



October/November 2010

Xplor

kids' adventures in nature

MISSOURI'S CREEPY CRITTERS

THESE FREAKS WILL MAKE YOU SHRIEK "EEEK!"



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photo by Noppadol Paothong



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American white pelican

Xplor

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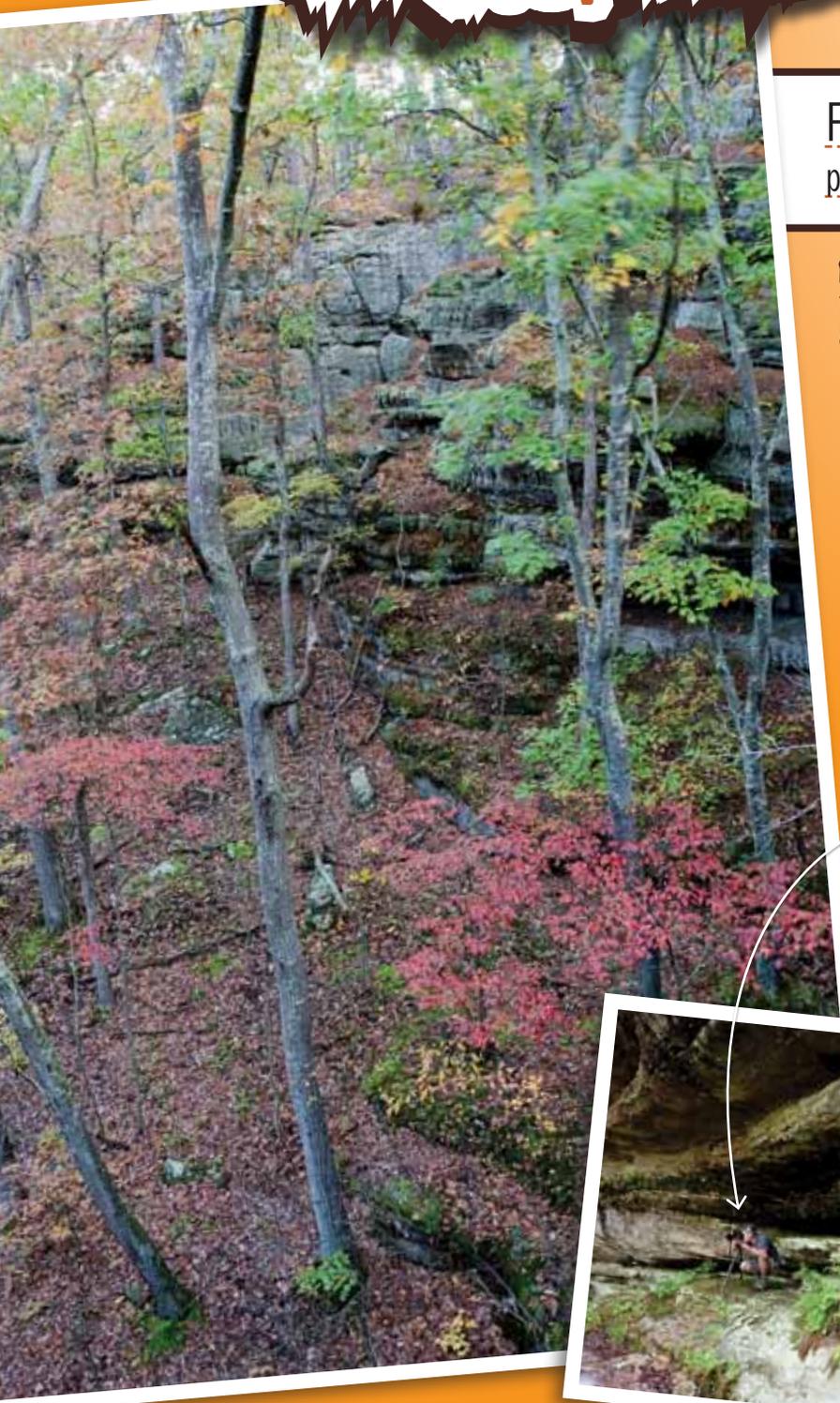
ON THE WEB

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

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

PHOTOS

with Nop & Dave



Fall Color at Hickory Canyons

photo by Dave Stonner

Dave Stonner shot this photo of colorful fall trees at Hickory Canyons Natural Area near Farmington. You can take great fall photos, too. Just follow Dave's advice:

- **Shoot on a cloudy day.** Dave says colors seem richer when the sky is overcast. Bright sunlight creates harsh shadows.
- **Look for contrast.** The red leaves in Dave's photo pop against the background of green. He says orange leaves look great with a blue sky, and purple and yellow look nice together, too.
- **Get up early.** Dave makes many photos during the "golden hours," those times in the early morning and late afternoon when the sun bathes everything in gorgeous golden light.
- **Explore.** Don't take one shot and call it a day. Dave shot hundreds of photos at Hickory Canyons, including sweeping scenics of an entire hillside and a close-up of a single red leaf on a bed of fuzzy moss.
- **Change perspective.** Dave says humans are used to seeing everything

from 4 to 6 feet off the ground. To make your photos stand out, lie on your back and shoot up through the trees for a bug's-eye view. Or, climb atop a bluff for a bird's perspective. That's what Dave did for this shot, and it turned out nicely, don't you think?

To see more of Dave's fantastic fall photos, go to www.xplormo.org/node/9750.



You'll discover

With birds migrating south, leaves changing color and hunting seasons gearing up, there's plenty for you to discover in October and November. Here are a few ideas to get you started.

Recycle some pumpkin guts.



What should you do with the leftover seeds from your jack-o'-lantern? You could roast them for a tasty treat or save them to plant in the spring. Or, you could turn them into a feast for hungry birds. To satisfy fall birds' needs for seeds—and coax them closer to your window for viewing—stock your feeder with pumpkin innards. Once the

pumpkin guts are gobbled up, restock your feeder with sunflower, millet and thistle seeds. If you're feederless, head to www.xplormo.org/node/2901 to learn how to make one.

Harvest time!

This Thanksgiving, get your goodies the way Pilgrims and Native Americans did it—by hunting and gathering. October and November are perfect months to scour the woods for pawpaws, pecans and edible fall mushrooms. (Some berries and mushrooms are poisonous. Check with an adult before eating anything you find in the woods.) Many hunting seasons, including those for rabbits, deer and waterfowl, open in the fall, too. For tips on identifying wild edibles, hunting season information and some lip-smacking recipes, check out www.xplormo.org/node/9738.



Peek in on a PELICAN.

If you've been to the beach, you've probably seen brown pelicans nose dive into the surf after fish. Their larger cousin, the American white pelican, flaps through Missouri each fall and spring. White pelicans don't dive for food, but they do something just as remarkable: Teams of pelicans flap and splash to herd fish into shallow water. There, the birds scoop up trapped fish by the billful. Pelicans can be found anywhere there's lots of water, but prime viewing areas include Swan Lake and Squaw Creek national wildlife refuges and Eagle Bluffs, Schell-Osage and Upper Mississippi conservation areas.



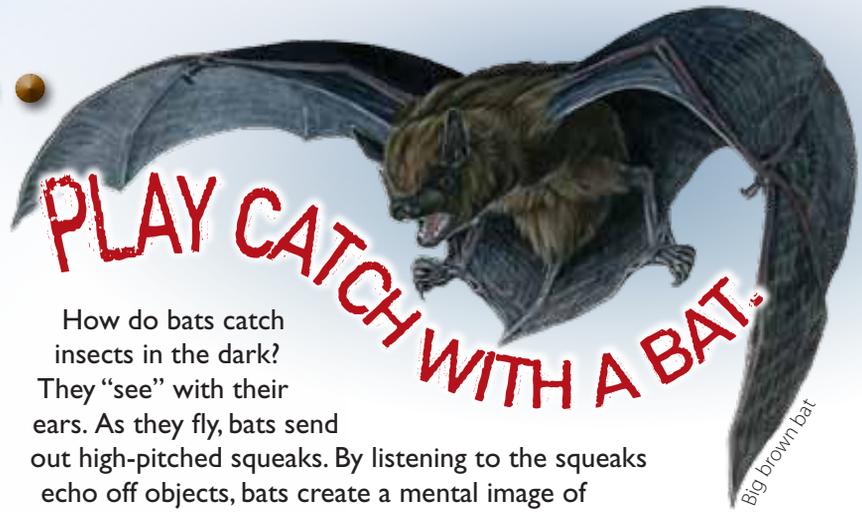
American white pelican



Poison ivy

Ditch the itch.

Forget “leaves of three, let it be.” Although poison ivy has leaflets in groups of three, so do many harmless plants. The best way to separate the safe from the irritating is to keep your eyes peeled this fall. Poison ivy turns bright red while most plants are still green. Find an early-turning vine or shrub—poison ivy comes in both forms—and look but don’t touch! Use the identification tips at www.mdc.mo.gov/node/4686 to see if you’ve found Missouri’s most irritating plant.



Big brown bat

PLAY CATCH WITH A BAT.

How do bats catch insects in the dark? They “see” with their ears. As they fly, bats send out high-pitched squeaks. By listening to the squeaks echo off objects, bats create a mental image of their surroundings. To see this process, called echolocation (*ek-o-lo-kay-shun*), gently toss a pebble in front of a fluttering bat. The bat will swoop down to investigate. Once it figures out the pebble isn’t a tasty moth, the bat will angle up to continue hunting.

Maple

Attend an ART SHOW!

Before winter’s whiteness drifts in, Missouri’s trees paint our state with a dazzling palette of color. The Show-Me State hits its showiest in mid-October when oaks and hickories reach their peak. Take a hike to collect a leaf of every color in the rainbow or grab an adult and head off on a fall-color road trip. For weekly color reports and a map of Missouri’s leafiest routes, visit www.xplormo.org/node/9739.

Hunt for hidden TREASURE.

Ahoy there matey! Geocaching (*jee-o-cashing*) is an activity in which a treasure hunter uses an electronic gadget called a GPS to find trinket-filled hidden containers.

Visit www.geocaching.com

to get the location of a container near you.

Before you strike off to search for hidden booty, load a daypack with water, snacks and a compass—

eyepatches and parrots are optional. If you don’t want to walk the plank, bring a trinket to exchange for the one you take.



Looking for more ways to have fun outside? Find out about Discover Nature programs in your area at www.xplormo.org/xplor/stuff-do/all-events.



WILD JOBS

Great Plains ratsnake

Snake Charmer

JEFF BRIGGLER WRANGLES CREEPY-CRAWLIES. WHY? AS A HERPETOLOGIST IT'S HIS JOB TO STUDY REPTILES AND AMPHIBIANS.

Jeff Briggler waded through the swamp. Out of the corner of his eye he spied a snake gliding across the water. The serpent was slithering away fast, so Jeff did what any self-respecting herpetologist would do—he dived headfirst into the murky water. When he surfaced, spitting and sputtering, he held a rare western mud snake.

Jeff dives headfirst into nearly everything. He overflows with curiosity about nature, especially animals that give some folks the creeps.

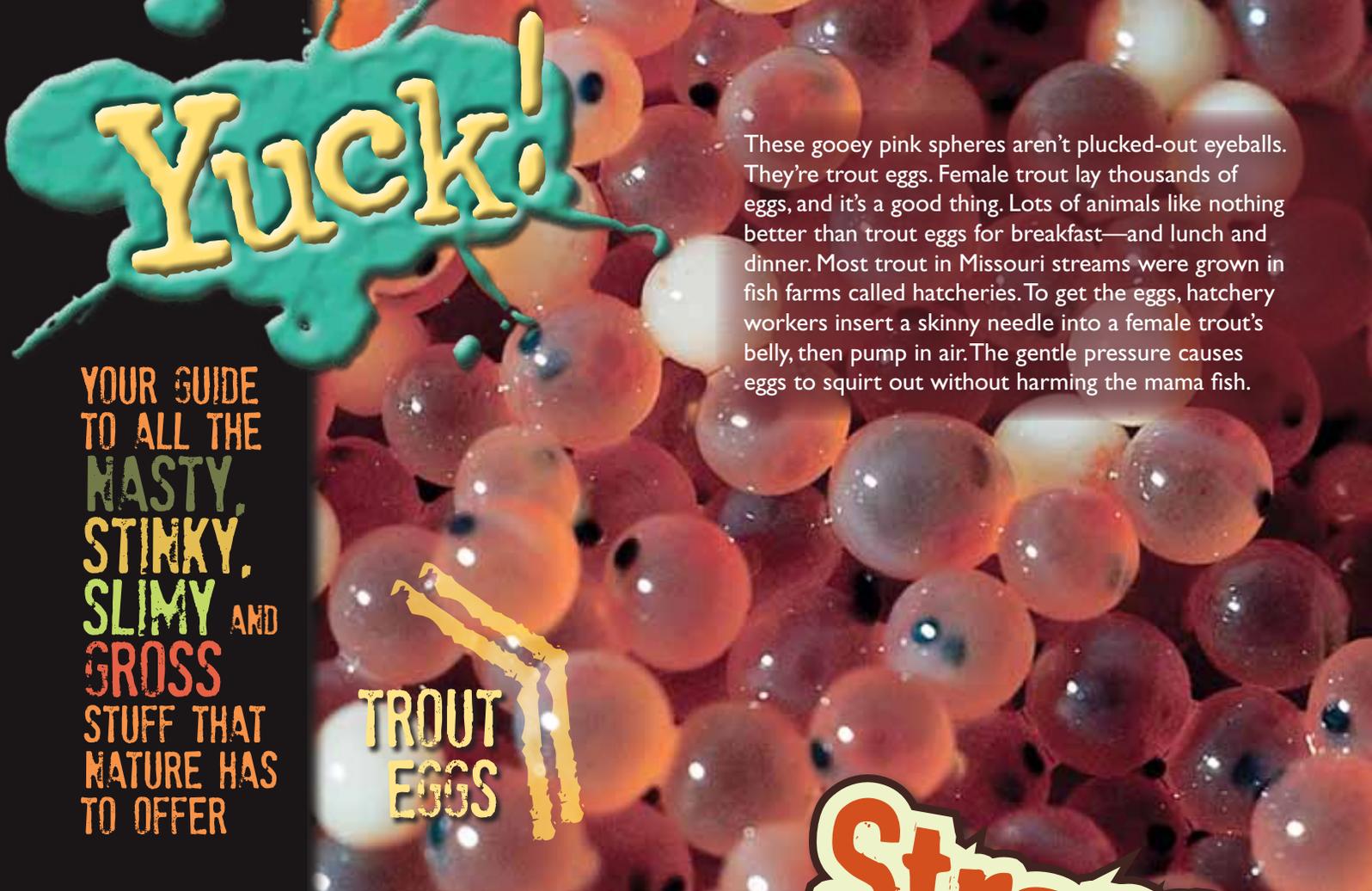
“As a boy, I was scared of snakes,” Jeff says. When he finally found the nerve to pick one up, he was startled by how silky smooth it felt. In college, Jeff learned that scientists still had many unanswered questions about reptiles and amphibians. He’s been working to answer

those questions ever since.

Jeff once counted 333 spring peeper eggs as they were laid in a bucket, just to see how many the frog could lay. He’s discovered that collared lizards are curious, mud snakes are gentle and spiny softshell turtles like to bite. Jeff was the first ever to find Ozark zigzag salamander eggs in the wild, and he’s become a world expert on the hellbender, a 2-foot salamander that lives in clear Ozark streams.

“The more we learn and the more I can teach people about these creatures, the better off they’ll be,” Jeff says.

“There are 112 species of reptiles and amphibians in Missouri. It’s my job to make sure 112 stay here.”



Yuck!

YOUR GUIDE
TO ALL THE
NASTY,
STINKY,
SLIMY AND
GROSS
STUFF THAT
NATURE HAS
TO OFFER

TROUT
EGGS

These goopy pink spheres aren't plucked-out eyeballs. They're trout eggs. Female trout lay thousands of eggs, and it's a good thing. Lots of animals like nothing better than trout eggs for breakfast—and lunch and dinner. Most trout in Missouri streams were grown in fish farms called hatcheries. To get the eggs, hatchery workers insert a skinny needle into a female trout's belly, then pump in air. The gentle pressure causes eggs to squirt out without harming the mama fish.

Strange BUT TRUE



Short-tailed shrew

Don't let the cute, furry face fool you. Shrews have an attitude—and an appetite. Although they're only as long as your index finger, shrews sometimes attack animals as big as rabbits! Night and day they tunnel through leaves and soil, hunting for earthworms, insects and anything else they can clobber. Their hyperactive lifestyle requires shrews to eat their weight in food each day. To accomplish the same feat, you'd have to snarf down nearly 300 cheeseburgers a day.

WHAT IS?

DON'T KNOW?
Jump to Page 16 to find out.



I'm **gar**bed in hard, bony scales.
Hundreds of teeth **gar**nish my mouth.
I'm not **gar**bage, though that's what some think.
In tough times, I **gar**gle air at the water's surface.

MAY OUTDOOR ADVENTURE

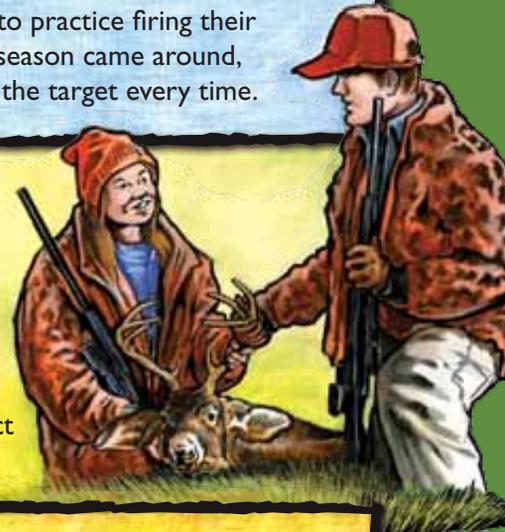
BY NINA AND ASHTON SMITH, AGE 13



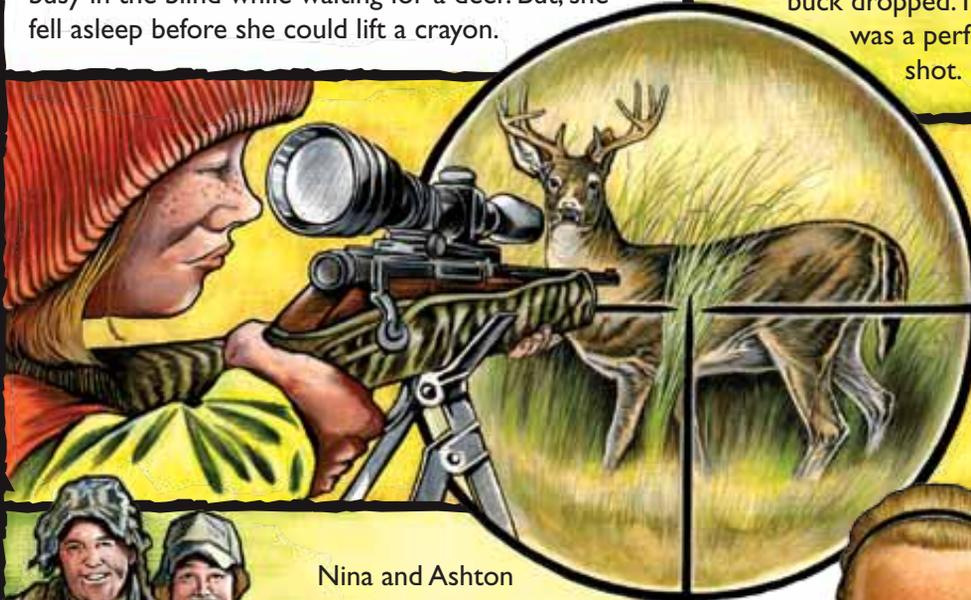
For weeks, twins Ashton and Nina Smith had gone to the shooting range to practice firing their dad's deer rifle. When deer season came around, they could hit the center of the target every time.

The girls flipped a coin to see who would hunt first. Ashton won. She brought coloring books to keep her busy in the blind while waiting for a deer. But, she fell asleep before she could lift a crayon.

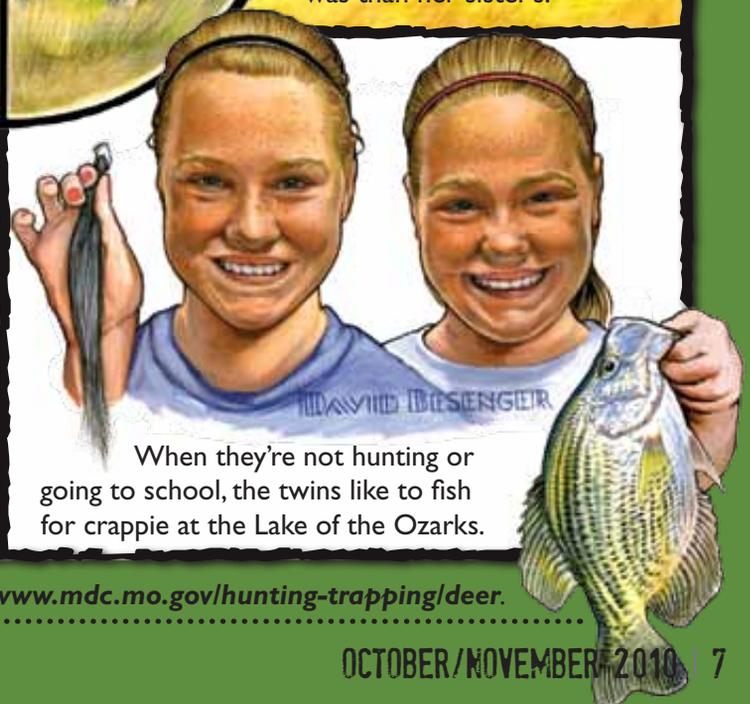
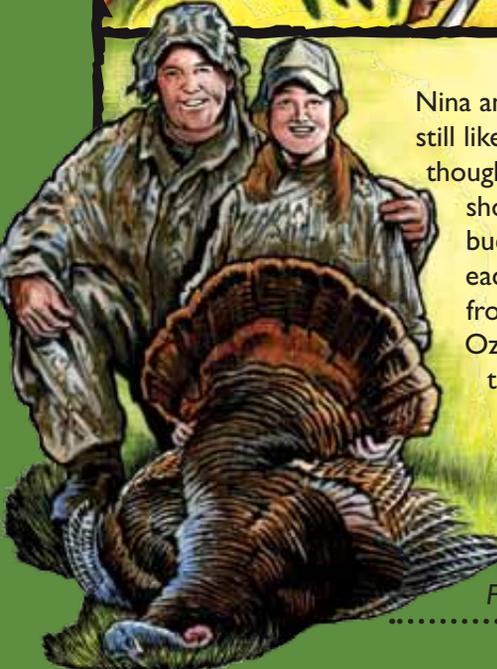
Luckily, her dad kept watch. He nudged her awake when an 8-point buck walked in. Ashton took aim and squeezed the trigger. BLAM! The buck dropped. It was a perfect shot.



Nina wasn't so lucky. She missed several deer that season. But the following year—after more practice at the shooting range—she shot a nice 10-pointer. Nina called from the woods to brag to Ashton how much bigger her deer was than her sister's.



Nina and Ashton still like to deer hunt, though these days they shoot more does than bucks. Last fall, they each harvested an elk from a game farm in the Ozarks. Ashton also likes to turkey hunt with her dad. She got a 24-pound tom last spring.



When they're not hunting or going to school, the twins like to fish for crappie at the Lake of the Ozarks.

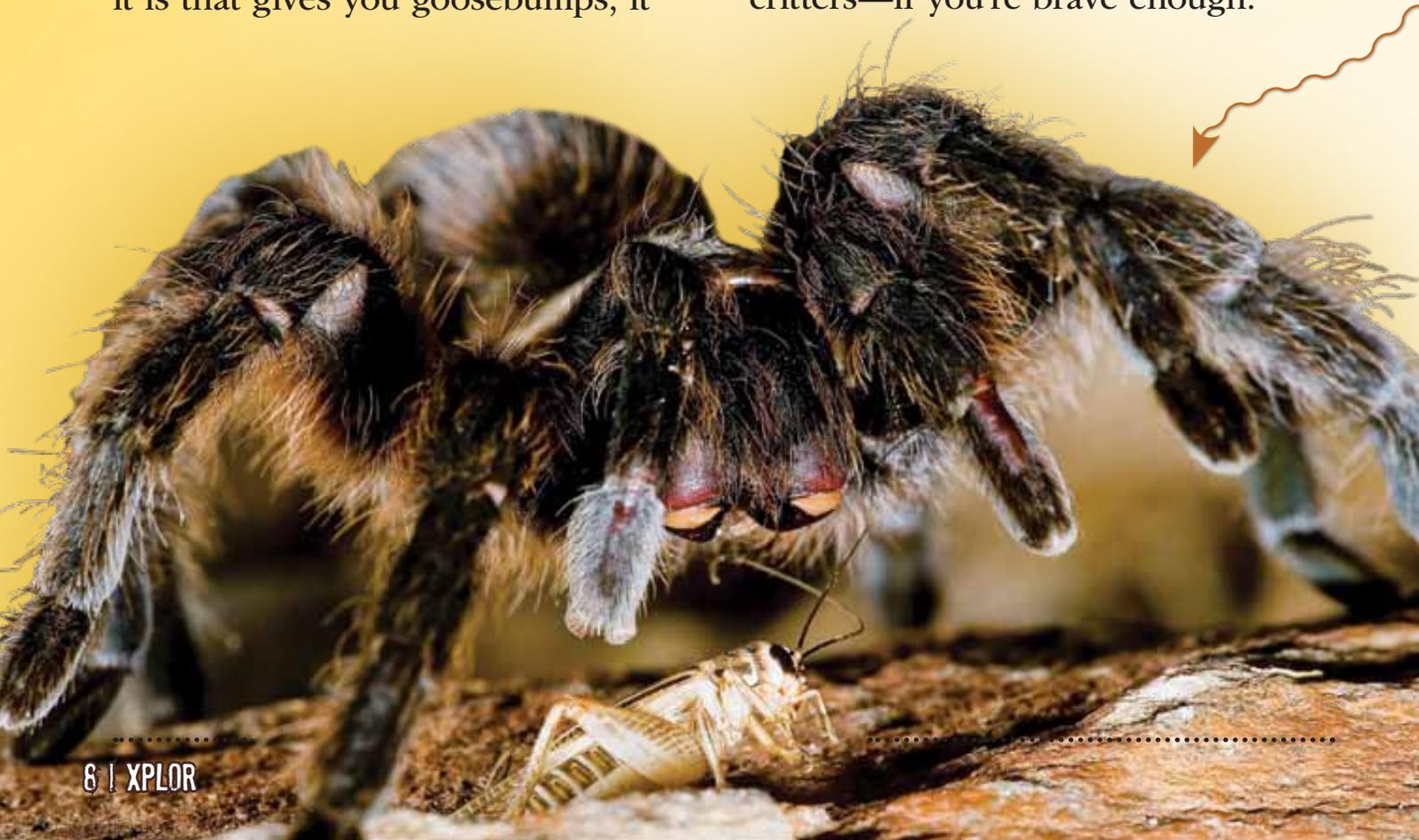
For deer-hunting info, visit www.mdc.mo.gov/hunting-trapping/deer.

MISSOURI'S CREEPIEST CRITTERS

by Matt Seek

Some creatures make folks shriek “Eeek!” Maybe it’s their hair-raising appearance or the way they scurry, skitter or slither. Perhaps it’s their bloodcurdling call or their fangs, stingers and teeth. Whatever it is that gives you goosebumps, it

helps to remember that each of these creepy-crawlies has an important job in nature, and most go about their business without us knowing they’re around. Check out our ghoulish gathering of Missouri’s creepiest critters—if you’re brave enough.



BAT

Let's set a few things straight. Bats are not flying rats, they're not blind, they won't fly into your hair, and they won't turn into blood-sucking vampires. Bats are clean, shy, intelligent creatures. They're the only mammals that can truly fly. And, they rid the skies of creatures that *will* suck your blood—mosquitoes. In fact, a little brown bat can eat 600 of the pesky pests in an hour! Who needs a bug zapper if you have a bat?

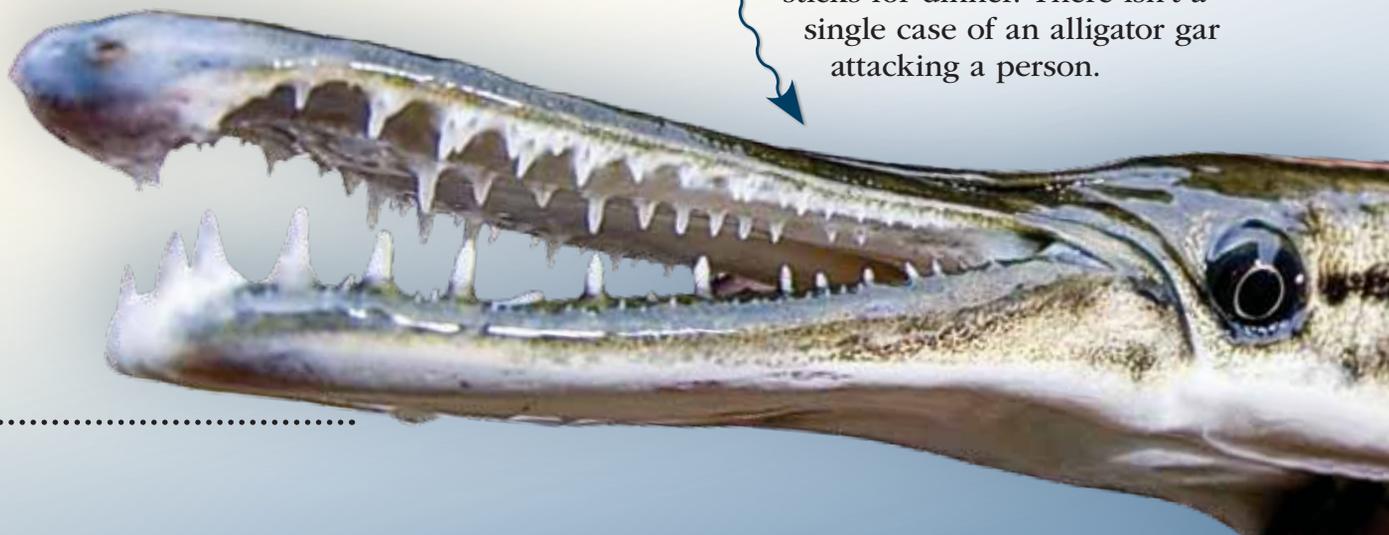


TARANTULA

They're big. They're hairy. But, are they really scary? Missouri's largest spider looks ferocious, but it's actually quite shy and goes out of its way to avoid people. They prefer glades where they hide in silk-lined burrows until night falls. If you meet a tarantula, it's not their fangs but tiny barbed hairs on their tummy that might cause you problems. When threatened, tarantulas rear up on their back legs and flick the hairs like daggers. They irritate the skin, eyes and nose, helping the tarantula get away.

ALLIGATOR GAR

Alligator gar are armed with a mouthful of razor-sharp teeth, bone-hard scales and camouflage that makes them look like a drifting log until they're well within biting range. Plus, they get freakishly big. Think of a fish about as long and as heavy as your couch, and you've imagined how big an alligator gar can get. But fear not. These toothy predators prefer fish sticks for dinner. There isn't a single case of an alligator gar attacking a person.





MOUSE

A mouse in the house sends some folks jumping on chairs. And, though they're rarely welcome in places where people live, mice play an important role in the wild—protein. All kinds of animals eat mice, including snakes, hawks, owls, weasels, coyotes, foxes, bobcats and even shrews. Mice taste so nice, without these little walking cheeseburgers, lots of other critters would go hungry.

CENTIPEDE

Although their name means “hundred feet,” most centipedes have far fewer limbs. These distant relatives of lobsters, shrimp and crayfish prowl under rocks, rotten logs, soil and leaves looking for insects to eat. To subdue their prey, centipedes are armed with venom glands and a special pair of legs that act like fangs. Biologists claim these fang-legs are fairly weak, and can pierce human skin only *sometimes*.

SCORPION

Striped scorpions seize prey with their plier-like pincers then stab it to death with their stinger-tipped tail. No wonder they creep folks out. Missouri's only native scorpion prefers glades with lots of loose rocks to hide under during the day. They crawl out at night to hunt insects, spiders, centipedes and other scorpions. If you find yourself wandering barefoot through a glade in the dark—are you crazy?—take heart. This tiny scorpion's sting is no worse than a bee's.





HOG-NOSED SNAKE

Sometimes called a puff adder, the harmless hog-nosed snake does a good job of looking deadly. When it feels threatened, it hisses loudly and flattens its head like a cobra. It may even strike, though it keeps its mouth closed. If this bluff fails, the snake plays possum. It writhes about, rolls on its back and lets its tongue flop out, pretending to be dead. If left alone, the sneaky snake will slowly roll over, peak around to make sure it's safe, then slither away to shelter.



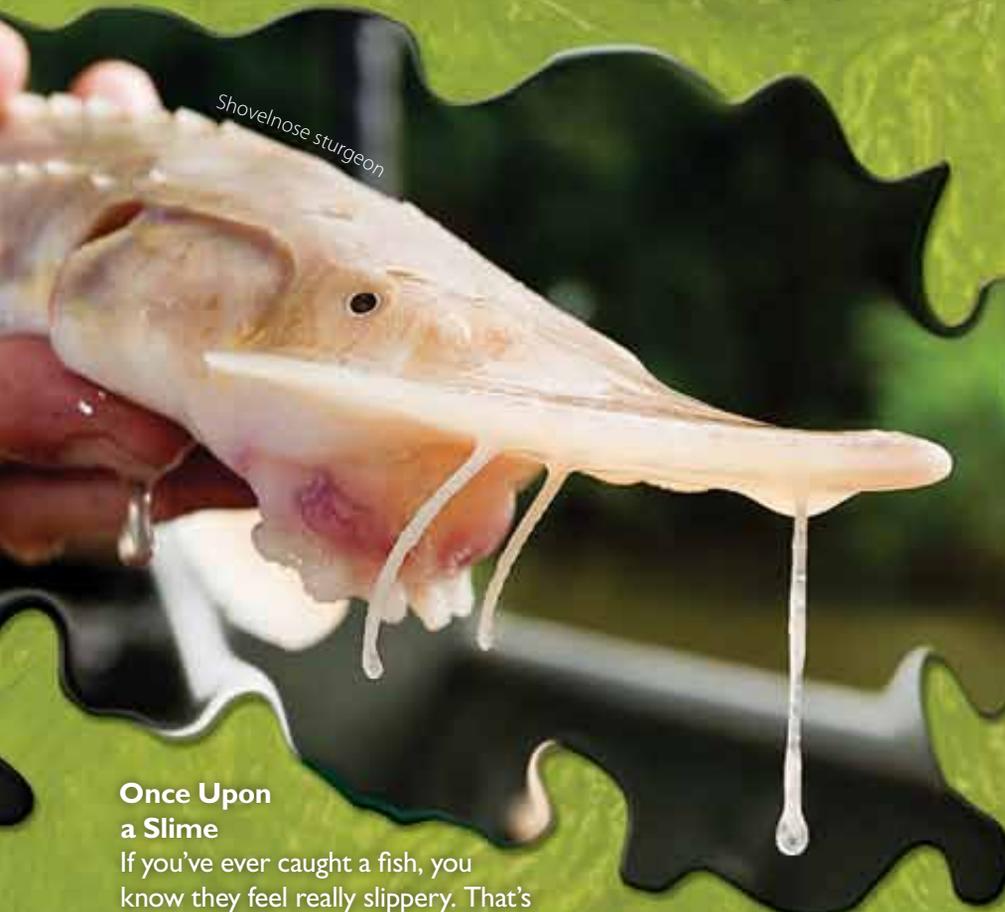
SCREECH-OWL

Screech-owls are tiny owls with big voices. They hoot, bark and, yes, screech, but it's their mating call that makes your skin crawl. When a screech-owl calls to its mate, it lets loose an eerie, wavering whinny that sounds like a cross between a horse and someone screaming. If you're ever out after dark and hear such a thing, don't worry. It's *probably* just a screech-owl.



Got snot? Of course you do. Your nose

makes enough every day to fill a soda bottle. And, that's a good thing. Snot, slobber, slime—whatever you want to call it—is made of mucus (*myoo-kus*). Mucus looks and feels gross, but it's really useful. It traps particles in the air—dust, germs, pollen—before they reach your lungs. But, protecting your lungs isn't all mucus can do. Read on to learn more about oozy, gooey, wonderful slime.



Shovelnose sturgeon

Once Upon a Slime

If you've ever caught a fish, you know they feel really slippery. That's because they're covered with slime. A fish's slime protects it from diseases and helps the fish slip easily through the water. Slime also acts as a gooey Band-Aid, protecting wounds so they heal faster. If you're going to release a fish you've caught, try to remove the hook while the fish is still in the water. If you can't, make sure to wet your hands before picking up the fish. That way, you won't remove too much of the fish's precious slime.



slug

Sliding on a Highway of Snot

Slugs don't have legs, wings or fins. So, how do they move? They slide on a layer of slime. The bottom part of a slug's body, called a foot, oozes mucus over everything it touches. The mucus makes the slug stick to stuff—they can crawl up glass—and it greases the slug's path, helping it slip over things. The slime is so slick slugs can glide over knives without getting sliced! Mucus also keeps slugs from drying out and discourages other animals from eating them. If you were to lick a slug—who would do such a thing?—you would find that slug slime tastes awful!

by Matt Seek



George

Cool Drool

This is George. George slobbers a lot. Although you may not want to smooch this slobbery pooch, his drool is quite a useful tool. George's slobber contains mucus. The mucus greases George's throat so when he wolfs down his food—George rarely takes time to chew his chow—the chunks slide down easily and don't scratch. Our slobber, called saliva

(*suh-lie-vah*), has mucus, too. Without this slippery slime, swallowing a tortilla chip would be awfully painful!

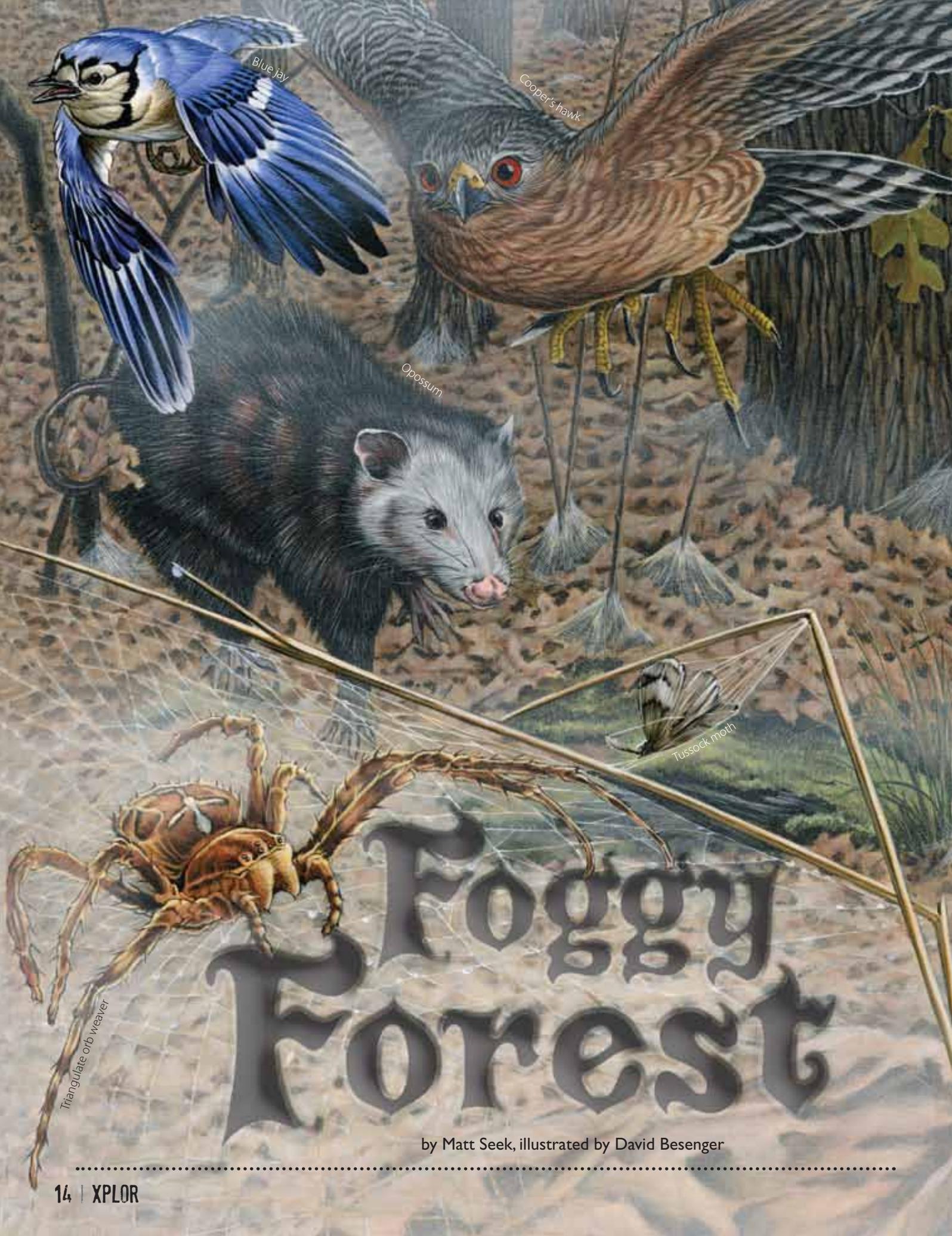


Western slimy salamander

Super Skin

Slimy salamanders have amazing skin. They don't just wear it, they breathe through it. These little amphibians don't have lungs like you and me or gills like a fish. Instead, oxygen passes right through their skin into tiny blood vessels just underneath.

It's a neat trick, but there's a catch: Their skin has to be moist for oxygen to pass through. That's where slime comes in. Salamander skin is coated with the stuff. The slime acts like a raincoat, except it keeps moisture in instead of out. And, that keeps these little guys moist and alive. Thank goodness for slime!



Blue jay

Cooper's hawk

Opossum

Tussock moth

Triangulate orb weaver

Foggy Forest

by Matt Seek, illustrated by David Besenger



White-tailed deer

Barred owl

Filmy dome spider

A foggy fall forest might seem spooky, but there's nothing to fear. Sit quietly against a tree, and you'll be surprised by what you'll see.

All along the forest floor, tiny eight-legged anglers tend their silken nets. An orb weaver has caught a tussock moth, ridding the forest of a leaf-eating pest. The filmy dome spider wasn't so lucky. Its tent-shaped trap is insect free.

Sleepy from a long night spent scavenging food, an opossum gathers leaves to pad its bed. Overhead, a blue jay streaks through the trees, desperate to escape the Cooper's hawk on its tail. The hawk is closing in fast, but the birds

careen out of sight before you see who wins.

A white-tailed deer nibbles acorns. Her ears move constantly, like tiny satellite dishes, scanning the forest for sounds of danger. A barred owl's thunderous call interrupts her meal. "Who cooks for you? Who cooks for you all?" he seems to ask. Other owls know it isn't a question but a declaration that this patch of woods—and all the tasty mice in it—belongs to him.

To hear what this foggy forest sounds like, visit www.xplormo.org/node/9788.

XPLOR MOOR

MAKE A MILKWEED BRACELET

Not long ago, nature was a grocery store, pharmacy and hardware shop all rolled into one. If a Native American needed a string for his bow, he couldn't ride to the sporting goods store. He had to make it himself out of cordage. Cordage is rope or twine made from plant fibers. It's really useful stuff. You can use cordage to make fishing line, rig a snare, lash small trees together for a shelter or make a bracelet like the one shown below. Learn the basics here, then go to www.xplormo.org/node/9756 for detailed instructions.



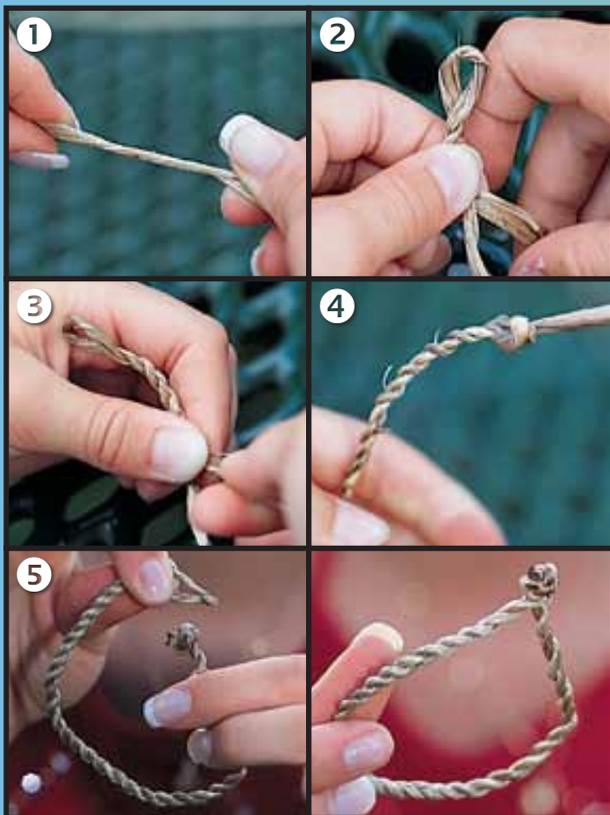
Find some milkweed or dogbane.

Milkweed and dogbane grow in many places and make great cordage. Collect them in the fall, when their stems and leaves are dry and brown. Don't pull up their roots. Instead, snip them off at the stem, so the plants will regrow next spring.



Remove the fibers.

Lay the stems on a hard surface. Step on them so they crack open. Gently peel off the stem's outer layer, and the fibers you'll need will separate from inside the stem. Sprinkle water on the fibers to make them easier to work with.



Twist the fibers into cordage.

1. Hold a small bundle of fibers with your hands spaced two inches apart. Twist the fibers with one hand. 2. When the fibers get tight, bring your hands together, and a loop will form. 3. Hold the loop in one hand. Use your other hand to twist the strand of fibers farthest away. When that strand is tight, bring it toward you and over the closer strand. Repeat with the other strand. Continue until the cordage will fit around your wrist. 4. Tie an overhand knot so the cordage won't unravel. 5. Stick the knot through the loop.

Now you have a milkweed bracelet!

ANSWER TO

WHAT IS IT?

FROM PAGE 6

Longnose gar have skinny bodies protected by bony scales. Their long snouts are filled with teeth. Gar pretend to be a log until another fish swims by. CHOMP! Many anglers think gar eat too many fish. They call gar "trash fish." In fact, gar keep lakes from getting too crowded. If oxygen gets scarce underwater, gar gulp air at the surface. The largest longnose gar caught in Missouri stretched 5 feet long. Now that's gargantuan!



F

Set a date to
hibernate!

Missouri's skies soon will be bat free. The Show-Me State is home to 15 kinds of bats, and they all eat insects. During cold weather, when bugs disappear, so do bats. Some flutter south. Three species snuggle under layers of leaves or hide in trees. Most bats hibernate in caves. Hibernation is a deep sleep

in which a bat's breathing and heartbeat slow way down. This helps the bat save energy until insects return. It's important to stay out of caves where bats hibernate. Each time a bat is awakened, it can lose two months of energy. If its energy runs out before insects return, the bat will die.



KEEP OUT
Bat Hibernation
Cave

**HELP THE BATS FIND
THEIR HIBERNATION ROOST**

FINISH

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FREE TO MISSOURI HOUSEHOLDS

MARBLED ORB WEAVER



Call me when dinner's ready. After this marbled orb weaver fixes its web, it will hide in a nearby tent made of leaves and silk. A signal thread connected to the web will vibrate when prey gets tangled, notifying the spider that dinner awaits.