## MISSOURI DEPARTMENT OF CONSERVATION



WOODPECKERS ARE THE HARD ROCKERS OF THE BIRD WORLD

IGER.

January/February 2015

### FEATURES

- 6 Hungry Hunters A mini field guide to Missouri's meat-eating mammals
- **11 Head Bangers** Meet Missouri's hard-rocking feathered drummers.

### DEPARTMENTS

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Thick, shaggy fur keeps a **bison** cozy during an ice storm at Prairie State Park. by Noppadol Paothong





GOVERNOR Jeremiah W. "Jay" Nixon

### CONSERVATION COMMISSION

Don C. Bedell James T. Blair, IV Marilynn J. Bradford David W. Murphy

DIRECTOR Robert L. Ziehmer

**XPLOR STAFF** 

Brett Dufur Les Fortenberry Karen Hudson Regina Knauer Nichole LeClair Terrill Noppadol Paothong Marci Porter Mark Raithel Laura Scheuler Matt Seek David Stonner Stephanie Thurber Cliff White

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Visit *xplormo.org* for cool videos, sounds, photos, fun facts, and more!

ON THE COVER Pileated Woodpecker Nestlings by Danny Brown

# DON'TTMISS THE CHANCE TO DISCOVER NATURE AT THESE FUNEVENTS

### Swing a hammer and BUILD A BLUEBIRD BUNGALOW.

GELOVII

Cape Girardeau Conservation Nature Center. February 17, 6:30–8:30 p.m. Register at 573-290-5218.

Watch wild eagles soar along the riverfront at Clarksville EAGLE DAYS. January 24 and 25. For info, call 660-785-2420. Find other Eagle Days events at mdc.mo.gov/ node/16598.

Tie a popping bug fly at the **BEGINNING FLY TYING CLASS.** St. Joseph Regional Office. Mondays and Thursdays in January, 6:30–8:30 p.m. Register at 816-271-3100. Youth must be with an adult.

Bald eagle

### Learn how Sacajawea survived at DISCOVER NATURE – LEWIS AND CLARK Twin Pines Conservation Education Center

in Winona. January 8, 10 a.m.–1:30 p.m. Register at 573-325-1381.

Learn the basics of upland hunting at the YOUTH PHEASANT CLINIC. August A. Busch Shooting Range and Outdoor Education Center. February 26, 6–8:30 p.m. and hunt March 7. Register at 636-441-4554. Even during winter, nature is on the move. Watch for these natural events around the following dates.

### JANVARY 2

White-tailed deer bucks start to shed antlers.

### FEBRUARY 5

Watch for pintail and mallard ducks migrating north.

FEBRUARY UP Look for large flocks of reddish-orange chested robins.

### FEBRUARY 18

Once temperatures rise above 60 degrees, male rabbits begin fighting and chasing each other while looking for mates.

FEBRUARY 20 Chipmunks come out of hibernation.

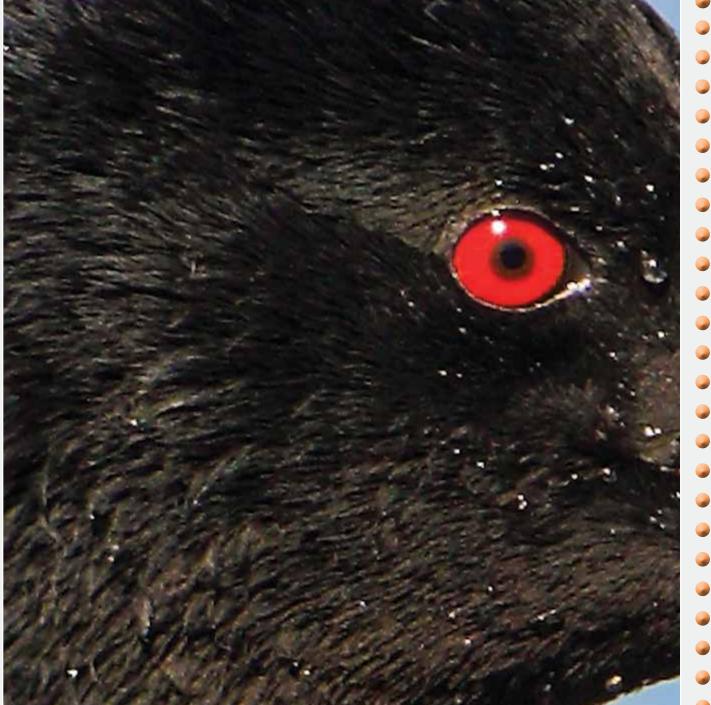
### FEBRUARY 25

Listen for chorus frogs. Their calls sound like a thumbnail scratched along a comb.



Looking for more ways to have fun outside? Find out about Discover Nature programs in your area at **xplormo.org/node/2616**.





I have big, funny feet.Old coots call me a "marsh hen."

ummer isn't the only time to seek a creek.Winter brings its share of amazing discoveries. Use this guide to know what you'll find when you head out into the wild.



Never, ever walk on an icy stream unless an adult says it's OK. Ice that isn't at least 4 inches thick isn't safe to walk on.

A wild picnic took place on this stream bank. River and mussels to munch on the the empty shells on the bank. At the empty shells on the bank.

Mink

e a Closer Look

It takes II to I4 months for bullfrog tadpoles to turn into frogs. That means the chubby polliwogs pass winter underwater. If you're lucky, you might spot them swimming lazily under the ice.



Most mammals are nocturnal, so you may not see many in the flesh and fur. But footprints in the snow offer evidence of their nightly wanderings. Can you find the tracks in this photo?

Into the

thozen creaks

Bullfrog tadpole photo: © Tonny Anwar | Dreamstime.com

Pack a small trash bag whenever you head outside. If you find

litter, pick it up!

Cardinals, chickadees, and tufted titmice begin singing in February to attract mates (the early bird gets the girl) and to stake claims on patches of habitat. To learn what these early spring singers sound like, fly over to allaboutbirds.org.

# Touch

en cadinal

Run your hand over a velvety soft patch of moss. Mosses are tiny plants that don't produce flowers or seeds. After a natural disaster, such as a forest fire or tornado, they are often the first plants to grow back. LOOK If you spot a tree that seems as if it's been run through a ginormous pencil sharpener, you're likely looking at the handiwork of a beaver. Missouri's largest rodent uses its sharp front teeth to cut down trees. Beavers use trees for food and to build dens and dams. During autumn, a beaver will cut down, on average, a tree every

other night.

A beaver can gnaw down a 5-inch-wide willow tree in under three minutes.

nid You the

# by Brett Dufue

Coyote

hen tummies growl, these hungry hunters skip the fruits and veggies and seek meat. Meat eaters are called carnivores (*CAR-ni-vorz*). Eating meat helps these animals get all the energy they need to raise their young, stay on the move, survive long winters, and compete in nature's never-ending quest for survival. Head outside to see Missouri's meat eaters, from the slinky little mink to the big black bear.

# But First, Make This Field Guide

- 1 Cut out the next two pages along the dotted lines.
- **2** Fold each cut-out down the middle.
- **3** Stack the cut-outs so the pages are in numerical order.
- 4 Staple the cut-outs together along the middle between pages 8 and 9.
- **5** Take your mini field guide to the nearest field, forest, or stream.

# YOU DISCOVER HURGRY HURTERS



A MINI FIELD GUIDE TO MISSOURI'S MEAT-EATING MAMMALS



### mdc.mo.gov

# Covote

16



Weight: 18 to 30 pounds

You're more likely to hear a coyote's nightly howls and yelps than see one during the day. They like to hunt at night.



Rabbits and mice make up most of a coyote's diet. When there's lots of food to eat, coyotes will bury the extra food in a hole and come back for it later.



### **Babies:**

Baby mammals are often born hairless with closed eyes and can't care for themselves. Female mammals make milk for their young.

Habitat: Habitat (ha-BI-taat) is a fancy word for where an animal lives. Most mammals need food and water, shelter from predators, and a cozy place to have babies. Thankfully, Missouri offers many kinds of habitat to suit many different mammals.

Feet: Mammals typically have four legs with toes and nails, claws, or hooves. Mammals that dig, such as moles, have strong claws for burrowing. Others mammals, like squirrels, have sharp claws for holding onto tree bark.

Saying Hi: Mammals "talk" using sounds, scent, touch, and movement — like when your dog wags its tail. We can learn a lot by studying the sounds and signals of Missouri's mammals. 3

### What Makes an Animal a Mammal?

hen animals have things in common, biologists group them together. For example, mammals are similar in many ways: teeth, hair, feet, how they raise babies, and more. Read on to learn what makes an animal a mammal.



Hair: Mammals are fluffy for a reason. That furry coat keeps mammals warm. Most mammals have whiskers on their faces and a puffy tail that doubles as an extra blanket 2 on cold nights. **Teeth:** All of Missouri's adult mammals have teeth. They tell a lot about what a mammal eats, from gnawing on trees to piercing and tearing apart prey.





During winter, bears fall into a deep sleep. Their pulse can drop to eight beats per minute. Learn more about Missouri's biggest meat eater at **mdc.mo.gov/node/973.** 

> Only about 300 black bears live in Missouri, so you're lucky to see one. Thanks to conservation efforts, black bear numbers are on the rise. **15**

### What Makes a Mammal a Carnivore?

A carnivore (*CAR-ni-vor*) is a meat-eating animal. Meat offers carnivores a big boost of energy so they can spend more of their day doing things other than hunting.

> Carnivores are grouped together because they eat mostly meat.

Some mammals, such as the coyote, prefer a meat-only diet. Compare the meat meters on the following pages to see which carnivores tip the scales on a meat-only diet.



**Total Length:** 18 to 50 inches **Weight:** 8 to 49 pounds

The short tail, speckled coat, and pointed ears let you know you're not looking at an ordinary house cat.

Bobcats eat everything from squirrels to wild turkeys, but their preferred meal is rabbits. About the size of a medium dog, the secretive bobcat is one of the larger wild mammals in the state.

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Red Fox

Meat-eating mammals have large, sharp canine teeth. These are used to seize and hold prey. Canines are also used for piercing and tearing meat. You have canine teeth too — they are usually a bit pointy.

Carnivores have other specialized teeth that help them cut and chew flesh and meat.

**Total Length:** 12 to 46 inches **Weight:** 7 to 15 pounds

Red foxes are doglike with long puffy tails and a reddish coat. They are about the size of a heavy house cat.

screeches, and more.

What does the fox say? A lot! Foxes have many calls, including long yells, barks followed by a single squall,



Menu

Most carnivores hunt other animals to eat. But many, like the black bear, will also eat the carrion, or dead bodies, of animals they find.

Hunting other animals takes planning, strategy, and sometimes communication and teamwork. Carnivores, like coyotes, use their big brains to improve their hunt.

mouse

12





This masked bandit is easy to ID with its stocky body and striped tail. Raccoons do most of their eating and prowling at night. They eat equal parts plants and animals.

Raccoons weigh the most in the fall, when they're plumped up for winter. The record weight of a raccoon was 62 pounds.



**Total Length:** 20 to 30 inches **Weight:** 2 to 12 pounds

Menu: 50% Meat

Striped skunks eat equal amounts of plants and animals. Mice, rats, eggs, and dead carcasses are favorites, along with lots of insects and even bees and wasps. Yeouch!

You know you've been skunked when you sense their scent. Stripy generally gives several warnings before spraying, such as stamping its front feet or clicking its teeth.







Total Length: 20 to 27 inches Weight: 1 to 3 pounds



A mink, about the size of a small house cat, lives on land like a weasel and in the water like an otter.

When it snows, a mink likes to slide down hills on its belly, just like a river otter.

Mink prey on critters from the water and the shore, including fish, crayfish, frogs, mice, rabbits, and more.

The gray fox has grayish fur and a black-tipped tail, and is slightly smaller than the red fox.

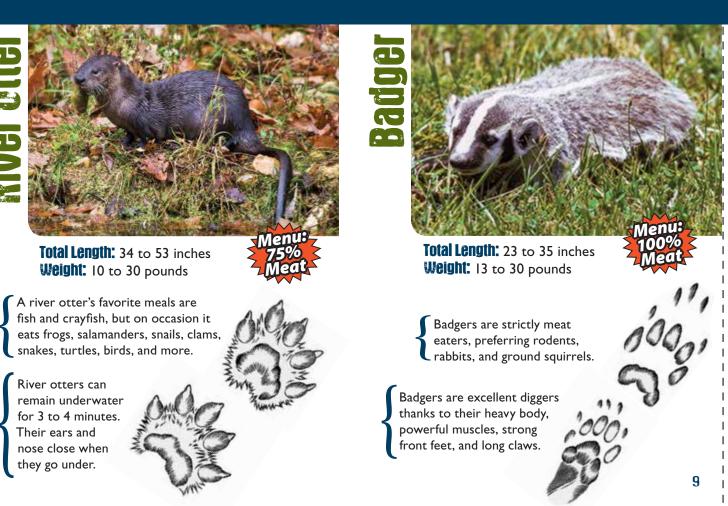
> Gray foxes have a yapping bark they give four or five times in a row. It's louder and harsher than the bark of the red fox.

11

Total Length: 31 to 44 inches

Weight: 5 to 15 pounds





Vith their bold black feathers, rowdy behavior, and head-banging habits, woodpeckers are the hard rockers of the bird world.

by Matt Seek

In a headbanging contest, you wouldn't stand a chance against a woodpecker. To understand why, imagine being kicked in the head by a professional soccer player. That's about the same amount of force a woodpecker feels when it slams its head into a tree — and woodpeckers bash their beaks into bark thousands of times a day. They do so to find food, hammer out holes in which to raise families, and drum messages to fellow woodpeckers. Keep reading to learn more about these hard-rocking birds.

When flying, woodpeckers is a bit then glide a while his sives their flight ath a wavelike shape

**JANUARY/FEBRUARY 2015** 

# **Missouri's Feathered** Drummers Seven kinds of

woodpeckers tour the

Show-Me State. The tree trunk to the right shows where each species often hangs out on a tree.

# Pileated Woodpecker

### Here all year

**Pileated woodpeckers** are Missouri's largest woodpecker, and boy do they pack a punch. The crowsized birds hammer out huge rectangular holes in their search for carpenter ants and other insects. Sometimes the holes are so deep that they cause skinny trees to break in two. Oops.

### **Yellow-Bellied Sapsucker**

Visits during winter; flies north to nest

Sapsuckers drill tidy rows of shallow holes in living trees. When sweet sap leaks out of the holes, the little woodpeckers return to lick it up. If insects drop by for a taste, they become sapsucker snacks. Although sapsuckers chase other animals away from their sappy soda fountain, hummingbirds, squirrels, and bats often slip in for a sip.

### **Downy Woodpecker**

### Here all year

Missouri's smallest woodpecker isn't much bigger than a sparrow. But being dainty isn't a drawback. It's an advantage. A downy's light weight lets it cling to skinny branches, weed stalks, and wildflowers without breaking them. This way, the acrobatic little woodpecker can snap up insects that larger birds can't get.



# Red-Bellied Woodpecker

### Here all year

Male red-bellied woodpeckers show off their drumming skills to pick up chicks. After a male excavates a nest hole, he taps around the opening to attract a mate. If a female's interested, she joins in the drumming and helps finish the nest.

Danny Brown photo



Danny Brown photo

### Hairy Woodpecker

### Here all year

Hairy and downy woodpeckers look nearly identical. How do you tell them apart? Size is a good clue. Hairy woodpeckers are robinsized; downies are sparrow-sized. Another tip-off is the length of the bird's beak. A hairy's bill is about as long as its head; a downy's bill is only half as long as its head.

### **Red-Headed Woodpecker**

Migrates south during hard winters

Red-headed woodpeckers store acorns for winter in all kinds of nooks and crannies: cracks in trees, holes in fence posts, and rain gutters. The sneaky birds even wedge wood chips over their stashes to hide them from hungry squirrels. Redheads also stow insects for future snacking. Live grasshoppers get crammed into cracks so tightly they cannot escape.

### **Northern Flicker**

### Migrates south during hard winters

Flickers are weird — but wonderful — woodpeckers. Most woodpeckers are black and white. Flickers are mostly brown. Most woodpeckers spend their time in trees. Flickers fancy ants, so they spend lots of time on the ground. Most woodpeckers use their beaks like chisels to chip away wood. Flickers use their beaks like shovels to dig up ants and grubs. Woodpeckers talk to each other by drumming. They pick something hollow — such as a dead branch, stove pipe, or rain gutter — and peck loudly and rapidly. The tapping tells other woodpeckers someone is looking for a mate or claiming a patch of trees.

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Danny Brown photo

# **Built for Hard Knocks**

Here are a few of the tools woodpeckers use to survive the hard knocks of their hard-rock life.

### **Tweezer Tongue**

Woodpeckers use long, pointy tongues to pluck insects out of hidey-holes. The tongues are barbed and coated with sticky spit so squirmy bugs can't wiggle off.

### Helmet Head

A thick, spongy skull absorbs the shock of a woodpecker's persistent pounding. The bird's brain is packed tightly inside so it doesn't slosh around.

### Feather Filters

Heavy-duty hammerers — such as downy, hairy, and pileated woodpeckers — have feathers covering their nose holes to keep out sawdust.

Woodpeckers • can peck 15 to 20 times a second and rack up 8,000 to 12,000 taps a day.

### Kickstand Tail

The edges of a woodpecker's tail feathers curl inward. This makes the feathers strong and stiff. Woodpeckers prop their tails against tree trunks for balance as they climb. **Drill Bill** 

If a woodpecker's beak were pointy, it would get stuck a lot. Instead, its beak is wedgeshaped — like a chisel — which is perfect for chipping away wood.

### **No-Slip Grip**

Clinging to trees isn't tough — if you have sharp claws to bite into bark and toes that point forward and backward for a no-slip grip.

Woodpecker eggs are pure white. Because they're laid in a dark cavity, they don't have to be camouflaged.

# Cavity Creatures

Woodpeckers raise their babies in holes they hammer into trees. When excavating a nest, woodpeckers search for soft wood that is already dead or rotting, so their cavity creation doesn't hurt the tree. When 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.

# Tree Huggers

Woodpeckers keep trees healthy by eating harmful insects. When there's an outbreak of treemunching bugs, woodpeckers arrive in large numbers for a feast. Afterward, the forest sports a few more holes — and a lot fewer pests.

. . . . . . . . . . . . . . . . . . .

Woodpeckers use the tone of their tapping to locate insects under the bark.



With their bold colors and *whacky* way of finding food, woodpeckers are tons of fun to watch. Here are some tips to attract them to your yard.

### Hang up some suet

Suet — animal fat mixed with seeds, nuts, and berries — is like candy to woodpeckers. Hang some in your yard, and woodpeckers are sure to come calling.

### **Fill a feeder**

When woodpeckers aren't gobbling grubs, they love to nibble peanuts, corn, and acorns. Fill a bird feeder with these munchies, and soon you'll have hairy, downy, and red-bellied woodpeckers swooping in for a snack.

### Leave dead trees

Ask your parents to leave dead or dying trees in your yard — unless the trees are a safety hazard. These "snags" make great places for woodpeckers to feed and nest.



To learn how to make suet, flock to **xplormo.org/ node/16068**. THE STRUGGLE TO SURVIVE ISN'T ALVAYS A FAIR FIGHT

Illustrated by David Besenger

### Following the Food

THIS ISSUE

> Missouri is one of America's hottest eagle hangouts. Nearly 4,000 eagles spend their winters here. Look for them along Missouri's big rivers, where they often fish from floating ice.

### Perfect Predator

Bald eagles have massive hooked beaks for ripping apart fish and a windwhipping wingspan of more than 6 feet. Their eagle eyes can spot a meal on the move a mile away!

### Talon Take-Out

Eagles dive into meals feet first. Flying almost level to the water, they snag fish with an outstretched talon that has 10 times the gripping strength of humans.

# Strength in Numbers

Millions of shad live in Missouri's rivers. That helps this fish family survive. Shad travel in large, constantly moving schools, leaping and skipping along. That's why shad are nicknamed "skipjack."

### Boot Scootin' Shad

In winter, gizzard shad seek out warmer surface water to feed on plankton. When spooked, they can dart the length of your room in less than a second.

### AND THE WINNER IS ...

Once the eagle's taions find their mark, our shad becomes a fish shadwich. Gizzard shad are one of the eagle's favorite meals, sometimes accounting for nine out of 10 fish that eagles eat.

# YOUR GUIDE TO ALL THE UNUSUAL UNIQUE. AND UNBELIEVABLE STUFF THAT GOES ON IN NATURE

Mother MUD DAUBERS lay their eggs inside tubes of mud. The wasps pack the tubes with live spiders they have paralyzed with their stingers. When the baby wasps hatch, they eat the spiders, leaving only piles of legs behind.

### THIRTEEN-LINED GROUND SQUIRRELS

spend more than half their lives sleeping. The drowsy squirrels crawl into their burrows in October, fall deeply asleep, and don't wake up until April.

### LEAST SHREWS are

Missouri's smallest mammals. Fully grown, the insect-eating animals are barely bigger than your dad's thumb and weigh less than a ketchup packet from a fast food restaurant.

Bombs away! When flushed off her nest, a mother NORTHERN SHOVELER often poops on her eggs as she flies away. Biologists believe this makes the eggs less appetizing to hungry predators.

# opponent in the head.

Seeing triple: **EASTERN SCREECH-OWLS** come in three colors.

come in three colors. Gray and brown screech-owls are common in Missouri. Reddish-orange screech-owls are less common.

Female bunnies want

brawny boyfriends. To show off, male **COTTONTAILS** box and bite each other. Often, one of the flop-eared

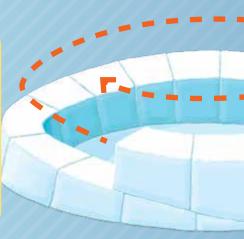
fighters will leap into the

air and try to kick his



Male HOUSE FINCHES get their reddish color from the foods they eat. Bright feathers may signal to female finches that a male is good at finding food. So it's no surprise females seem to prefer the reddest males for mates.

MINK — like their larger cousins, river otters — swim and dive with ease. Mink feel so at home in the water, they've been seen floating down rivers curled up in balls, apparently asleep. Place a single layer of bricks around the circle. Use your saw to cut a gentle slope from the top of the last brick to the bottom of the first brick. When you're done, the bricks should spiral like a coiled-up snake.



### Even though it's frozen, snow is great at trapping heat. Inuit hunters in the Arctic figured this out long ago and have been keeping cozy in igloos ever since. You can build an igloo, too. All you need are a few tools, a few friends, and lots of hardpacked or slightly slushy snow.

GOG

**Build** a

Push a stick into the snow where you want the center of your igloo to be. Tie a 4-foot piece of rope to the stick. Tie the end of the rope to another stick. While keeping the rope tight, walk around the center stick to scratch a circle in the snow.

Use a carpenter's saw (or a bread knife) to cut hardpacked snow into bricks. The bricks work best if they're about 2 feet long, 1 foot tall, and 8 inches thick. You can make them smaller if they're too heavy. If the snow is too slushy to cut, pack it into 3-gallon storage tubs. Flip the tubs upside down and gently shake out the bricks. Wait 20 minutes before working with the bricks to let them freeze solid.

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Begin stacking bricks, one beside another, working your way around the spiral. (It's easiest if one person works inside the igloo and another works outside.) Trim each brick to fit snuggly against the bricks on either side.

Cut a brick that's the same shape but slightly bigger than the opening at the top of the igloo. Place it over the opening (you may need a tall adult to help). From inside the igloo, carefully shave off extra snow until the brick slips into place.



Pack any cracks in your igloo with loose snow, and smooth out the walls by hand, inside and outside. Last, cut out a door. Remember: It's easy to make the door bigger, but hard to make the door smaller. Start small. As you build up the walls, shape the bottom and top of each brick so that it leans slightly toward the center of the igloo. If you forget to do this, you'll build a tower instead of a dome. Winter is tough on wild animals. Some mammals cope with cold by curling up in cozy dens to sleep. Many birds fly south where weather is warmer and more food can be found. Critters that stick around must work hard to find food. By February, the seeds that plant-eating animals had squirreled away have been eaten. And spring, with tender new plants to nibble, is weeks away. Meat eaters spend extra time hunting because their prey hunkers down when temperatures drop.

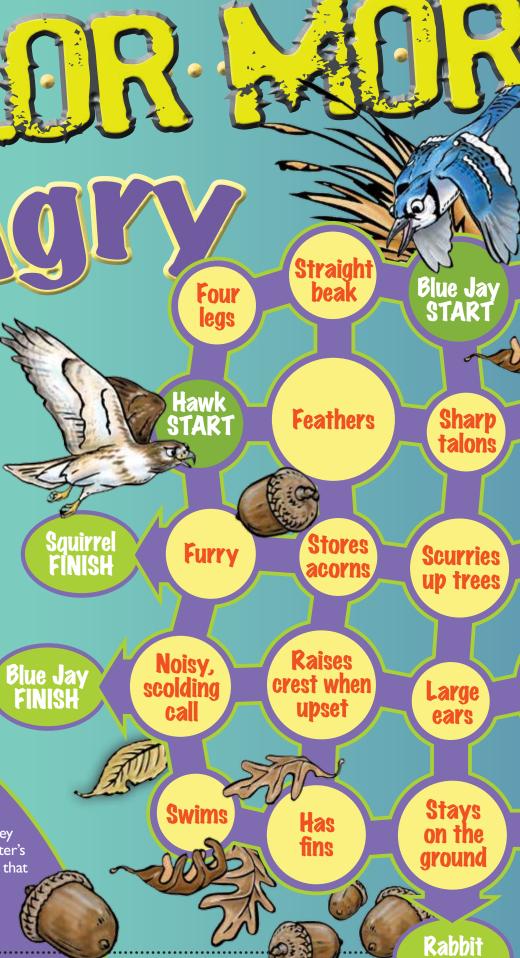
game

the



These hungry animals are out hunting for food. Can you figure out where they have been? Draw a line from each critter's start to its finish using only the spaces that contain facts about the animal.

**Hint:** You can use the same fact for more than one animal.





JANUARY/FEBRUARY 2015 | 21

2.131

2.131

245,783

245.783

.247.914

...4,500

252,414

..0.9%

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### ANSWER TO WHAT IS 7 FROM PAGE 3



Spot these crazy coots in a wetland near you. The **American coot**'s white bill and dark feathers make it easy to ID. The piercing red eyes of an adult signal it's ready to find a mate. Nicknamed the "marsh hen," the coot bobs its head when it walks or swims. Coots don't have webbed feet like a duck. Their oversized feet have side flaps to help them swim. They're clumsy fliers and make long running water takeoffs.