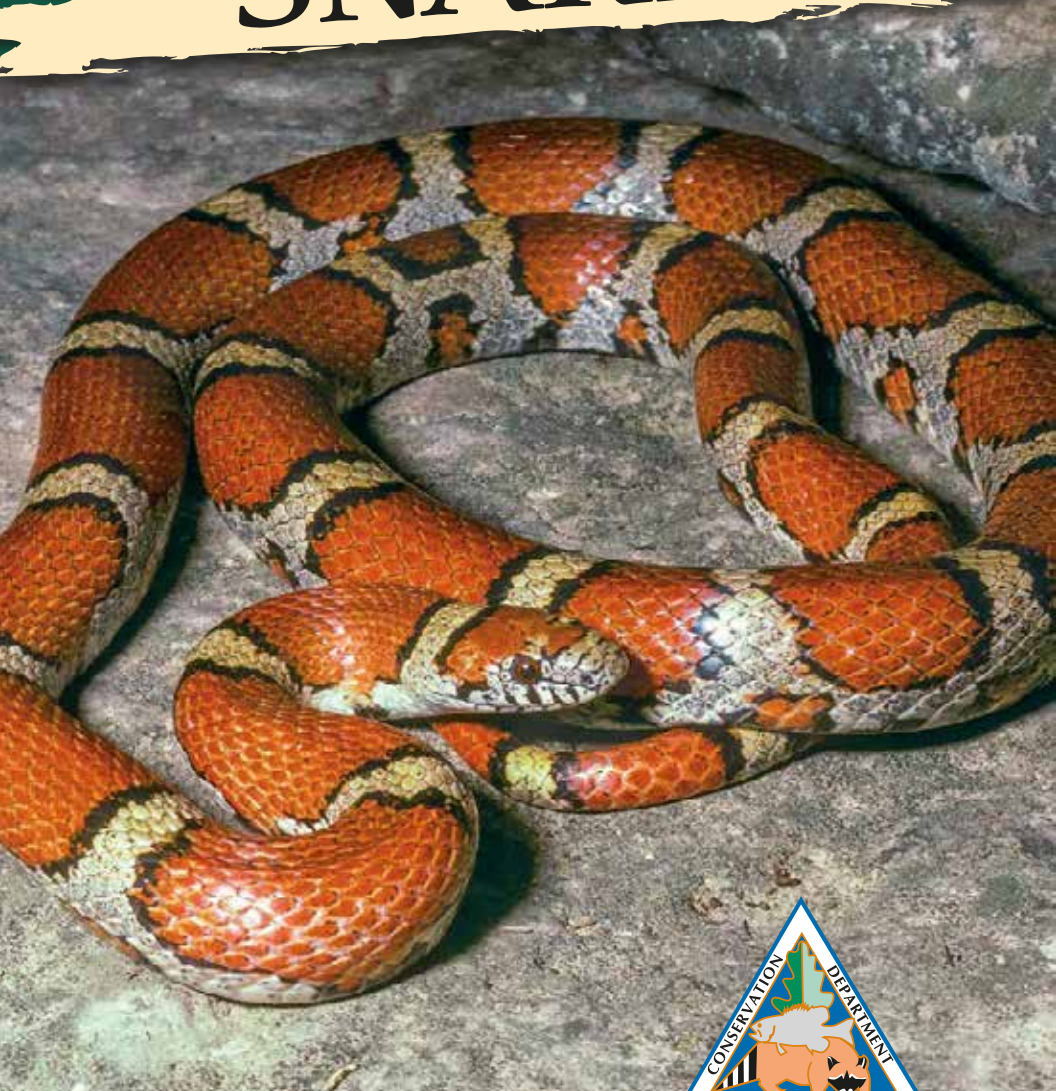


A GUIDE TO MISSOURI'S

# SNAKES



MISSOURI DEPARTMENT OF CONSERVATION

# A Guide to Missouri's Snakes

by Jeffrey T. Briggler, herpetologist, and Tom R. Johnson, retired herpetologist,  
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Front cover: Eastern milksnake. Photo by Jim Rathert.



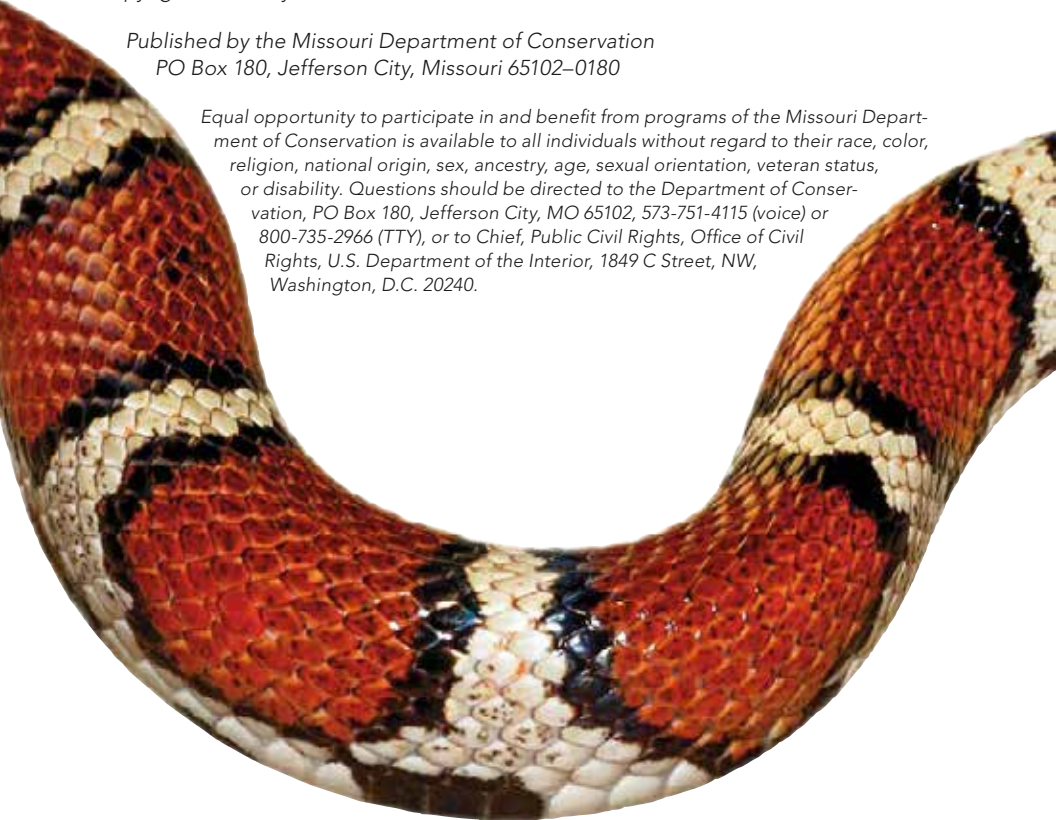
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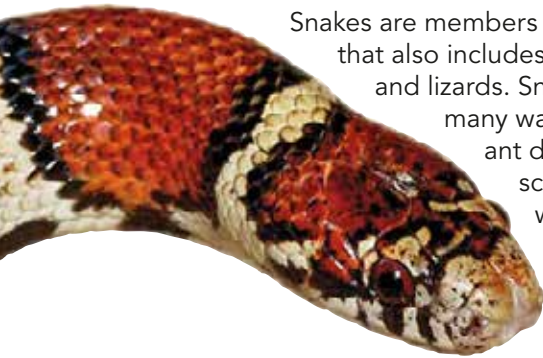
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# GET TO KNOW MISSOURI'S SNAKES

Snakes have generated more fear and misunderstanding than any other group of animals. Psychologists have proven that a fear of snakes (called ophidiophobia) is acquired; we are not born with it. Once people learn some of the interesting facts about snakes and discover that most of them are harmless and beneficial, their aversion may diminish. With patience and understanding, almost anyone can overcome a dread of snakes and actually enjoy studying them. One thing is certain — even people with a well-developed fear of snakes are curious about them.

Missouri, with its wide variety of wildlife habitats — prairies, Ozark hills and valleys, swamps, marshes — has 49 species and subspecies of snakes (a subspecies is a geographic race of a species). Most of our snakes are harmless. Although many may bite in self-defense, their bites usually produce nothing more than harmless scratches. There are only six species of venomous snakes in all of Missouri, and they are described in a separate section of this pamphlet.



Snakes are members of the Class Reptilia, a group that also includes turtles, alligators, crocodiles, and lizards. Snakes and lizards are similar in many ways, but there are some important differences. A clear, non-movable scale covers the eyes of all snakes, whereas most lizards have moveable eyelids. Most lizards have legs, but some are legless. The slender glass lizard, which lives nearly statewide in Missouri, is an example; it looks like a snake

because it has no legs, but like all our lizards, the slender glass lizard has moveable eyelids and external ear openings, both of which are lacking in snakes. In addition, lizards have a pair of lungs, while most snakes have an elongated right lung and either no left lung or only a rudimentary one.

Although snakes are legless, they are able to move about with ease. A snake's backbone has from 200 to 400 vertebrae, depending on the

species, which permits extreme flexibility. Snakes move forward by a side-to-side movement, or in a straight line using muscles that are anchored to the ribs and attached to skin, allowing forward movement. Sometimes this movement is described as walking on their ribs. All snakes can swim.

Snakes must swallow their food whole, and some can engulf animals three times the diameter of the snake's head. The lower jaws of snakes are loosely joined to the skull and the upper jaws are moveable. A snake grasps its prey (fish, frog, mouse) by the head and engulfs it by advancing first one side of the jaw



TOM R. JOHNSON

*A bullsnake eating a mouse.*

and then the other. The snake's teeth also help it swallow. The teeth are sharp and curve toward the rear of the mouth. They hold the prey and prevent its escape. Some snakes, such as watersnakes and garter snakes, eat their prey alive, while venomous snakes usually inject venom into the animal and swallow it after it is dead. Several Missouri snakes, such as ratsnakes, kingsnakes, milksnakes, and bullsnakes, kill by constriction. The snake grasps the prey in its mouth and immediately wraps several tight coils around it. It was once believed that constriction prevented the prey from breathing, and it would die from lack of oxygen.

However, recent research shows that constriction stops blood flow and causes heart failure in prey. Then the snake swallows its prey.

The snake's long, forked, extendable tongue is often thought to be dangerous; in fact, it is completely harmless. Snakes and lizards use their tongues to



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*An Eastern gartersnake picks up a scent with its tongue.*

pick up odors that are transferred to special sense organs (Jacobson's organ) in the roof of the mouth.

The food habits of Missouri's snakes are as varied as the types of snakes we have. Some, such as the rough greensnake, eat insects and insect larvae. Others, like watersnakes, eat fish, frogs, tadpoles, or crayfish. The western ratsnake and bullsnake eat rodents, small birds, and small bird eggs. Kingsnakes also eat rodents and are important

predators of lizards and other snakes, including venomous species.

All snakes shed their outer layer of skin periodically usually shed once every four or five weeks during warm months, whereas adults may shed once every six or eight weeks during their active season. In the case of rattlesnakes, a new segment is added at the base of the rattle at each

shedding. In Missouri, rattlesnakes may shed from two to five times a year, depending on their growth rate. As the rattle becomes longer, the old segments weaken and may break off, so it is not possible to determine the age of a rattlesnake by counting the segments in the rattle.

In Missouri, snakes normally breed in the spring, soon after they emerge from winter dormancy. Studies show, however, that a few species may breed in the fall. About half of Missouri's snake species lay eggs; the rest give birth to fully developed young.

Some of the egg-laying snakes include western ratsnakes, bullsnakes, kingsnakes, racers, wormsnakes, ring-



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*A Prairie kingsnake shedding its skin.*



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*A rough greensnake emerges from its egg.*

necked snakes, and rough greensnakes. The size of the egg depends on the species; the number of eggs produced depends on the size of the female. The larger the female, the more eggs she can produce. Snake eggs are elongated and have a tough, leathery shell. Females select rotten logs or stumps, leaf litter or sawdust piles in which to deposit their eggs. As a young snake develops within the egg, a small "egg tooth" grows on the tip of its snout; the snake uses this "tooth" to slit the shell when hatching. Afterwards, the "tooth" is shed. Snakes usually hatch in late summer or early fall.

Some of the snakes that retain their young until they are completely developed are watersnakes, gartersnakes, brownsnakes, copperheads, cottonmouths, and rattlesnakes. This

form of reproduction is slightly advanced over egg layers. The young snakes are retained and protected inside the female during their development. Each young snake is protected inside a thin, sac-like membrane contain-

ing yolk for nourishment. Some of the young snakes break through the membrane while inside the female and emerge from the female in a tight coil; others break through after being born. Snakes that develop inside the female are normally born in mid to late summer.

The smallest snake native to Missouri is the flat-headed snake (*Tantilla gracilis*), which averages from 7 to 8 inches (18–20 cm) long. The largest is the bullsnake (*Pituophis catenifer sayi*), which can grow to over 6 feet.



Newborn diamond-backed watersnakes emerging from their sac-like membranes.

TOM R. JOHNSON

# SPECIES ACCOUNTS

*Non-venomous Snakes*



For more details, visit [mdc.mo.gov/field-guide](http://mdc.mo.gov/field-guide).

# Western Wormsnake

## *Carphophis vermis*

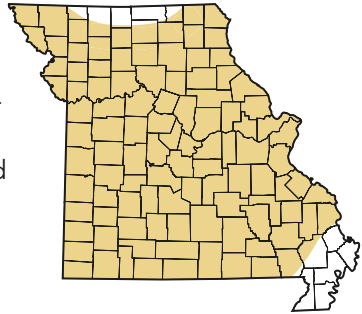
**About:** This species is never seen in the open; it either hides under rocks, logs, or boards, or burrows into damp soil or leaf litter. Wormsnakes mainly live on wooded hillsides.

**Description:** This species is usually purplish-brown above and salmon pink on the belly and lower sides. The tail has an interesting (and harmless) spike, which also helps it maneuver through soil.

**Length:** Ranges from 7 to 11 inches (18–28 cm).

**Diet:** Earthworms, and insect larvae and eggs.

**Missouri Distribution:** Statewide, except for extreme southeastern corner and a few counties in the north-central part of the state.



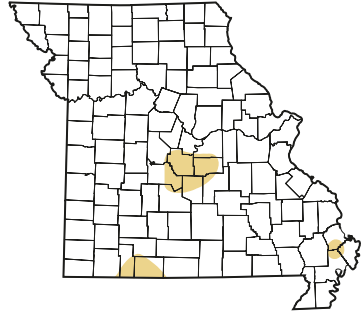
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# Northern Scarletsnake

## *Cemophora coccinea copei*

**About:** One of Missouri's most brilliantly colored snakes, the northern scarletsnake is extremely rare to find. This secretive snake spends much of its life underground, surfacing primarily to feed. It is named for the red or crimson blotches along the back.



**Description:** It is similar in pattern and color to the Eastern milksnake, but instead has a red or orange snout and a spotless, white belly.

**Length:** Ranges from 14 to 20 inches (36–51 cm).

**Diet:** Eggs of other reptiles, and occasionally rodents, lizards, and small snakes.

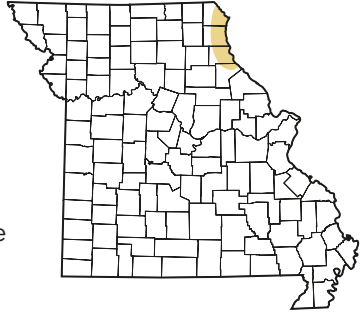
**Missouri Distribution:** Scattered counties in south-central and southern parts of the state.



# Kirtland's Snake

## *Clonophis kirtlandii*

**About:** This small, hard to find, and poorly known species occurs in only a few Midwestern states. The Kirtland's snake uses mainly crayfish burrows in grassland habitats that are damp and adjacent to a river, creek, or wetland. Due to loss of native grasslands, this species is extremely rare in the state.



**Description:** Reddish brown with two rows of dark spots along each side and a pink to red belly with a row of black spots on each side.

**Length:** Ranges from 14 to 18 inches (36–46 cm).

**Diet:** Earthworms and slugs, and occasionally crayfish and small minnows.

**Missouri Distribution:** Restricted to a few counties along the Mississippi River in the northeast corner of the state.

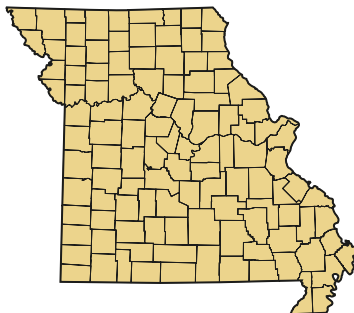


JEFFREY T. BRIGGLER

# Eastern Yellow-bellied Racer

## *Coluber constrictor flaviventris*

**About:** Also known as the blue racer, the eastern yellow-bellied racer prefers bushy fields, grasslands, and open woods. This species is active by day and will take shelter under rocks, brush, or in animal burrows if pursued. As the name implies, racers can move fast, especially through tall grass or brush. As with many of our harmless snakes, a racer will sometimes vibrate its tail when alarmed.



**Description:** The color of this common snake is variable — from olive, tan, brown, or blue to nearly black. The belly may be yellow, cream or light blue-gray. Young racers are clearly marked with brown blotches and spots (see inset), but these markings fade and eventually disappear as the young snakes grow.

**Length:** Ranges from 30 to 50 inches (76–127 cm).

**Diet:** Frogs, lizards, snakes, small rodents, and birds.

**Missouri Distribution:** Statewide, replaced by the southern black racer (*Coluber constrictor priapus*) — a subspecies — in southeastern Missouri.

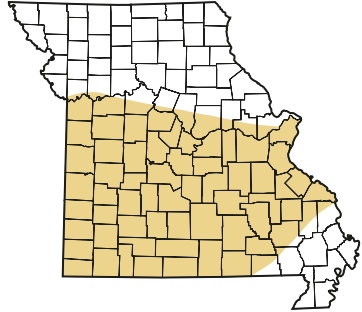


Eastern yellow-bellied racer hatchling ▶

# Eastern Coachwhip

## *Coluber flagellum flagellum*

**About:** This is one of Missouri's longest snakes. The eastern coachwhip lives on rocky, wooded, south-facing hillsides, open woods, and prairies. Because it is fast-moving and thrashes about when captured, some people believe coachwhips can whip a person to death. This is a myth. The coachwhip will bite to defend itself and may vibrate its tail when alarmed.



**Description:** It is dark brown or black from the head and back over half the length of the snake. The rest of the snake is tan or light brown. Occasionally, some individuals in our area are totally black or have wide pinkish bands along the dark body.

**Length:** Averages from 42 to 60 inches (107–152 cm).

**Diet:** Mice, insects, lizards, small snakes, and, occasionally, small birds.

**Missouri Distribution:** Southern half of the state except for the southeastern corner.



Eastern coachwhip  
hatchling ▶

# Prairie Ring-necked Snake

## *Diadophis punctatus arnyi*

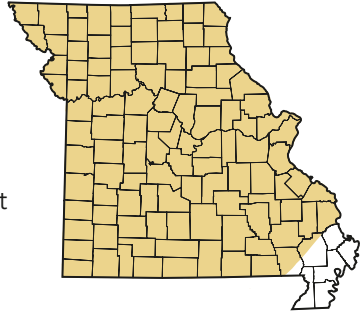
**About:** Prairie ring-necked snakes prefer to live on rocky, wooded hillsides, but can be found in grasslands and edges of woodlands. These snakes are secretive and not only take shelter under rocks, but also find prey there.

**Description:** Ring-necked snakes are easily recognizable by their small size, uniform dark color on the back, bright yellow-orange belly and distinct yellow ring around the neck. The back can be dark brown, gray or blue-black. The belly is yellow, changing to orange near the tail. The belly also has small, black spots that are irregular in size and pattern.

**Length:** Ranges from 10 to 14 inches (25–36 cm).

**Diet:** Worms, slugs, soft-bodied insects, and small salamanders.

**Missouri Distribution:** Nearly statewide, but likely replaced by the Mississippi ring-necked snake (*Diadophis punctatus stictogenys*) — a subspecies — in the southeastern portion of its state range.



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# Western Mudsnake

## *Farancia abacura reinwardtii*

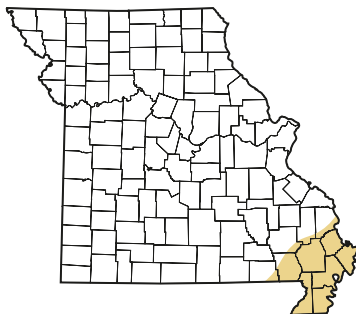
**About:** Also known locally as the hoop snake, the western mudsnake lives in and near the large swamps in the southeastern corner of the state. According to myth, this species can place its tail in its mouth and roll downhill at high speed. There is no scientific basis to this myth.

**Description:** This is a shiny, iridescent snake of the southeastern swamps. It is shiny black on top, and the belly is red, pink, and orange with some black spots. The tail of most specimens ends in a sharp point, which is harmless.

**Length:** Ranges from 40 to 54 inches (102–137 cm).

**Diet:** Mudsnakes have specialized food habits; primarily, they eat aquatic salamanders such as the three-toed amphiuma and western lesser siren. Mudsnakes also eat frogs, tadpoles, and fish.

**Missouri Distribution:** Restricted to the southeastern corner of the state.

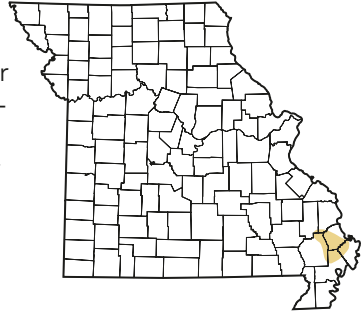


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# Dusty Hog-nosed Snake

## *Heterodon gloydi*

**About:** This species is found in the sandy or loose prairie and savanna soils in southeastern Missouri. This species has always been quite rare in Missouri, but was only recently rediscovered in the state. This snake is extremely similar in appearance to the plains hog-nosed snake and mainly identified to species based upon geographical range in Missouri (see distribution).



**Description:** The dusty hog-nosed snake has a sharply upturned snout, similar to a shovel, used to dig in loose or sandy soils. It is brown to brownish gray with dark brown spots along the body, and the belly and underside of the tail are chiefly black.

**Length:** Ranges from 15 to 25 inches (38–64 cm).

**Diet:** Amphibians (frogs and toads), lizards, reptile eggs (snakes and lizards), and small rodents.

**Missouri Distribution:** Restricted to the sand prairie and savanna areas of southeastern Missouri.



JIM RATHERT

# Plains Hog-nosed Snake

## *Heterodon nasicus*

**About:** This species is restricted to sandy, loose prairie soils. Its shovel-like snout is used to dig out prey, which it detects by smell, or to burrow to hide from predators. Like other hog-nosed snakes, this species is known to play dead in self-defense. This species has not been seen in the state for many years.



**Description:** This species is grayish-tan with rows of dark brown spots along the body, and a sharply upturned snout. The belly and especially the underside of the tail are mainly black. The plains hog-nosed snake and dusty hog-nosed snake differs from the eastern hog-nosed snake by having a sharply upturned snout and black pigment on the underside of the tail.

**Length:** Ranges from 16 to 25 inches (41–64 cm).

**Diet:** Primarily toads, snakes, and lizard eggs, with a secondary diet of small rodents.

**Missouri Distribution:** Historically known to occur in the loess hill prairies in extreme northwestern counties.



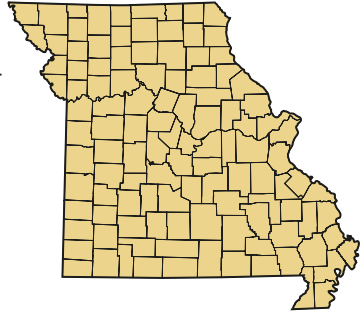
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# Eastern Hog-nosed Snake

## *Heterodon platirhinos*

**About:** Also known locally as the spread-head, puff adder, and hissing viper, the eastern hog-nosed snake's preferred habitat is sandy areas or open woods with loose soil. This harmless snake has the ability to hiss loudly and spread its neck like a cobra. If this defense fails to ward off an enemy, the snake may thrash around, open its mouth, roll over, and play dead.



**Description:** A snake with an upturned snout, the eastern hog-nosed snake normally is gray-brown or tan with distinct dark brown markings down its back. However, it is not uncommon for individuals to be yellow or orange. Also, some individuals lack most of the spots, except for two large black spots behind the head. The belly is mottled with gray.

**Length:** Ranges from 20 to 33 inches (51–84 cm).

**Diet:** Toads, frogs, and salamanders.

**Missouri Distribution:** Statewide.

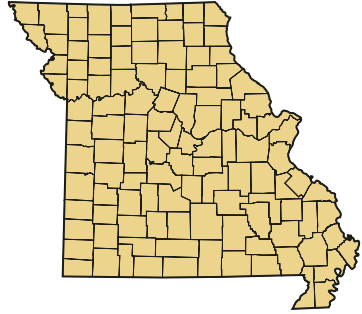


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# Prairie Kingsnake

## *Lampropeltis calligaster calligaster*

**About:** The prairie kingsnake is fairly common throughout the state. It lives in prairies and open woods, as well as rocky, wooded hillsides. Kingsnakes kill their prey by constriction. Young or newly hatched prairie kingsnakes often are confused with the venomous copperhead. Kingsnakes have round to rectangular markings on their back (see inset), while copperheads have hourglass-shaped markings.



**Description:** Its overall color is tan or gray with numerous dark blotches down the back and sides that are outlined in black. There is usually a “v” or “u” shaped marking on top of the head. The belly is yellowish tan covered by blocky, brown markings.

**Length:** Ranges from 30 to 42 inches (76–107 cm).

**Diet:** Small rodents, lizards, snakes, and, occasionally, birds.

**Missouri Distribution:** Statewide.



▲ *Prairie kingsnake hatchling*

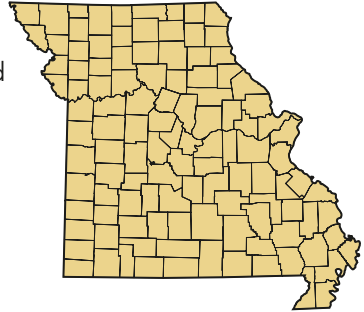


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# Speckled Kingsnake

## *Lampropeltis holbrooki*

**About:** Also known locally as the salt and pepper snake, the speckled kingsnake can be found under rocks, logs, or boards on rocky, wooded hillsides or near farm buildings. Kingsnakes, especially the speckled kingsnake, are known for their ability to eat other snakes, including venomous species, and are immune to the venom of copperheads, cottonmouths and rattlesnakes. Like other kingsnakes, the speckled kingsnake vibrates its tail when alarmed.



**Description:** This handsome snake is generally black. A white or yellow spot in the center of most of the scales causes it to look speckled. Its belly is yellowish with some irregular black markings.

**Length:** Ranges from 36 to 48 inches (91–122 cm).

**Diet:** Snakes, lizards, and small rodents.

**Missouri Distribution:** Statewide.



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# Eastern Milksnake

## *Lampropeltis triangulum*

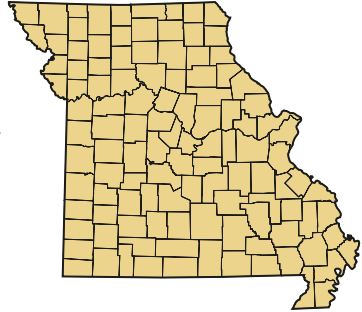
**About:** Also known locally as the red milksnake, the eastern milksnake was so named for the myth that it had the ability to nurse milk from cows. This species lives under rocks on wooded, rocky hillsides and glades. It kills its prey by constriction.

**Description:** This is one of Missouri's most beautifully colored snakes. Its general body color is white or light tan with red or orange markings bordered with black, and its belly is white and strongly checked with black. The eastern milksnake often is misidentified as a coralsnake, which is not found in Missouri. Coralsnakes have red bands bordered by yellow.

**Length:** Ranges from 21 to 28 inches (53–71 cm).

**Diet:** Lizards, small mice, and small snakes.

**Missouri Distribution:** Statewide.



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# Eastern Black Kingsnake

## *Lampropeltis nigra*

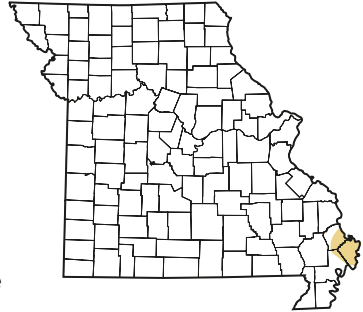
**About:** This species can be found in open woodlands and dry, rocky hills. It was known to occur east of the Mississippi River, and recently individuals were discovered west of the Mississippi River in southeastern Missouri.

**Description:** This species is similar to the speckled kingsnake, with white to yellow dots on a black body. However, the eastern black kingsnake pattern is very faint or incomplete with white or yellow dots and in some individuals the pattern can be a faint chainlike marking along the side.

**Length:** Ranges from 36 to 45 inches (90–114 cm).

**Diet:** Lizards, other snakes (including venomous snakes), and small rodents.

**Missouri Distribution:** Restricted to the southeastern corner of the state.

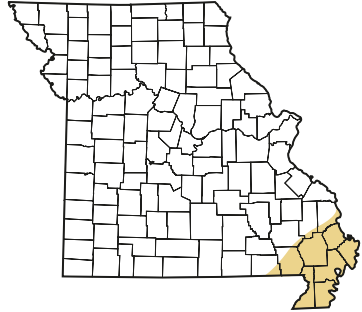


RICHARD DANIEL

# Mississippi Green Watersnake

## *Nerodia cyclopion*

**About:** This semi-aquatic, heavy-bodied snake was once somewhat common in southeastern Missouri, but is now quite rare. Due to drastic reductions in native cypress swamps, this species is endangered in Missouri and has not been seen in the state for many years. Watersnakes bite viciously to defend themselves and also secrete a strong-smelling musk from glands at the base of the tail.



**Description:** It is greenish-brown with numerous small, obscure brown markings and a dark gray belly with numerous, yellow half-moon shaped markings.

**Length:** Ranges from 30 to 45 inches (76–114 cm).

**Diet:** Fish, salamanders, frogs, and crayfish.

**Missouri Distribution:** Restricted to the southeastern corner of the state.

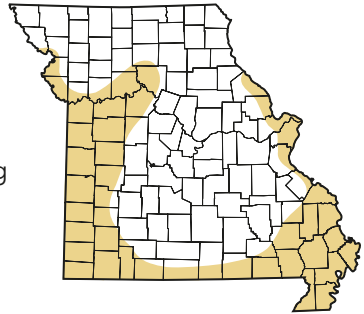


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# Plain-bellied Watersnake

## *Nerodia erythrogaster*

**About:** Also known locally as the yellow-bellied watersnake, this species is found in river bottoms, swamps, sloughs, lakes, and ponds where it can be found basking on overhanging branches or logs in the water. Like other species of watersnakes, plain-bellied watersnakes give birth to live young.



**Description:** The plain-bellied watersnake is mainly gray or greenish with little or no pattern and a belly that is typically plain yellow or occasionally orange.

**Length:** Ranges from 30 to 48 inches (76–122 cm).

**Diet:** Fish, amphibians, and crayfish.

**Missouri Distribution:** Lives throughout southeastern Missouri, north along the Mississippi River floodplain, and in southwestern and western Missouri.

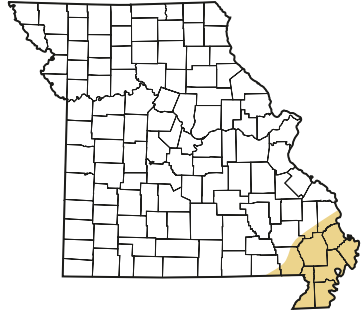


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# Broad-banded Watersnake

## *Nerodia fasciata confluens*

**About:** They often are seen basking on logs or among branches above the water in cypress swamps, river sloughs, or oxbow lakes. Like other watersnakes, broad-banded watersnakes often are mistaken for western cottonmouths and needlessly killed. Watersnakes bite viciously to defend themselves and also secrete a strong-smelling musk from glands at the base of the tail.



**Description:** The broad-banded watersnake is a beautiful, semi-aquatic snake named for its broad, irregular shaped bands along the back. These bands can be brown, red-brown, or black, and are separated by yellow and gray.

**Length:** Ranges from 22 to 36 inches (56–91 cm).

**Diet:** Fish, frogs, toads, and tadpoles.

**Missouri Distribution:** Restricted to the southeastern corner of the state.



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# Diamond-backed Watersnake

## *Nerodia rhombifer*

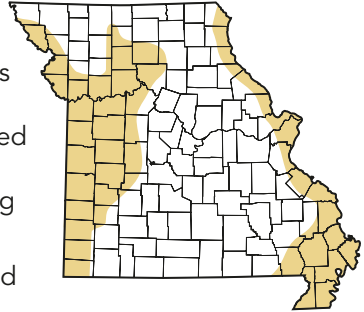
**About:** Of the five species of watersnakes native to Missouri, the diamond-backed watersnake is the largest. Diamond-backed watersnakes may live along slow-moving rivers, but more commonly are seen along river sloughs, oxbow lakes, and swamps.

**Description:** The common name is derived from the light areas along the snake's back, which may be shaped like diamonds. Its overall color may be light brown or dull yellow, with dark brown markings on the sides and back, and two rows of dark brown half-moon shaped markings bordering its yellow belly. Similar to other watersnake species, the scales along its body have keels, which cause watersnakes to feel rough.

**Length:** Ranges from 30 to 48 inches (76–122 cm).

**Diet:** Fish, frogs, and toads.

**Missouri Distribution:** Absent from the Ozarks; common in southeastern corner, north along the Mississippi River floodplain, and in northern and western Missouri.

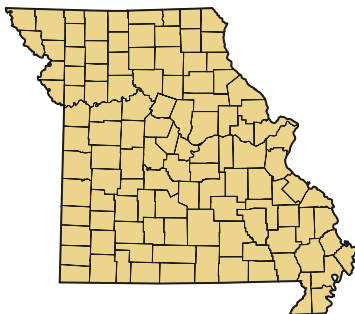


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# Northern Watersnake

## *Nerodia sipedon sipedon*

**About:** Also known locally as the banded watersnake, the northern watersnake is Missouri's most common species of watersnake. It lives in or near any aquatic habitat: ponds, lakes, sloughs, streams, rivers, and marshes. Although watersnakes will bite to defend themselves, their bite is harmless. Like other watersnakes, northern watersnakes often are mistaken for western cottonmouths and needlessly killed.



**Description:** A gray to reddish-brown snake with dark brown cross-bands, its belly is cream-colored with numerous black and reddish half-moon markings. The scales along its back and sides are keeled.

**Length:** Ranges from 24 to 42 inches (61–107 cm).

**Diet:** Fish, frogs, tadpoles, toads, and salamanders.

**Missouri Distribution:** Statewide. Northern watersnakes are found throughout the western and northern two-thirds of the state. A subspecies, the midland watersnake (*Nerodia sipedon pleuralis*), lives in the southern and eastern third of the state.

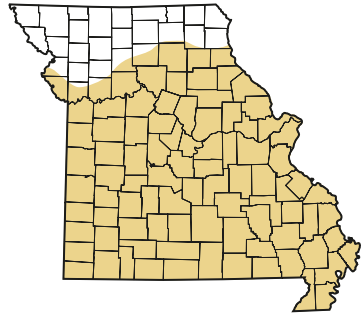


TOM R. JOHNSON

# Rough Greensnake

## *Opheodrys aestivus*

**About:** This is a long and slender snake often seen in the Ozarks. This species is active by day and lives in bushes, vines, and low-hanging branches of trees near streams or lakes. It is often overlooked because it blends so well with its vegetative surroundings.



**Description:** It is light green above and has a white or yellowish belly. Scales on its back have small ridges or keels.

**Length:** Ranges from 22 to 32 inches (56–81 cm).

**Diet:** Spiders, and soft-bodied insects — especially grasshoppers, crickets, and caterpillars.

**Missouri Distribution:** Throughout the southern two-thirds of the state.

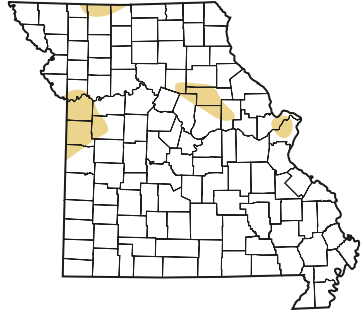


TOM R. JOHNSON

# Smooth Greensnake

## *Opheodrys vernalis*

**About:** This gentle snake lives in grassy meadows in the northern half of the state. This harmless snake will struggle to escape, but seldom attempts to bite when handled. Due to habitat destruction and insecticide use, smooth greensnakes have not been seen in the state for many years. Upon death both species of greensnakes will turn a pale blue.



**Description:** This species differs from the rough greensnake by having smooth scales, a smaller size, and a more northern distribution in Missouri.

**Length:** Ranges from 14 to 20 inches (36–51 cm).

**Diet:** Insects, spiders, and slugs.

**Missouri Distribution:** Scattered counties in the northern half of the state.

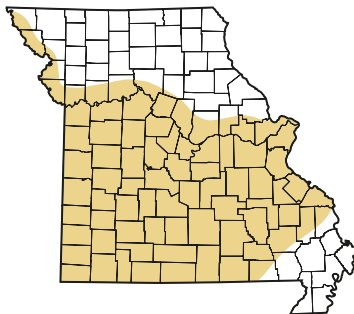


TOM R. JOHNSON

# Great Plains Ratsnake

## *Pantherophis emoryi*

**About:** This species is a member of the ratsnake group and is seldom seen. It lives in open, rocky, wooded hill-sides, where it ventures out at night to feed. Like other ratsnakes, Great Plains ratsnakes vibrate their tails when alarmed. They will bite to defend themselves, but the bite is harmless.



**Description:** This snake has numerous brown blotches along the body, a brown eye stripe, and a spear-point marking on top of the head. The belly is white and covered with small, squarish black markings.

**Length:** Ranges from 24 to 36 inches (61–91 cm).

**Diet:** Rodents, bats, and small birds.

**Missouri Distribution:** Mainly wooded areas in the southern half of the state and along Missouri River counties, excluding southeastern counties.

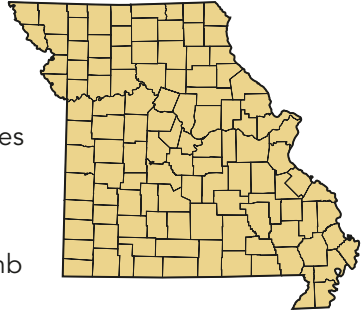


TOM R. JOHNSON

# Western Ratsnake

## *Pantherophis obsoletus*

**About:** Also known locally as the black snake, the western ratsnake is one of our largest common snakes. Western ratsnakes live in a wide variety of habitats: rocky, wooded hillsides, wooded areas along rivers, and in or near farm buildings. This species is well known for its ability to climb trees. They kill their prey by constriction. Farmers are well aware of the value of ratsnakes in controlling destructive rodents.



**Description:** It is generally shiny black, but some individuals show dark brown blotches. The skin between the scales along the sides may be red, and the belly is mottled with gray or may be checkered with black. Young of this species are light gray with dark brown or black markings (see inset), but after a year or two of growth, the color normally will change to a more uniform black.

**Length:** Ranges from 42 to 72 inches (107–183 cm).

**Diet:** Rodents, birds, and bird eggs.

**Missouri Distribution:** Statewide, but shows some indication of being replaced by the gray ratsnake (*Pantherophis spiloides*) in the southeastern corner.



◀ Western ratsnake hatchling

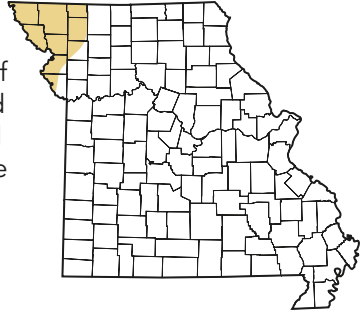


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# Western Foxsnake

## *Pantherophis ramspotti*

**About:** This is a marsh-dwelling member of the ratsnake group. The species is believed to be an inhabitant of open grasslands and borders of woods. In Missouri, the foxsnake has been found near large, natural marshes, but it is not a common snake. Foxsnakes kill their prey by constriction, vibrate their tail when alarmed, and will bite to defend themselves.



**Description:** General color is yellowish, greenish-brown or tan, with an average of 37 large brown blotches on the back and smaller ones on the sides. The head of foxsnakes may show some orange color, which might cause them to be misidentified as a copperhead. Belly color is normally yellow, marked with a distinct black, checkered pattern.

**Length:** Ranges from 36 to 54 inches (91–137 cm).

**Diet:** Small rodents, birds, and bird eggs.

**Missouri Distribution:** Restricted to a few counties in the northwestern corner of the state.

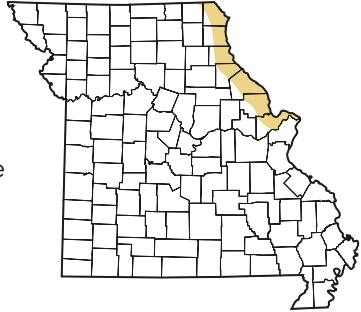


JEFFREY T. BRIGGLER

# Eastern Foxsnake

## *Pantherophis vulpinus*

**About:** This snake is extremely similar in appearance to the western foxsnake and mainly identified to species based upon geographical range in Missouri (see distribution). This species is mainly an inhabitant of grasslands, scrub brush and borders of woods, and along edges of agriculture fields that adjoin wet prairies and marshes. Foxsnakes kill their prey by constriction.



**Description:** It averages 43 dark blotches on the back and sides with a brown to reddish brown head. Its belly is yellowish with a prominent dark, checkered pattern.

**Length:** Ranges from 36 to 54 inches (91–137 cm).

**Diet:** Rodents, occasionally birds, and bird eggs.

**Missouri Distribution:** Restricted to a few counties along the Mississippi River floodplain north from St. Louis.



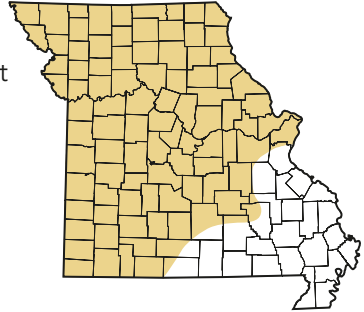
TOM R. JOHNSON



# Bullsnake

## *Pituophis catenifer sayi*

**About:** The bullsnake is Missouri's largest snake. Commonly considered a prairie species, it may also be found in open areas along the border of the Ozarks. Bullsnakes take shelter in large clumps of grass or mammal burrows. This large snake may hiss loudly and vibrate its tail when alarmed. This species is extremely valuable in controlling destructive rodents. Bullsnakes kill their prey by constriction.



**Description:** It is tan or cream colored with numerous, large, brown or black blotches. The tail may have light and dark bands. Often a dark line angles from the eye down to the jaw. The belly is yellow or cream colored, with dark brown or black spots along the sides.

**Length:** Ranges from 37 to 72 inches (94–183 cm).

**Diet:** Small mammals, especially rodents, as well as birds and bird eggs.

**Missouri Distribution:** Most common along the western grassland areas of the state with scattered locations throughout the Ozarks and northern Missouri.

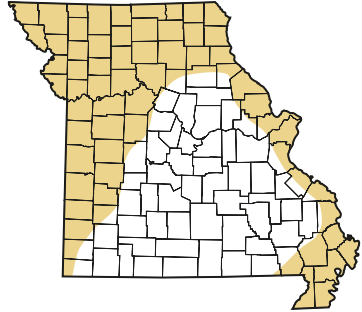


TOM R. JOHNSON

# Graham's Crayfish Snake

## *Regina grahamii*

**About:** This reclusive snake often takes shelter under rocks, logs, or in crayfish burrows along the edge of streams, marshes, sloughs, or ponds. It is named for feeding mainly on freshly molted crayfish and overwintering in crayfish burrows. Like most other snakes associated with water, Graham's crayfish snake are often misidentified as western cottonmouths and needlessly killed.



**Description:** This semi-aquatic snake is fairly nondescript. They are brown to yellow-brown in color with yellowish-tan stripes along the side of the body.

**Length:** Ranges from 18 to 28 inches (46–71 cm).

**Diet:** Mainly soft-bodied crayfish, as well as frogs and tadpoles.

**Missouri Distribution:** Statewide, except for the Ozarks.

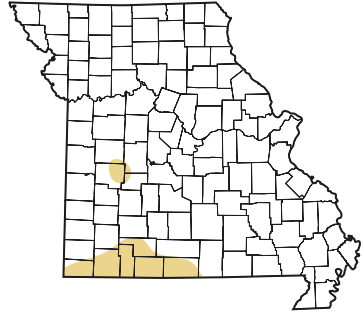


TOM R. JOHNSON

# Variable Groundsnake

## *Sonora semiannulata* *semiannulata*

**About:** Groundsnakes are usually found along rocky glades and open, rocky woodlands on south- and southwest-facing slopes where they remain hidden under flat rocks. They are seldom seen in the open, and spend most of their time under rocks or within rock crevices. Females lay from 4 to 6 eggs during mid-summer.



**Description:** A small, secretive, shiny snake that is highly variable in color. It can be gray, brown, orange or even red with or without dark bands, and it has a white or cream-colored belly with dark transverse bars on the underside of the tail.

**Length:** Ranges from 8 to 12 inches (20–31 cm).

**Diet:** Scorpions, centipedes, and spiders, including the black widow.

**Missouri Distribution:** Southwestern corner of the state.

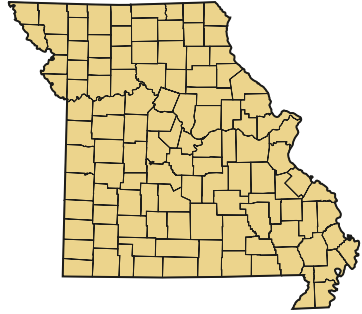


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# Midland Brownsnake

## *Storeria dekayi wrightorum*

**About:** The Midland brownsnake is a close relative of the red-bellied snake. This species prefers a moist environment and can be found under logs, boards or rocks near marshes, swamps, moist woods and, sometimes, rocky hillsides. From 3 to 30 young are born in late summer.



**Description:** The general color is gray-brown to reddish-brown, with a white or yellowish belly. Its back has a distinct tan stripe bordered by two rows of small, dark brown spots; the spots normally are joined by small lines across the tan stripe.

**Length:** Ranges from 9 to 13 inches (23–33 cm).

**Diet:** Earthworms, slugs, snails, and soft-bodied insects.

**Missouri Distribution:** Statewide, but intergrades with the Texas brownsnake (*Storeria dekayi texana*) in the western part of the state.

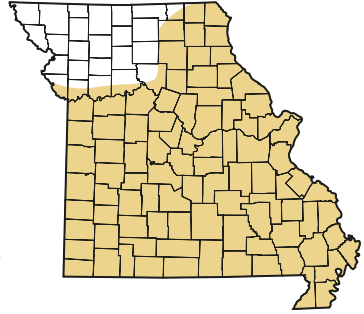


JIM RATHERT

# Northern Red-bellied Snake

*Storeria occipitomaculata*  
*occipitomaculata*

**About:** Red-bellied snakes are secretive and normally live under rocks or logs in rocky or damp woods. This species is sometimes mistaken for a young copperhead and needlessly killed. From 1 to 21 young are born in late summer or early autumn.



**Description:** One of Missouri's smallest snakes, the northern red-bellied snake is gray-brown or reddish-brown on top and bright red or orange below. It usually has a light tan stripe down the back.

**Length:** Ranges from 8 to 10 inches (20–25 cm).

**Diet:** Earthworms, slugs, and, occasionally, insects.

**Missouri Distribution:** Statewide, except for several northwestern counties.



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# Flat-headed Snake

## *Tantilla gracilus*

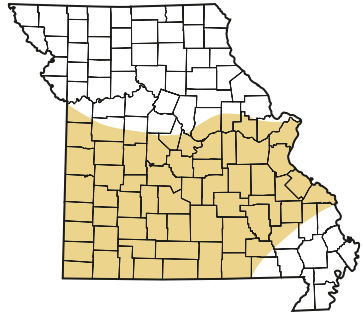
**About:** The flat-headed snake is most likely to be under rocks where there is slightly moist soil, and south-facing, rocky, wooded hillsides are its preferred habitat. This tiny snake lays one to four eggs in moist soil under rocks.

**Description:** Missouri's smallest snake, the flat-headed snake is tan, gray-brown, or reddish-brown. The head sometimes is slightly darker than the rest of the body or is black, and the belly is salmon pink.

**Length:** Ranges from 7 to 8 inches (18–20 cm).

**Diet:** Centipedes and insect larvae.

**Missouri Distribution:** Southern half of the state except for the southeastern corner.

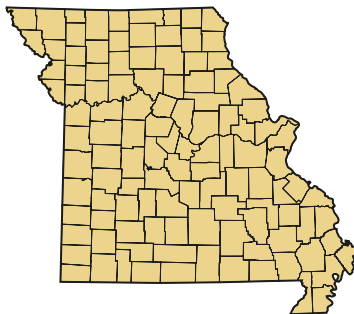


TOM R. JOHNSON

# Orange-striped Ribbonsnake

*Thamnophis proximus proximus*

**About:** This long, slender snake is a type of gartersnake. This species lives in wooded areas near water and may be seen along the banks of streams or the edges of ponds. They also will secrete a foul-smelling musk from glands at the base of the tail when first captured, as with other members of the gartersnake group.



**Description:** Two wide, black stripes border a yellow or orange stripe down its back, and often there is a yellow or orange spot on its head. The belly is greenish.

**Length:** Ranges from 20 to 30 inches (51–76 cm).

**Diet:** Small frogs and, sometimes, minnows.

**Missouri Distribution:** Statewide



# Plains Gartersnake

## *Thamnophis radix*

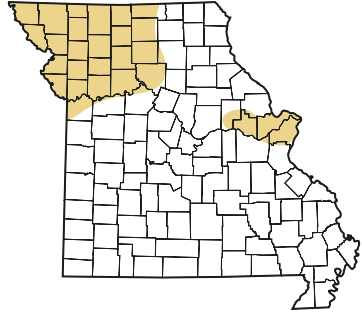
**About:** The plains gartersnake is another kind of gartersnake that is associated with wet meadows and prairies, marshes, lakes, and ponds.

**Description:** It is very similar to the other gartersnakes, but it usually has a yellowish-orange stripe down the middle of the back, an alternating double row of black spots along the sides, and black bars along the edge of the upper green lip.

**Length:** Ranges from 15 to 28 inches (38–71 cm).

**Diet:** Earthworms, amphibians, and minnows.

**Missouri Distribution:** Occurs mainly in the north-central and western corner, with an isolated population in the eastern part of the state near St. Louis.



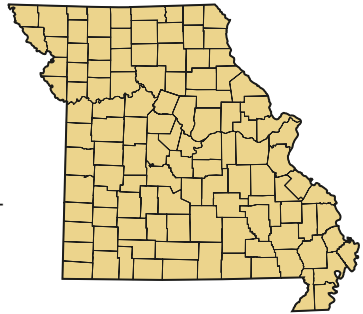
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# Eastern Gartersnake

## *Thamnophis sirtalis sirtalis*

**About:** Of the three species of garter-snakes in Missouri, the eastern garter-snake is the most common. Gartersnakes often are found under boards, rocks or other objects in city lots, near farm buildings, in meadows, or along streams. Like many kinds of harmless snakes, garter-snakes will bite to defend themselves.



**Description:** It may be dark brown, greenish or olive, and normally there are three yellowish stripes — one on the back and one on each side. Dark areas between the light stripes may be spots instead of stripes. The skin between scales along the sides may be red or orange. The belly is usually yellowish-green with two indistinct rows of black spots.

**Length:** Ranges from 18 to 26 inches (46–66 cm).

**Diet:** Earthworms, frogs, toads, salamanders, minnows, and occasionally small mice.

**Missouri Distribution:** Statewide. Eastern gartersnakes occur throughout the eastern half of the state. The red-sided gartersnake (*Thamnophis sirtalis parietalis*) (see inset) — a subspecies — lives mainly in the prairie region of western and northern Missouri.



TOM R. JOHNSON; INSET: JEFFREY T. BRIGGLER

# Lined Snake

## *Tropidoclonion lineatum*

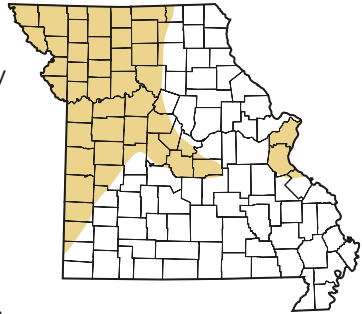
**About:** Lined snakes live in a wide variety of habitats, from native prairies and glades to old trash dumps and empty town lots. It will release a foul-smelling musk from the base of the tail when handled.

**Description:** This small, secretive snake is fairly easy to identify. It is mainly brown to grayish-brown, with a lighter color stripe down the middle of the back and distinctive double row of half-moon shaped markings along the belly.

**Length:** Ranges from 8 to 15 inches (20–38 cm).

**Diet:** Almost exclusively earthworms.

**Missouri Distribution:** Lives mainly in the western part of the state with scattered populations in extreme northeast counties and the St. Louis area.



TOM R. JOHNSON

# Rough Earthsnake

## *Haldea striatula*

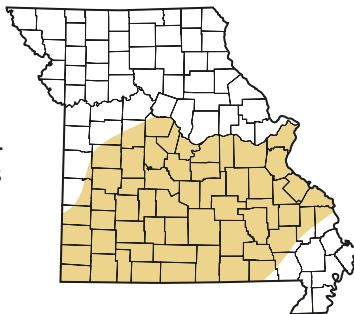
**About:** This species is mainly found in open woodlands with abundant ground cover (logs, rocks, bark, stumps, leaf litter). They give birth to live young, with females producing up to 10 young in a litter.

**Description:** The rough earthsnake is a close relative of the western smooth earthsnake and is extremely similar in appearance. Rough earthsnakes differ from western smooth earthsnakes by having keeled scales along the back, five labial scales along the upper lip, and a single scale between the nostrils — compared to relatively smooth scales along the back, six labial scales along the upper lip, and two scales between the nostrils for the western earthsnake.

**Length:** Ranges from 7 to 10 inches (18–25 cm).

**Diet:** Earthworms, and, occasionally, snails and slugs.

**Missouri Distribution:** Southern half of the state excluding southeastern counties.

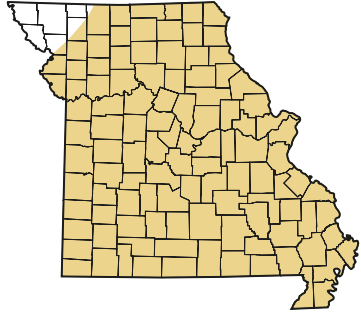


TOM R. JOHNSON

# Western Smooth Earthsnake

## *Virginia valeriae elegans*

**About:** This nondescript little snake is a woodland species and usually remains hidden under rocks, logs, or in leaf litter. They are active mainly at night, especially during warm, humid conditions, searching for food. Similar to the rough earthsnake, they give birth to live young.



**Description:** A small snake with a cone-shaped head, this snake generally is gray to light brown or reddish-brown. It has no distinct markings. The belly is white or cream colored. See description of the rough earthsnake to distinguish species.

**Length:** Ranges from 7 to 10 inches (18–25 cm).

**Diet:** Earthworms, and, occasionally, soft-bodied insects and slugs.

**Missouri Distribution:** Mainly southern half of the state with scattered populations in the north-central part of the state.



JIM RATHERT

# SPECIES ACCOUNTS

## *Venomous Snakes*

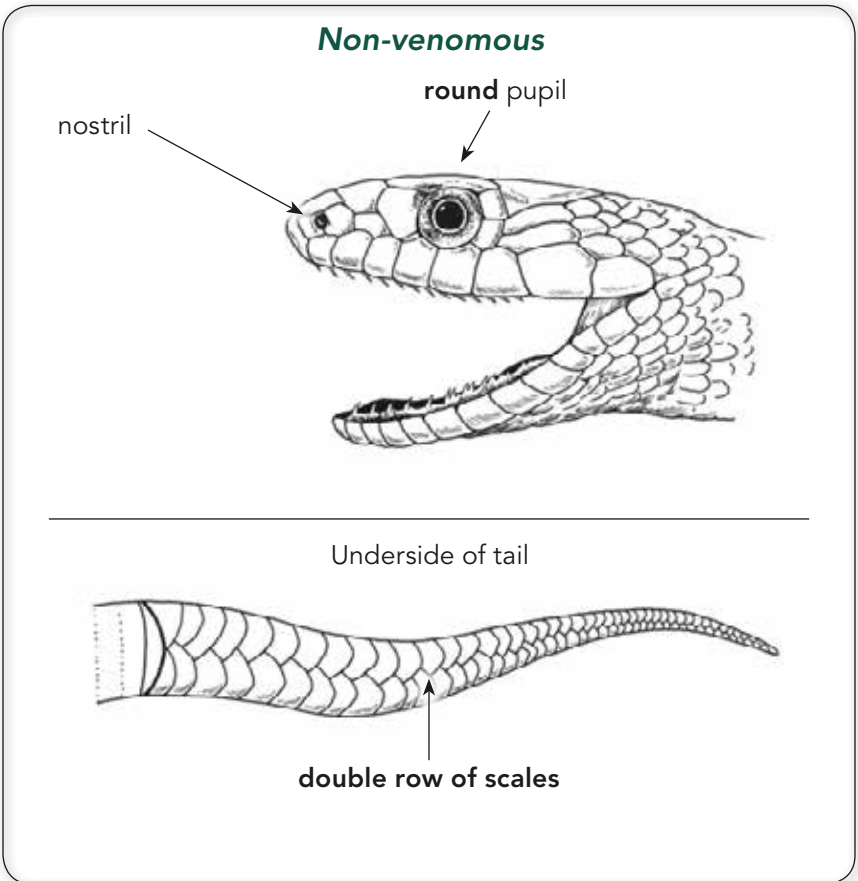


For more details, visit [mdc.mo.gov/field-guide](http://mdc.mo.gov/field-guide).

## Venomous Snake Facts

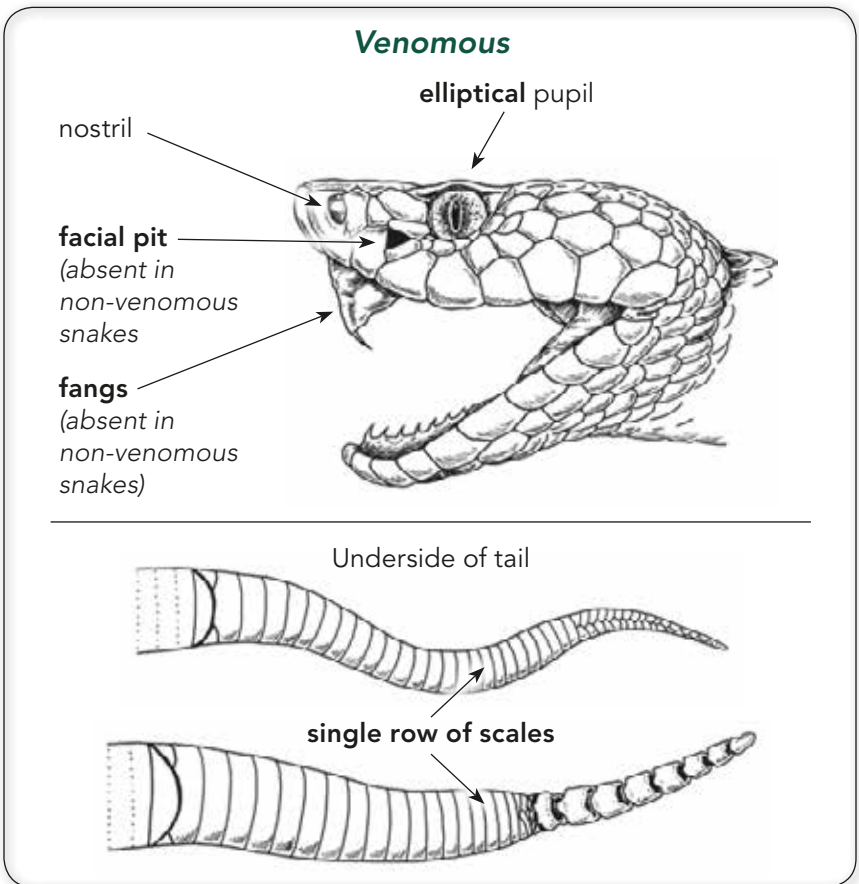
There are six venomous snakes native to Missouri that are members of the pit viper family. Pit vipers have a characteristic sensory pit located between the eye and nostril of each side of the head, which detects the body heat of a small mammal or bird. Their pupils are elliptical in shape, and they have a pair of well-developed hollow fangs located on the front of the upper jaw. Missouri's venomous snakes all have a single row of scales along the underside of the tail, which can be used to distinguish venomous from harmless snake by examining a shed skin. Also, the four species of rattlesnakes have the characteristic rattle at the end of their tail.

### Some physical differences between non-venomous and venomous snakes



Many people insist on using the triangular shape of the head to determine whether a snake is dangerous or harmless, but this is not the best way to identify these snakes. Although venomous snakes have a triangular shaped head, several harmless species (e.g., watersnakes, gartersnakes, and hog-nosed snakes) can flatten their head, which cause them to appear triangular. Harmless snakes lack the sensory focal pit and fangs. They have round pupils and a double row of scales along the underside of their tail.

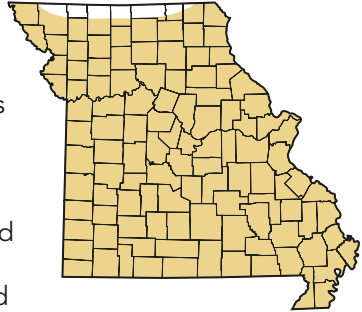
It is important for those who spend time in Missouri's outdoors to learn to identify venomous snakes. Use these photos, descriptions, and maps to familiarize yourself with the size, color, and distribution of these snakes discussed in the following pages.



# Eastern Copperhead

## *Agkistrodon contortrix*

**About:** This is our most common venomous snake. Copperheads make their homes on rocky hillsides and along the edges of forests. They also spend time among trees and in brush along prairie streams. Copperheads, often found near abandoned farm buildings, will vibrate their tails when alarmed. Copperhead venom is considered mild compared to other venomous snakes, but medical treatment should still be sought if a person is bitten.



**Description:** Its color varies from grayish-brown to pinkish-tan, with hourglass-shaped crossbands of dark gray, brown or reddish-brown. The head may have some pink or orange color, hence the name “copperhead.” The tail may be yellow or greenish-yellow, especially in young specimens (see inset), and the belly usually is a dusky mixture of gray, tan, and black.

**Length:** Ranges from 24 to 36 inches (61–91 cm).

**Diet:** Mice, lizards, frogs, and sometimes small snakes.

**Missouri Distribution:** Statewide, except for extreme northern border with Iowa.



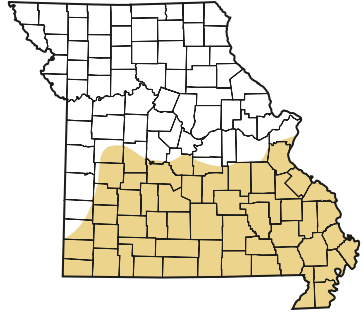
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# Northern Cottonmouth

## *Agkistrodon piscivorus*

**About:** Also known locally as the water moccasin, this semi-aquatic snake is so named because of the cotton-white lining of its mouth, which it opens widely when alarmed. This species lives in two distinctly different habitats: in southeastern Missouri, they live in swamps and oxbow lakes, and in the southern Ozarks, they live in rocky streams and river sloughs. The cottonmouth is a dangerously venomous species that can deliver a fatal bite. Various harmless snakes, especially watersnakes, are often misidentified as cottonmouths.



**Description:** Its general body color is black with little or no pattern or dark brown with darker crossbands on the back and a dark brown or black belly. Young cottonmouths are superficially patterned like a copperhead and usually have a yellowish-green tail.

**Length:** Ranges from 30 to 42 inches (76–107 cm).

**Diet:** Fish, frogs, snakes, lizards, and rodents.

**Missouri Distribution:** Southeastern corner and a spotty distribution in the Ozark Region.



▲ Northern cottonmouth newborn

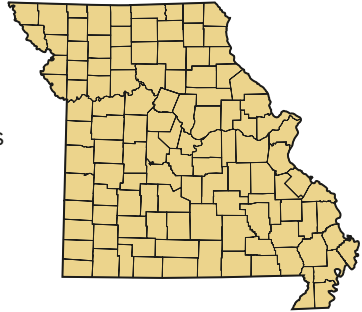


JIM RATHER; INSET: JEFFREY T. BRIGGLER

# Timber Rattlesnake

## *Crotalus horridus*

**About:** This is Missouri's largest venomous snake. The timber rattlesnake lives on rocky, wooded hillsides where it tends to congregate in selected south-facing rocky areas where it overwinters. This snake uses camouflage to avoid being seen; however, it will bite if harassed. It is dangerously venomous and medical attention must be immediately sought if bitten. There are only a few cases of rattlesnake bites in this state.



**Description:** Generally tan or yellowish-tan, the timber rattlesnake has markings along the back that are dark brown and change from blotches on the neck to bands near the tail. Often, a dark line extends from the eye along the angle of the jaw, and there is a rust-colored stripe down the back. It has a large rattle at the end of its tail.

**Length:** Ranges from 36 to 60 inches (91–152 cm).

**Diet:** Rodents and small rabbits.

**Missouri Distribution:** Statewide.

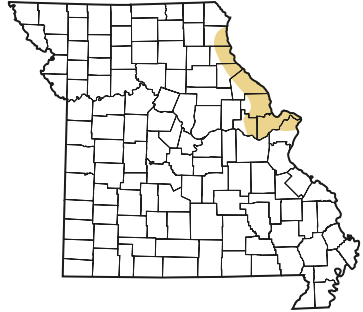


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# Eastern Massasauga

## *Sistrurus catenatus*

**About:** Also known locally as the swamp rattler, this snake lives in marshy areas or wet prairies and may take shelter in burrows of crayfish or other animals. This species was once known to occur along the Mississippi River floodplain from the St. Louis area to northeastern Missouri. However, this rattlesnake is state-endangered and has not been seen in the state for many years.



**Description:** This snake is gray to dark gray with numerous brown or gray-brown blotches, and often a dark line extending from the eye onto the side of the neck. The belly is dark gray or black, and there is a small rattle at the end of the tail.

**Length:** Ranges from 18 to 30 inches (46–76 cm).

**Diet:** Mice, shrews, small snakes, and lizards.

**Missouri Distribution:** Along the Mississippi River floodplain north from St. Louis.

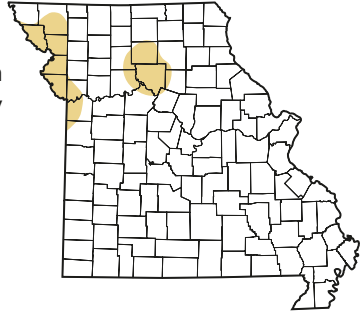


JEFFREY T. BRIGGLER

# Prairie Massasauga

## *Sistrurus tergeminus tergeminus*

**About:** Prairie massasaugas live mainly in bottomland or wet prairies dominated by grasses and sedges that have numerous crayfish burrows providing shelter from predators and weather conditions. This snake has declined drastically due to the draining of wetlands and conversion of prairies for agriculture and pastureland. Human deaths caused by its bite are rare, but studies show that the massasauga's venom is highly toxic, so it must be respected and classified as dangerous.



**Description:** This species is light gray to dark gray with rows of dark to light brown blotches along the body. The belly is generally light in color, and there is a small rattle at the end of the tail. This snake is extremely similar in appearance to the Eastern massasauga and mainly identified to species based upon geographical range in Missouri (see distribution).

**Length:** Ranges from 18 to 30 inches (46–76 cm).

**Diet:** Small rodents, small snakes, and lizards.

**Missouri Distribution:** North-central and northwestern corner of the state.

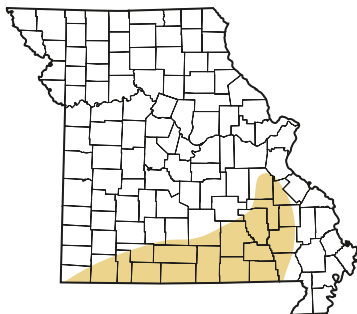


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# Western Pygmy Rattlesnake

## *Sistrurus miliarius streckeri*

**About:** Also known locally as the ground rattler, the western pygmy rattlesnake is one of the smallest species of rattlesnakes in North America. This species lives under rocks on glades and woodlands, and is so secretive that few people encounter it. The sound of the vibrating rattle is a faint buzz like the sound of a grasshopper. Although the bite of this species is not fatal, a bite victim should seek immediate medical attention. Pygmy rattlesnakes should be respected and left alone.



**Description:** It's generally light grayish-brown, with a row of small, dark brown spots on the back and similar spots on each side. Most specimens also have a rust-colored stripe down the back. The belly is usually gray. Pygmy rattlesnakes have a thin tail and tiny rattle.

**Length:** Ranges from 15 to 20 inches (38–51 cm).

**Diet:** Small lizards, snakes, frogs, and mice.

**Missouri Distribution:** Counties bordering Arkansas and the eastern Missouri Ozarks.



TOM R. JOHNSON

# VENOM, FANGS, AND HUMANS

Venomous snakes have a venom system (glands, ducts, and fangs) to deliver venom, which evolved to allow them to kill mice and other prey animals. They bite a prey, inject venom, and then quickly release the prey. A mouse or other prey dies in minutes and all the snake has to do is follow the odor trail and eat the freshly killed rodent. By using venom, these snakes do not have to struggle with the prey and risk injury or death to itself. A venomous snake venom apparatus, however, can also be used for protection.

Any of these venomous species will likely bite a person who steps on it because it is trying to defend itself. This type of bite is not that common. Most bites occur when someone sees a venomous snake and decides to handle or kill the snake. During such scenarios the venomous snake will do its best to defend itself.

Of the approximately 7,000 to 8,000 people bitten by venomous snakes each year in the United States, fewer than five die. A person is approximately 10 times more likely to die from being struck by lightning than to die from a venomous snakebite.

In Missouri, venomous snakes — primarily copperheads — bite an average of 100 people annually. The extremely rare deaths from these bites are typically due to the victim's allergic reaction to the snake venom, poor health, or failure to seek medical treatment in a reasonable timeframe. The overwhelming majority of bites are treated to prevent infection, reduce pain, and minimize tissue damage, not because of the threat of death.

The bite of a venomous snake usually produces immediate, intense, burning pain. This may be followed by tingling or throbbing and nausea. In several minutes there may be signs of swelling on the bitten area such as a hand, arm, or leg. It is important to remain as calm as possible, remove constrictive jewelry and clothes (e.g., rings, watches, shoes, etc.) from bitten area, and most importantly take the victim immediately to a hospital emergency room. Various first-aid measures, such as applying a tourniquet, cutting and sucking out the venom, applying ice packs, electric shock therapy, or consuming alcohol or caffeinated drinks are **not** recommended for snakebites.

The majority of venomous snakebites can be prevented simply by not trying to capture or handle venomous snakes. Most venomous snakes, by nature, are not aggressive. They do not go after people, do not search for people to bite, and would rather stay motionless and undetected or try to avoid an intruder.

## How to Prevent Snakebites

**Encounters with venomous snakes can be prevented if you follow these simple rules:**

1. Stay away from areas where there may be a concentration of venomous snakes, such as swamps, marshes, and bluffs.
2. Wear protective footwear in areas where there are likely to be snakes. Thick leather or rubber boots or hightop hiking shoes will protect feet, ankles and lower legs. In areas with concentrations of venomous snakes, gaiters or chaps may be preferred to protect shins, calves, and legs.
3. Never place your hands under rocks or logs; do not step over rocks or logs. Step on them first, then over.
4. Step lively when hiking. Look the ground over, particularly around large rocks or logs, when you stop to stand or sit.
5. Wear rubber boots when fishing in streams that may harbor the venomous cottonmouth. If a cottonmouth falls in your canoe or boat, don't panic — get to shore and flip the snake out with a paddle, net or fishing rod. Trying to kill the snake in the boat may cause the snake to bite you or cause you to fall into the water.
6. Learn to identify venomous snakes in your area, and avoid any snake you cannot identify.

For current information on snakebite first-aid, contact your nearest American Red Cross or Poison Control Center. **In the event of a venomous snakebite, seek medical attention immediately!**

## Too Close to Home

Although snakes are a part of Missouri's outdoors, there may be times and places where their presence is objectionable. Venomous snakes are not desirable around human dwellings. It is possible to discourage snakes around homes by eliminating their food and shelter. Piles of boards, fence posts, dump heaps, roofing paper, scrap steel roofing, railroad ties, slabs of bark, and piles of rocks provide hiding places for snakes and the prey they eat. Removing these attractions and generally tidying up are the best ways to keep a premise free of snakes. Inspect foundations, doors, and low windows to make sure there are no openings where snakes might enter. Once openings are found, repair, plug, or caulk them to prevent further use. There are no reliable perimeter sprays or chemicals to repel snakes. Many non-venomous snakes are often welcomed or tolerated by Missouri's residents. However, if you are afraid or worried about snakes, we recommend any harmless snake encountered be captured with a hoe or stick, or swept into a large container (e.g., trash can, bucket), and released unharmed in an isolated, safe habitat.



JEFFREY T. BRIGGLER

*Wood piles make excellent habitat for snakes. To discourage snakes, debris such as this should be removed, especially if located near dwellings.*



## Snake Myths

### Copperheads smell like cucumbers

You may have heard someone say you always know when a copperhead is around because it smells like cucumbers. Although true, it is misleading. Copperheads and most other kinds of snakes give off an offensive odor when molested, cornered, or captured. This odor, produced by glands at the base of the tail, is given off at will and may also be mixed with feces. To some individuals this musk may smell somewhat like cucumbers. However, a snake must have a reason to expel its musk. Thus, a copperhead at rest under a rock or alongside a log will have no reason to give off its musky defense. You could walk within a few inches of a snake and never know it's there.

### Black snakes breed with venomous snakes to produce venomous black snakes

This myth has no biological basis. Western ratsnakes (formerly black snake) are not closely related to venomous snakes and have no interest in breeding with a venomous species. This would be like expecting a chicken to breed with a hawk.

### Venomous snakes move in pairs

Snakes compete with each other for food and shelter, so remaining together reduces their chances of finding enough prey to eat. If snakes are seen together, it is because the habitat is ideal and may sustain more than one snake, they might be mating, or the site may be an overwintering site.

### Baby venomous snakes are more dangerous than adults

There is no biological reason for a newly born venomous snake to have more potent venom than adults. They have smaller glands and fangs, and are not capable of producing a venom more potent than an adult.

### A snake must be venomous if it vibrates its tail

Many types of harmless snakes (e.g., ratsnakes, kingsnakes, racers, bullsnakes, etc.) can and will vibrate their tails when alarmed or threatened.

## Snakes cannot bite while underwater

Snakes can and do bite underwater. This is how they capture aquatic prey such as fish, tadpoles, and salamanders. Watersnakes and venomous cottonmouths are able to defend themselves while underwater.

## Some snakes chase people

There are many stories of snakes chasing people, but there is no biological reason for a snake to just chase a person. Snakes will defend themselves when threatened, and may advance toward a person if an escape route is not available or if the person is positioned between the snake and a hiding place.

## Conserving Missouri's Wildlife

Snakes are not popular creatures in our culture; the very mention of them evokes images of evil for some people. These animals, however, have a difficult time surviving — not only because of persecution, but primarily because of habitat destruction (deforestation, pollution, and urbanization).

As with many animals whose numbers are declining, most problems associated with the plight of our native snakes result from a lack of understanding. People traditionally have been brought up to fear and hate snakes; consequently, snakes have not fared well in their relations with humanity.

However, snakes are an important part of the natural food chain and play an important role in the balance of nature. As an example, snakes are helpful in reducing populations of destructive rodents and, in turn, are prey to such wildlife as hawks, great blue herons, otters, and game fish. Ironically, the properties of snake venom that are harmful to humans also make them valuable for human medicines. There are



JIM RATHER

*Snakes, like the Graham's crayfish snake, are an important part of the food chain and are prey to other species such as the great blue heron.*

many drugs derived from snake venom that are used in cancer research and pain relief, and to treat human conditions such as arthritis, heart disease, and diabetes.

Overall, snakes are a fascinating part of the natural world in which we live, and seeing a snake in the wilds of Missouri can add to your outdoor adventures.



STACY KEMPER

*Interpretive snake programs at MDC nature centers introduce young audiences to snake biology and ecological importance.*

## Learn More About Missouri's Snakes

### In Print

*The Amphibians and Reptiles of Missouri* (2000) by Tom R. Johnson. To purchase this 368-page book, visit the MDC Nature Shop at [mdcnatureshop.com](http://mdcnatureshop.com) or call 877-521-8632 to place your order.

### Online

Visit [mdc.mo.gov](http://mdc.mo.gov) and search the keyword "snake" to find Missouri's online *Field Guide*, photos and videos of snakes, snake facts, and *Missouri Conservationist* and *Xplor* magazine stories about snakes.

### In Person

Attend an interpretive program on snakes at an MDC nature center near you.



Rough greensnake

Photo by Jeffrey T. Briggler

