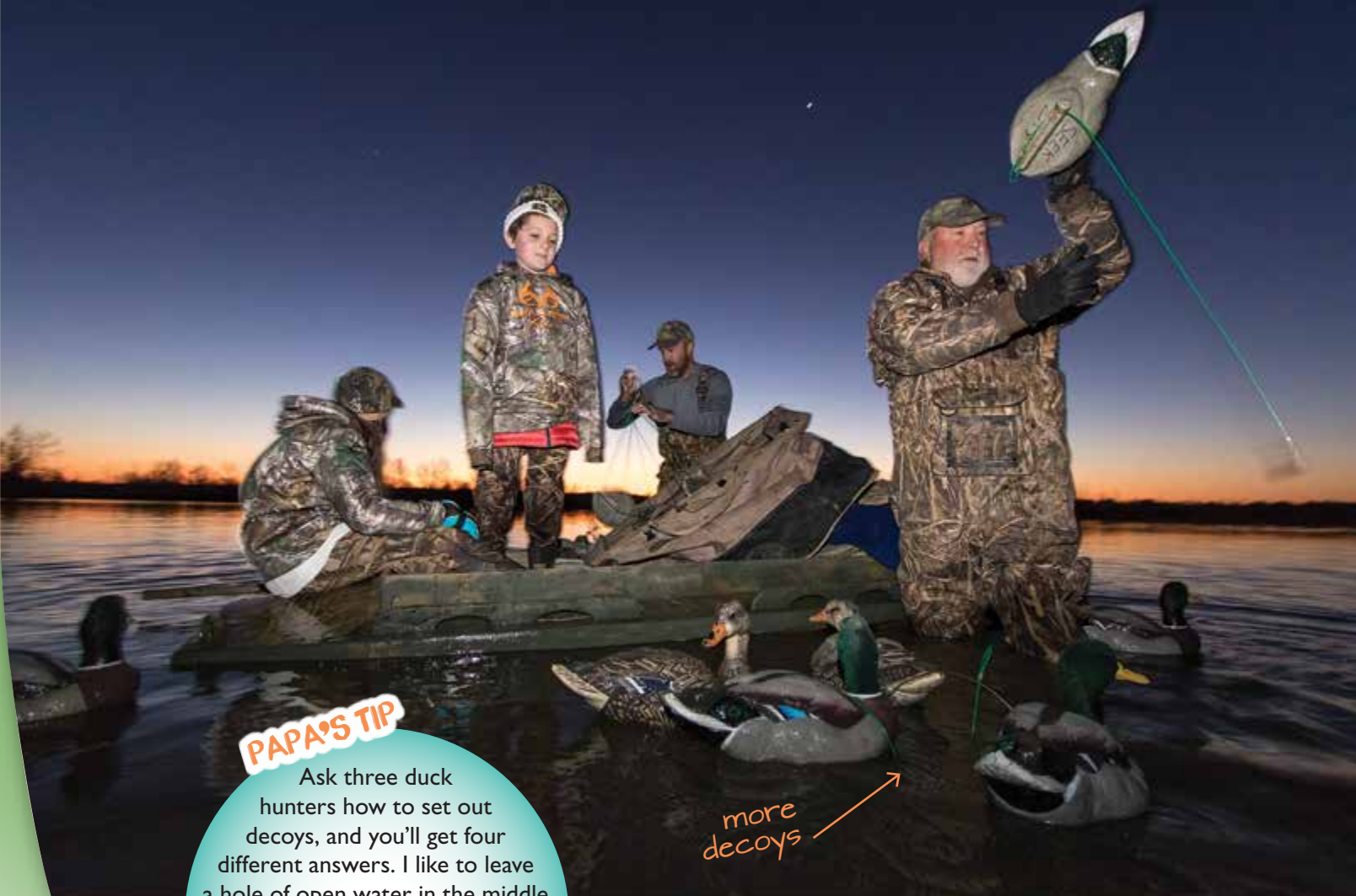
Gabe dressed quickly then shuffled out into the cold night to join his sister in Papa’s pickup truck.

“You’ve got to be crazy to be a duck hunter,” Papa said as he shifted the truck into gear. “Why else would you get up at oh-dark-thirty to spend hours out in the freezing cold just to watch a bunch of birds fly around a marsh?”

In the back seat, Maya and Gabe were wondering the same thing.

PAPA'S TIP
Duck hunting is cold — except when it’s not. Dress in layers that are easy to take off and put back on. When you’re poling a boat, wading through the muck, or throwing out decoys, you get hot. So peel off a layer. The last thing you want to do is sweat. Because when you stop moving, sweat will make you cold.

grass mats →



PAPA'S TIP

Ask three duck hunters how to set out decoys, and you'll get four different answers. I like to leave a hole of open water in the middle of my decoys so that ducks have a place to land. Keep your decoys looking nice, too. Ducks have good eyes and won't be fooled by muddy decoys or ones with faded paint.

more decoys →

Fake Plastic Ducks

"Decoys," Papa explained, "are fake plastic ducks. You use them to fool real ducks into thinking your corner of the marsh is a good place to land."

Each decoy had a weight tied to it with a long cord. The weights kept the decoys from floating away, but the cords had become hopelessly tangled. While Papa worked to untie them, Gabe waded around in the cold, waist-deep water.

Walking in waders felt ... weird. Water pressed against the waders, making it feel like they were squeezing his legs. The sticky marsh mud felt like pudding under his feet. It sucked at his boots and wouldn't let go, threatening to trip him with every step.

"Think fast!" Papa said and tossed a decoy in Gabe's direction. The fake duck splashed down a few feet away. Gabe watched it bob and turn in the wind. If I were a duck, he thought, that decoy would sure fool me.





PAPA'S TIP

Ducks always land pointed into the wind, so try to hunt with the wind at your back. That way, the birds will be coming right at you, and you'll have a better chance to make a good, clean shot.

A Not-So-Peaceful Sunrise

So that's what the grass mats are for, Maya thought.

They had beached the boats side-by-side on a reed-covered mound in the middle of the marsh. Dad and Papa were using the mats for camouflage. When they were done, the boats looked like a patch of cattails. Gabe and Papa hunkered down inside one of the boats. Maya hid with her dad in the other.

The sun had just peeked over the horizon when Maya heard a strange whistling noise. "Get ready," Dad whispered. Maya scanned the sky but

couldn't see anything. Papa began blowing on his duck call: *Waaank, waank, waank, waank. Ticka, ticka, ticka, ticka.* And then Maya saw them: a dense flock of green-headed ducks whizzing by just beyond the decoys. Their wings made the quavering whistle she had heard earlier. They flew impossibly fast.

When Rip saw them, he went berserk. He began shaking uncontrollably and trumpeting out ear-piercing whimpers that made Maya imagine Chewbacca from *Stars Wars* getting tickled ruthlessly. The ducks swung far out into the marsh, and disappeared behind some trees.

"Well that was exciting," Papa said.



Stories and LCDs

“The hunting is excellent, but the shooting is poor.”

Gabe figured that was Papa’s way of saying there weren’t many ducks around today. In fact, they’d seen only a couple other flocks since Rip scared away the first one. It didn’t matter to Gabe. It was fun just being out in the marsh.

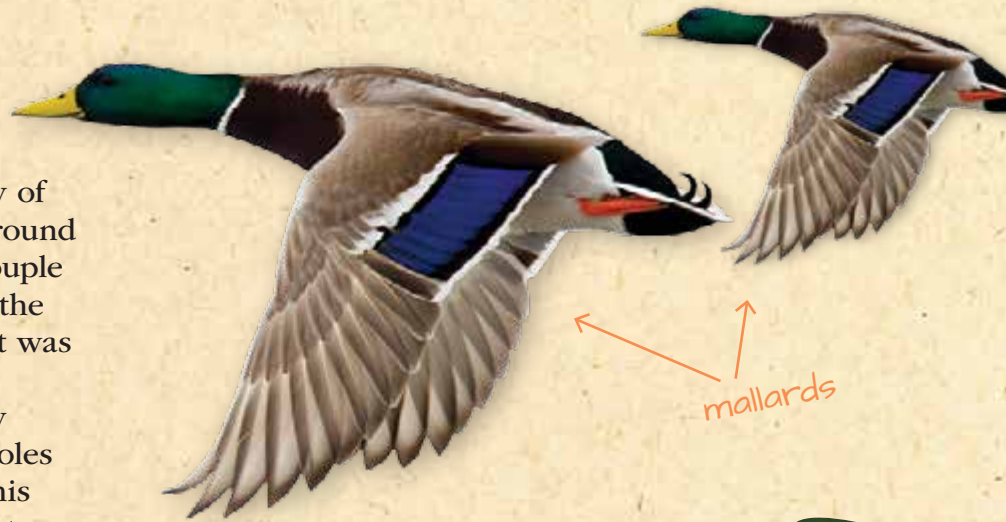
To pass the time, Papa told funny stories. He told about melting the soles of his boots while trying to warm his feet by a campfire, and stories about the ornery things that Dad did when he was a boy, and about the bald eagle that swooped down to steal a duck that Papa had just shot. The funniest stories always started with Papa saying, “Now don’t tell grandma I told you this”

When Gabe got cold, Papa moved everyone into a duck blind that was well-hidden behind the boats. He lit a propane heater and passed out cups of steamy hot chocolate, slices of spicy summer sausage, and LCDs — Little Chocolate Doughnuts. Gabe felt toasty in no time.

“You know,” Papa said, “this is one of the best hunts I’ve ever been on.”

“But you haven’t fired a shot,” Gabe said.

“Hunting isn’t just about shooting ducks. It’s about slipping quietly through dark water in a good boat, watching the sun rise in a wild place, and spending time with people you love. And it seems to me,” Papa said, “that we did all those things.”




What's SNOWING on?

by Bonnie Chasteen | artwork by Mark Raithel

A blanket of fresh snow can mean a day of sledding for you, but it is a mixed blessing for animals trying to survive winter in the wild. Let's take a walk and see how some Missouri critters spend their snow days.

In old fields and pastures, **prairie voles** tunnel through the snow, nibbling grass and tree bark. Are they safer from predators by being under the snow? Depends on who's doing the hunting.

Voles can produce as many as 17 litters or up to more than 80 young per year.



Hawks hunt mostly by sight. While snow hides small prey like cottontail rabbits from view, it also makes them easier to see when they come out to feed.


Red-tailed hawks are common statewide and easily seen during winter.

Missouri's fastest mammal, the coyote, can run 43 miles per hour — about seven times as fast as you. But relax, it eats mostly rabbits and mice.

During heavy snow, cottontails eat just about anything — including bark, twigs, and even their own poop (eww!) — to survive.

Even if **coyotes** can't see voles and mice traveling under the snow, they can still catch them. Listening carefully, they pounce and dig, dig, dig until they nab their prey — if they're lucky. They aren't always successful.


Cottontails are most active at dusk and dawn, when it's harder for predators like hawks and coyotes to spot them. A blanket of snow gives them even more protection until dinnertime.



Over in the woods, a **wild turkey** must scratch through the snow and leaf litter to find seeds, nuts, and grubs.


Extremely soft feathers insulate the **great horned owl** against the cold and help it fly silently in pursuit of prey. It hunts at night, patrolling woods and fields for mice, rabbits, and other critters.

If snow gets too deep for turkeys to scratch through it, they will roost in trees to conserve energy until the snow melts.

A red fox is shown in a snowy landscape, looking towards the left. The background features bare trees and a large tree trunk on the right.


A red fox can hear a mouse's squeak 330 feet away — about the length of a football field.

The **white-footed mouse**, which doesn't hibernate, has ventured above the snow to search for seeds, bark, and stems to eat. The **red fox** in the distance hasn't spotted it yet, but there's a good chance the fox will catch the mouse, even if it hurries back under the snow. Foxes are successful at snow-diving for mice about seven out of 10 times.

A white-footed mouse is shown in the snow, moving towards the left. It is holding a stick in its mouth.

In order to prepare for winter, the white-footed mouse gathers and stores seeds and nuts in the fall.

Ever hear of a frog-sicle? The **wood frog's** antifreeze-like blood allows it to freeze solid when winter weather hits, then thaw and hop away when spring returns.

A wood frog is shown on a log, surrounded by dry leaves. The frog is brown and has a white stripe on its side.

This is one of the few frogs that can be found in Alaska and above the Arctic Circle.

THIS ISSUE:

COYOTE VS OPOSSUM

Illustrated by David Besenger

Fitter Fighter

At 18–30 pounds, most coyotes weigh about twice as much as most opossums.

Smells Like Death

Anal glands emit green mucus that can discourage predators like the coyote from chowing down while the opossum is out cold.

Sharp Senses

Sensitive hearing, keen eyesight, and a great sense of smell help the coyote find prey — and avoid scarfing down things that could make it sick.

Plays Possum

Why do opossums play dead? They can't help it. Fright makes them faint until the threat passes.

Plan B: Sharp Teeth

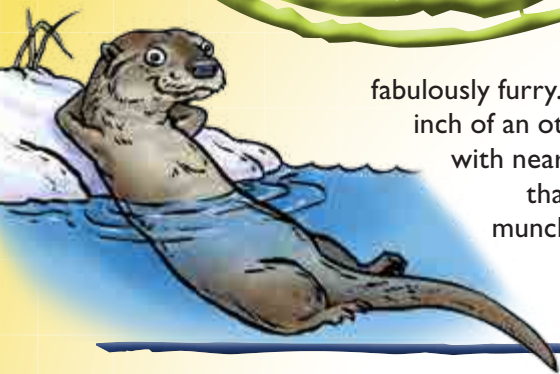
If the coyote still threatens when the opossum wakes up, the possum won't hesitate to hiss, lunge, and show its teeth.

AND THE WINNER IS...

Kind of a toss-up this time. If the coyote is really hungry, it might tear into the opossum. If it has eaten recently, it might pass up such a stinky, snarly snack.

STRANGE but TRUE!

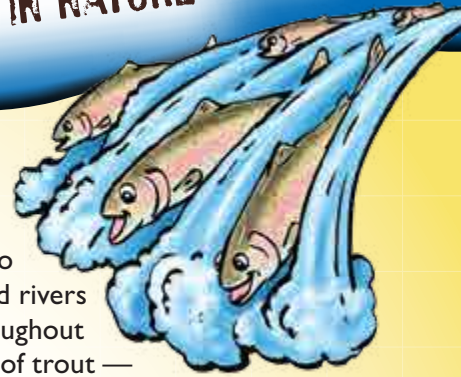
YOUR GUIDE TO ALL THE
UNUSUAL, UNIQUE,
AND **UNBELIEVABLE** STUFF
THAT GOES ON IN NATURE



RIVER OTTERS

are fabulously furry. In fact, each square inch of an otter's skin is covered with nearly 375,000 hairs. All that hair keeps the fish-munching mammals warm and dry when they swim in icy water.

Each year, the Conservation Department grows 1.6 million **TROUT** to release into spring-fed rivers and winter lakes throughout Missouri. That's tons of trout — literally. The fish produced annually have a combined weight of about 550 tons.



With their ginormous beaks, **EVENING GROSBEAKS** can crush seeds that would crumple another bird's bill. Pine siskins, redpolls, and finches often flock to grosbeaks, hoping to snatch up the scraps that the burly beaked birds leave behind.



A NORTHERN HARRIER'S

saucer-shaped face is lined with stiff feathers that funnel sounds to its ears. This "face funnel" helps harriers hear the slightest squeak so they can zero in on mice hiding in the grass.



Most pines, cedars, and other conifers keep their needles all year. That's why they're called "evergreen."

BALD CYPRESS trees are never-green — at least during winter. In autumn, their needles turn brown and drop, leaving the branches bald until spring.



SNOWY OWLS aren't night owls — they're early birds. The wintery white predators normally live far north of Missouri on the Arctic tundra. Up there, the sun doesn't set during summer, and snowies have no choice but to hunt during the day.



SCULPINS are big-mouthed, bug-eyed fish that hug the bottom of cold, swift streams in the Ozarks. To avoid becoming chum for predators, sculpins have a trick up their fins: They change color to blend in with their surroundings.



HOW TO

Make Deer Jerky

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

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
- 1/3 cup teriyaki sauce
- 1/3 cup soy sauce
- 1/3 cup Worcestershire sauce
- 1 teaspoon red pepper flakes (optional)
- Zip-top plastic bag
- Aluminum foil
- Shallow cake pan or cookie sheet
- An adult to help you

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.

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 fridge.



XPLOR MOR

MIGRATION MIX-UP



From October to December, skies above the Show-Me State become packed — like highways during rush hour — with thousands of ducks flying bumper-to-bumper (or beak-to-bottom), migrating south for winter. Missouri's marshes provide important pit stops where road-weary waterfowl can rest and refuel during their long journey.

Practice identifying a few common ducks with this puzzle, then grab a pair of binoculars and visit a wetland to see real ones.

Puzzle Instructions

You've heard, "birds of a feather flock together," but sometimes birds with *different* feathers flock together. For example, different kinds of ducks often hang out during migration. You might even find a coot or two — which aren't ducks at all — mixed in.

How many of each species can you find in this flock? *Hint:* There are 73 total.

MALLARD	NORTHERN PINTAIL	GADWALL	GREEN-WINGED TEAL	NORTHERN SHOVELER	AMERICAN COOT
					
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

WHAT IS IT? — FROM PAGE 3 —

Leaves that are shaped like Christmas stockings and a deep green color that lasts all winter earn this Missouri native fern its common name. If you like to hike in winter, you may see Christmas ferns growing in woods along streams and ravines.





Answers: Mallard 14, Northern pintail 10, Gadwall 16, Green-winged teal 18, Northern shoveler 13, American coot 2

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FREE TO MISSOURI HOUSEHOLDS

CRITTER CORNER River Otter



Danny Brown

Take a walk along a stream this winter, and you may see this member of the weasel family snacking on fish or playing on the ice. With streamlined bodies, webbed feet, and heavy layers of fat, otters are well-suited to life in the water. Otters live in family groups, so if you see one, you're likely to see others. Visit **mdc.mo.gov** to learn more and find great places to see them.