

Florida's

# Snakes

Florida is home to more snakes than any other state in the Southeast – 51 native species and four nonnative species. Because only six species are venomous, and two of those reside only in the northern part of the state, any snake you encounter is most likely going to be nonvenomous.



Florida Fish and Wildlife  
Conservation Commission

MyFWC.com



The eastern gartersnake is typically greenish with a light stripe down its back. Photo by Kevin Enge.



The eastern indigo is a large, bluish-black snake. Its chin, cheek and throat are often reddish, but instead may be white or black. Photo by Kevin Enge.

Florida has an abundance of wildlife, including a wide variety of reptiles. Florida has more snakes than any other state in the Southeast - 51 native species and four established nonnative species. These numbers recently increased because ratsnakes in Florida were split into two species, and three kingsnake subspecies were elevated to species.

Snake taxonomy will undoubtedly undergo future revisions. For example, a 2021 paper recommended using *Pantherophis quadrivittatus* and *P. alleghaniensis* for eastern and central lineages of ratsnakes instead of *P. alleghaniensis* and *P. spiloides*, which were used in a 2020 paper. We are opting to use the common names yellow and gray ratsnakes for these two species.

Snakes are found in every habitat from coastal mangroves and salt marshes to freshwater wetlands and dry uplands. Some species even thrive in residential areas. It's possible to find a snake anywhere you live or travel in Florida.

Many people are frightened of or repulsed by snakes due to superstitions or because they are unaware of the fascinating and vital role snakes play in Florida's complex ecology. Many species help reduce the populations of rodents and other pests.

Because only six of Florida's resident snake species are venomous, and two of those reside only in the northern part of the state, any snake you encounter is most likely nonvenomous. However, if you come across a snake, it is best



Many snake species are beneficial because they prey on rodents, like this red cornsnake eating a juvenile cotton rat. Photo by Kevin Enge.



Some snakes are excellent climbers and can easily scale trees and walls. The long and slender rough greensnake spends much of its time climbing in vegetation. Photo by Pierson Hill.

to admire it from a distance and not try to touch or capture it, just like any wild creature.

### What is a snake?

Snakes are reptiles, and like other reptiles such as lizards, turtles and crocodilians, they are covered with hard, dry scales. The scales of a snake may be smooth and shiny or rough and dull, but they are not slimy. These scales are not separate pieces, like fish scales, but are formed from folds of a single layer of skin. Each snake species has a unique scale pattern.

The scales may be either smooth or keeled. Smooth scales are shiny and reflective and are frequently iridescent. Keeled scales have a

central ridge and appear rougher and duller than smooth scales.

Snakes don't get more scales as they grow; the scales just get larger. Several times a year, snakes shed or molt the outside layer of skin as they grow; this process is called ecdysis.

Snakes do not have eyelids, so they can't blink or close their eyes. Their eyes are covered by a single transparent scale called a spectacle. When snakes are about to shed their skins, the scale over their eyes becomes cloudy or bluish and their color becomes drabber because of fluid between the two skin layers.

The most easily-seen distinctive trait of snakes is their long body and



Ratsnakes are found in almost every habitat in Florida. As their name implies, they feed primarily on rodents but will also eat birds and their eggs (hence the common name "chicken snake"); juveniles mostly eat lizards and treefrogs. This yellow ratsnake coiled in a pump house is about to shed its skin, as indicated by cloudy or bluish eyes. Photo by Bill Love.



Some snakes, such as this Florida green watersnake, don't lay eggs. The eggs remain in the female's body until they hatch and the young are born. Photo by Daniel Parker.

lack of legs. Some lizards lack legs and are mistaken for snakes, but glass lizards have eyelids and ear openings.

Snakes have between 200 and 400 bones in their backs, each with a pair of ribs, enabling them to bend and glide easily. Their size and flexibility enable them to crawl through tunnels, over the ground, through water and up trees to find prey and hide from predators.

All snakes are carnivores – they eat other creatures rather than plants. Some prey on insects, spiders and earthworms, whereas the larger species may eat birds, frogs and rabbits. Some species prefer to eat other snakes, including rattlesnakes.

Because snakes lack feet to capture or hold their food, they have needlelike teeth that curve backwards so their prey cannot escape. Many of the head bones, such as the highly-mobile jaw bones, are only loosely attached to the skull, allowing snakes to swallow animals wider than their own body.

Snakes do not have ears or ear openings, but they can detect vibrations through the ground via bones in their head and belly. Many snakes have adequate but not sharp vision that is good at detecting movements. Tree-climbing snakes tend to have better vision, whereas burrowing snakes may see only

shadows.

Reptiles, including snakes, are ectotherms, commonly known as cold-blooded. They are not able to maintain their body heat internally like mammals and birds but must control their temperature by basking in the sun when it is cold or resting in the shade when it is hot. This means they have lower metabolic rates and need much less food than similar-sized mammals.

Partly to help them regulate their body temperature, snake species are active during different seasons and various times of the day. They may be inactive during cold winters (brumation) and hot summers (aestivation). Most species are more



A snake's scales are not separate pieces but are formed from folds of a single layer of skin. Healthy snakes tend to shed their skins in one piece, as illustrated by this Apalachicola kingsnake. Photo by Kevin Enge.



Snake eggs, such as the scarlet kingsnake's, are not hard like bird eggs, but soft and leathery. Baby snakes slit open the egg using a special "egg tooth" that is lost soon after they hatch. Photo by Kevin Enge.

likely to be active in the middle of the day during cool weather and in the morning and evening during hot weather.

Males have paired, forked hemipenes that are stored inverted in the tail base. One hemipenis at a time is used to internally fertilize a female. About half of Florida's snake species lay eggs (oviparous), while most others retain eggs until they are almost ready to hatch and give birth to live young (ovoviviparous). The boa constrictor is viviparous, nourishing its young through a placenta as well as a yolk sac.

Most young snakes are born in summer or early fall. The incubation period for eggs is 40 to 90 days, depending on the species and incubation temperature. Females of a few species stay with the eggs until they hatch, and some pitvipers remain with their newborns for hours or days.

Some snakes change colors and patterns as they age, so young snakes may look different from adults.

# Venomous Snakes

Two families of venomous snakes occur in Florida: the Viperidae (vipers and pitvipers) and the Elapidae (cobra family).

Pitvipers are identified by facial pits located between the eye and nostril on either side of the head. The pits are heat-sensitive organs that enable the snake to “see” and strike accurately at prey, even in total darkness.

Elliptical eye pupils and a broad, V-shaped head are other identifying features of this group. Five pitvipers are found in Florida: eastern diamond-backed rattlesnake, timber rattlesnake, dusky pygmy rattlesnake, Florida cottonmouth and eastern copperhead.

Pitvipers have long, hollow, erectile fangs that are folded back against the roof of the mouth except when striking. The venom of most pitvipers contains hemotoxic proteins that attack blood and tissue.

The reclusive harlequin coralsnake is the only species of the elapid (cobra) family found in Florida. Its venom is primarily neurotoxic, attacking the nervous system and killing its prey through paralysis of the heart and respiratory muscles.



The harlequin coralsnake is found throughout Florida except in the southern Keys. It lays eggs, unlike Florida's other venomous snakes, which give birth to live young. Photo by Kevin Enge.

## Harlequin coralsnake

This colorful species is related to the cobra, krait and mamba. It has short fangs fixed in the front of its mouth. The coralsnake generally grabs and then chews its prey to inject venom, but contrary to a popular misconception, it can strike like a pitviper.

The coralsnake is slender-bodied with the narrow head and round eye pupil characteristic of nonvenomous species. The largest coralsnake on record measured 47½ inches, but most specimens are less than 30 inches in length.

Sometimes people confuse the coralsnake with the harmless scarlet kingsnake or scarletsnake, which are also brightly colored with red, black and yellow bands. However, the banding patterns differ: the red rings of the coralsnake are bordered by yellow, whereas the red bands of the scarlet kingsnake and scarletsnake are bordered by black. The coralsnake has a rounded, black snout, whereas its two mimics have red, pointed snouts.

Although locally common throughout Florida, the coralsnake is rarely seen. It may be found near rotting wood piles, decaying

mounds of vegetation, heavy fallen-leaf cover and old brush piles. When encountered, it tends to be calm and unlikely to bite unless touched.

The coralsnake hunts its prey by nosing through decaying vegetation and leaf litter to catch and feed on lizards and other snakes. It lays eggs, usually six or fewer, that hatch into miniature versions of adults measuring 7 to 9 inches long.

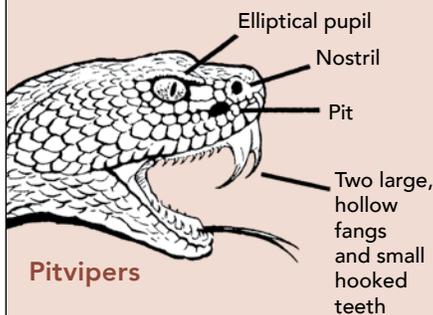
## Eastern diamond-backed rattlesnake

This species is the largest venomous snake in North America. It also is one of the world's most dangerous snakes because of its large body size, quantity of venom and tremendous striking speed. Although they reportedly grow up to 8 feet long, it is rare to find a rattler longer than 5 feet.

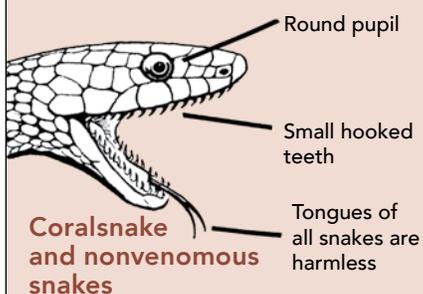
It has a distinctive pattern of yellow-bordered, diamond-shaped markings on its back and an arrowhead-shaped head much wider than the neck. Brittle segments of dead tissue form the signature rattle, which adds a new segment each time the snake sheds.

The diamond-backed rattlesnake occurs throughout Florida and on many coastal islands. Preferred

Pitvipers were named for their trademark heat-detecting pits between each eye and nostril. They can detect temperature differences as slight as .003 degrees C.



Pitvipers



Coralsnake and nonvenomous snakes



The eastern diamond-backed rattlesnake is easily identified by the diamond pattern down its back and large rattle on its tail. Its scales are strongly keeled, giving it a rough appearance. Newborns look like adults and come fully equipped with venom. Photo by Daniel Parker.

habitats are pinelands, dry prairie, abandoned fields and brushy or grassy areas, but diamond-backs may be found anywhere.

In its natural habitat, the diamond-backed rattlesnake is difficult to spot because its color pattern blends into the background. When disturbed, a rattler assumes a defensive posture with its body coiled upon itself and the head and neck raised in an S-position. Its tail is held upright and rapidly vibrated to sound its signature warning rattle. When in this stance, the rattler can deliver strikes faster than 100 mph.

When its mouth is closed, a rattlesnake's long fangs lie folded back against the roof of its mouth. When the mouth is opened wide during a strike, the fangs become erect, and pressure exerted on the venom sacs forces venom through the fangs. A rattler does not have to be coiled to strike – it can strike from any position and in any direction, and at a distance up to 2/3 the length of its body. When encountered, it may or may not sound a warning rattle. Many people tell of stepping near or even on a diamond-backed rattlesnake without it rattling or striking. If left alone, this rattlesnake almost always avoids or flees a human encounter.

Like other snakes, the diamond-backed rattlesnake may shed its skin up to five times each year, depending on its rate of growth,

which depends on its size and on food consumption. A newborn rattler doesn't rattle; its rattle starts as a silent "button." Each time it sheds, a new segment is added to the base of the rattle, enhancing the rattling sound. Rattle sections may break off as the snake travels about, and it is unusual to find an old snake with a perfect set that includes the terminal button. Counting rattles is not a reliable way to determine a rattlesnake's age.

Rattlesnakes feed on warmblooded animals such as rabbits, squirrels, rats, mice and birds. They help farmers by preying on crop-destroying rodents.

## Dusky pygmy rattlesnake

The dusky pygmy rattlesnake, often called a ground rattler, is found throughout Florida except for the Keys. Its rattle is small and slender and produces a barely audible buzzing sound, similar to an insect, that can only be heard a few feet away.

Stout-bodied for such a small snake, it is gray and marked prominently with rounded, dusky spots. Starting at the back of the head, a broken, reddish stripe typically alternates with black spots along the midline of the back. The tip of a young pygmy's tail is yellowish-green, but otherwise it resembles an adult.

The pygmy rattler feeds on small frogs, lizards, mice and other snakes. It can be common in pineland and floodplain swamps.

The pygmy has a feisty disposition and is quick to strike, resulting in a painful bite with swelling and sometimes tissue destruction. No human fatalities have been reported in Florida.

## Timber rattlesnake

The southern form of the timber rattlesnake, found in the coastal plains, is sometimes called a canebrake rattlesnake. It often has a lighter and pinker coloration than snakes in more northern areas.

The timber rattlesnake is found across the eastern United States



The tip of the tail of a juvenile pygmy rattlesnake is yellowish-green, otherwise it looks like an adult. Some pygmy rattlesnakes have a broken, rusty-colored stripe down the back. Photo by Kevin Enge.



Like the diamond-backed rattlesnake, the timber rattlesnake is a large, thick-bodied pitviper with a triangular head and rattles on its tail. In Florida, it may be beige or pinkish with dark, chevron-shaped crossbands and a rust-colored stripe down its back. Photo by Daniel Parker.

as far north as New England. In Florida, it is found mainly in the northern peninsula as far south as Alachua County. The southern form of the timber rattlesnake is recognized by its grayish-brown or pinkish-buff color. It has dark, chevron-shaped bands across its body, an orange or rusty-red stripe down the middle of its back, and a brown or black tail terminating in a rattle. Juveniles have the same coloration as adults.

Like other rattlesnakes, the head of the timber rattler is much wider than the neck. Florida specimens seldom measure more than 5 feet in length.

Usually found in flatwoods, river bottoms or hammocks, the timber rattlesnake also lives in abandoned fields and around farms. During hot weather, it may seek out low or swampy ground.

### Eastern copperhead

Instead of five subspecies of copperhead, two species are now recognized. The eastern copperhead occurs in Florida.

The Florida Panhandle, specifically the counties bordering the Apalachicola River and areas along the Alabama border, is the southern extent of the range of the copperhead. It is a handsome snake, pinkish-tan in color with reddish-brown crossbands on its body. These bands are wide along the sides

and narrow along the back to form something of an hourglass shape. The copper-colored head is wider than the neck. The copperhead's average length is 30 inches.

Many snakes reported as copperheads are actually young cottonmouths, which are similar in appearance and closely related. The copperhead's restricted range in Florida has resulted in very few bites and no deaths. However, a copperhead is more prone to bite than a cottonmouth.

### Florida cottonmouth

Two cottonmouth species are now recognized instead of three subspecies. The Florida cottonmouth occurs in Florida.

The Florida cottonmouth, a pitviper without rattles, occasionally exceeds 5 feet in length, but most Florida specimens are less than 3 feet long. Cottonmouths are common in every county and on many coastal islands.

The color pattern of the adult cottonmouth varies from olive-brown to black, with or without black crossbands on the body. It is a stout-bodied snake with an abruptly tapering tail and a broad, flat head much wider than the neck. Its most distinctive mark is a dark brown or black mask extending from the eye to the rear of the jaw. It has a drooping mouth-line, and the protective shields overhanging its eyes give it a "sinister" appearance, as compared to harmless watersnakes.

When disturbed, the cottonmouth will usually draw itself into its defensive posture of a loose coil. Its head is cocked back, and its mouth is opened wide to display the whitish lining of the mouth, hence the name, cottonmouth.

The cottonmouth does not have to be coiled to strike; it can deliver a bite from almost any position, in or out of the water. The cottonmouth



Copperheads typically inhabit areas around rivers, streams and swamps and primarily feed on rodents, but will eat birds, frogs, lizards and other snakes. Photo by Jonathan Mays.

often is portrayed as aggressive, partly due to its reluctance to flee, but most individuals are more likely to give an open-mouth display than to bite.

A water-loving snake, the cottonmouth prefers wooded wetlands including swamps, the forested margins of lakes and marshes, and the banks of wooded streams. However, the cottonmouth may be found in uplands away from water. It hunts at night for fish, frogs, lizards, other snakes and small mammals. During the day, the cottonmouth spends time resting near water, in grassy areas, on logs in water or under piles of debris.

Cottonmouths give birth to six to 12 young, born fully equipped with fangs and venom. Young cottonmouths are boldly marked with reddish-brown crossbands and bright yellow tails, and often are mistaken for copperheads. Juvenile cottonmouths, copperheads and pygmy rattlers hold their yellowish tails aloft and slowly wriggle them to lure frogs and lizards within striking range.

The venomous bite of the cottonmouth results in severe pain and swelling, but with proper medical attention, is rarely fatal.



A Florida cottonmouth in a defensive posture, showing its signature "cotton" mouth (photo above by Daniel Parker). Juvenile cottonmouths are more brightly colored and are often mistaken for copperheads (photo below by Kevin Enge).



Snakes are not aggressive toward humans and will not strike unless they feel threatened. While some snakebites may be nearly impossible to avoid, such as when a person accidentally steps on a snake, most could be prevented if people simply kept their distance.

**These precautions can lower the risk of being bitten:**

- If you come across a snake, walk around it. Leave about 6 feet of space between it and yourself.
- Do not try to get a close look at it or attempt to kill it. Remember, a snake can strike up to 2/3 its body length, and dead snakes still carry venom.
- Stay on paths as much as possible and avoid tall grass and thick brush unless you are wearing thick leather boots.
- Don't reach or walk into any area that you cannot see into.

## Preventing and treating snakebites

A striking snake does not always release venom, and some snakes may release too small an amount to pose a serious hazard. Although not everyone bitten by a snake needs medical attention, seek it if you think you have been bitten by a venomous snake, have an allergic reaction or develop an infection.

In the United States, between 7,000 and 8,000 people are bitten by venomous snakes each year and approximately five die from the bite. Both pitviper and coral snake bites can be effectively treated with antivenin, but the time between the bite and medical care can be critical.

**If you believe you've been bitten by a venomous snake:**

- Immobilize the bitten area and keep it lower than the heart.
- Remove rings or other constricting items because the area may swell.
- Seek immediate medical help.
- If medical care is more than 30 minutes away, the spread of venom may (or may not in some cases) be slowed by wrapping an elastic bandage or wide cloth 2-4 inches above the bite, loose enough to slip a finger under it.

**Do not treat a snakebite by:**

- Placing ice or other coolant on the bite.
- Tying a tourniquet above the bite. This cuts off the blood supply and could lead to loss of the affected limb.
- Applying electric shock.
- Making a cut into the wound, which may cause additional injuries.

# Nonvenomous Snakes



The southern black racer is one of the state's more common snakes and an adult is easily identified by its smooth black body with white chin. Photo by Kevin Enge

The remaining species of native Florida snakes are nonvenomous but vary widely in appearance, habitats and food preferences.

## Racer and coachwhip

One of Florida's most familiar snakes is the southern black racer, often called a blacksnake. Aptly named for its coloration and speed, the black racer is common in a wide variety of habitats.

The adult racer is a slender, satiny snake. It is solid black or slate-gray with a white or gray chin or throat. Its eyes are large in relationship to its head and have rich, chestnut-brown irises. A racer can reach 70 inches, but most are 36-60 inches long. The racer is one of the few species whose young look very different from adults. Many people fail to identify baby racers, which have light-colored bodies with maroon-colored blotches along their back and sides.

Adult southern black racers may be mistaken for the threatened eastern indigo snake. Indigos are much heavier with thick necks and often have a rusty or red chin or throat.

Southern black racers are easily startled and fast-moving. If discovered, they almost always try



Young southern black racers look very different from adults. Photo by Kevin Enge.

to escape as quickly as possible, but will bite if cornered. They also vibrate their tails when threatened.

Racers actively hunt during the day, one reason they are frequently seen. They feed on a wide variety of animals including other snakes, lizards, frogs, birds, rodents and insects. While hunting in open areas, the racer raises its head high above the ground to survey its surroundings.



Eastern coachwhips can grow to more than 8 feet, but average 4-6 feet in length. They usually have a black head and neck fading into tan, but some are uniformly tan or cream. Photos by Kevin Enge.

Many of these characteristics are shared with the racer's relative, the eastern coachwhip. The coachwhip can grow to more than 8 feet long and frequents dry, open habitats, including pine flatwoods, sandhill and scrub. It is an active hunter and can be quick to bite in self-defense.

The head and front quarter of an adult's body typically are black to dark-brown, fading to light-tan on the rest of the body and tail. The young are light-tan with irregular brownish bands along the back and sides.

## Kingsnakes

Seven kingsnake species are found in Florida: scarlet, short-tailed, northern mole, South Florida mole, Apalachicola, eastern and Florida kingsnake. The latter three *getula* species can grow up to 82 inches but are commonly 3 to 4 feet long.

The northern mole kingsnake has 50 or fewer black-bordered, reddish-brown blotches and is found in the Panhandle, whereas the South Florida mole kingsnake has 52 or more blotches and is found mostly in the dry prairie region of south-central Florida.

The short-tailed kingsnake is listed in Florida as threatened. It is a very slender snake, gray with 50-80 dark-brown or black blotches





An adult Florida kingsnake averages about 3-4 feet in length. The body color may be brown to yellow with more than 40 yellowish crossbands. Photo by Daniel Parker.



The Apalachicola kingsnake was named for the region in which it is found. Photo by Kevin Enge.

on its back separated by yellow or orange coloration. It lives mostly underground in sandhill and scrub habitats in the peninsula

The nonvenomous scarlet kingsnake is often confused with the venomous coral snake, due to its smooth red, black, and yellow or orange bands (juveniles have white bands).

The eastern kingsnake, which is found in northern Florida, is shiny black with narrow crossbands of white or light yellow. The Florida



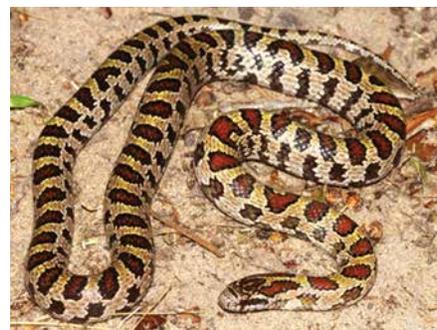
The short-tailed kingsnake is listed as threatened. Adults average 14-20 inches long. Photo by Kevin Enge.

kingsnake is found mostly in central and southern Florida. It has many indistinct crossbands on a yellow-and-black, salt-and-pepper background. The Apalachicola kingsnake is sometimes banded or striped with profuse yellow spotting. Chins of these three kingsnake species are marked by black and yellow.

These three kingsnake species are egg-laying, powerful constrictors that feed primarily on rodents, birds and reptiles, and are mostly active during the day. Kingsnakes often gorge on turtle

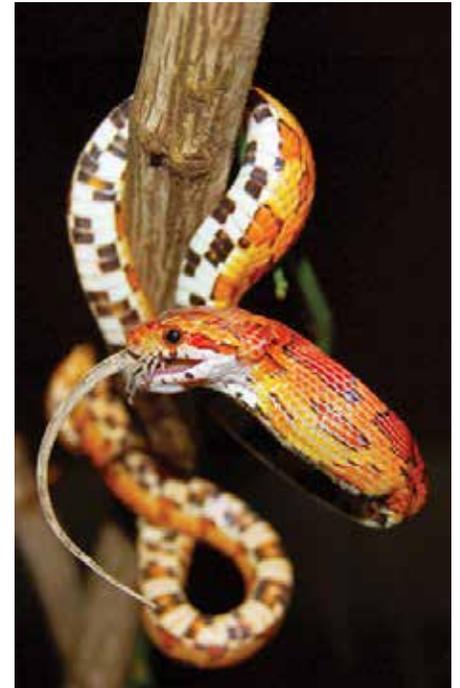


The northern mole kingsnake is found in the Panhandle and has up to 50 reddish-brown blotches. Photo by Kevin Enge.



The South Florida mole kingsnake is tannish-gray with more than 52 reddish-brown blotches. Photo by Kevin Enge.

eggs they dig up using their snout. Their reputation of being the “king of snakes” probably stems from their fondness for eating other snakes, including rattlesnakes and other pitvipers, whose venom does not harm them.



The red cornsnake’s body is usually orange, tan or brown, and its belly has a black-and-white checkerboard pattern. Here, one swallows a brown anole. Photo by Daniel Parker.

## Ratsnakes

Only two species of ratsnake are native to Florida, but they are so variable in color and pattern it may seem as if there are many more. The red cornsnake, often called a red ratsnake, is the only large, red-orange snake likely to be encountered in developed areas of Florida. It is commonly mistaken for a copperhead because of its color.

The cornsnake varies in color but is usually some shade of yellowish-tan to orange with a row of large, dark-edged, red or rusty blotches running down the back. Its black-and-white belly resembles a piano keyboard. The cornsnake can grow to a length of 72 inches but averages 30-48 inches.

The other ratsnake species has recently been split into two species, but this taxonomy may change again in the future. We are opting to use the names yellow (*Pantherophis quadrivittatus*) and gray (*P. alleghaniensis*) ratsnakes for

these new species.

Young ratsnakes are gray with darker gray, irregular blotches on the back. From the Panhandle to Osceola National Forest, adults usually retain this color pattern and are known as gray rat or oak snakes. Throughout most of Florida's peninsula, adults tend to be yellow or orange with four narrow, dark stripes running the length of the body. These are commonly called yellow ratsnakes or chicken snakes. The orange snakes with faded stripes found in extreme southern Florida were once called Everglades ratsnakes. Gray and yellow ratsnakes can reach a length of 84 inches but commonly are 42-72 inches.

Ratsnakes are found throughout Florida in almost every habitat. They tend to be elusive and spend most of their time in trees, under brush or mulch piles or in old buildings. Ratsnakes can easily climb trees because of their powerful constricting muscles and specially-edged belly scales that are pressed into tiny fissures, enabling them to climb vertically.



Both juvenile yellow ratsnakes (above) and gray ratsnake adults (below) are gray with dark blotches, but the yellow ratsnake will change color as it matures while the gray ratsnake will not. Photos by Kevin Enge.



The blue-striped gartersnake was named for the three stripes along its body. It is only found in Florida along the Gulf coast from Wakulla to Hernando County. Photo by Pierson Hill.

Young ratsnakes feed mostly on lizards and frogs, but adults graduate to rodents and birds. They coil around and kill prey by asphyxiation. Ratsnakes can be useful in controlling rodent populations around farms.

Females lay up to 30 eggs that hatch in mid- to late summer. Ratsnakes will defend themselves aggressively when cornered. When threatened, they also may vibrate their tails rapidly.

### **Gartersnakes and ribbonsnakes**

In Florida, any native snake species that is striped is nonvenomous. (Stripes run the length of the body; crossbands run from side to side.) The most familiar striped snakes are gartersnakes and ribbonsnakes. These closely related species are common in a variety of habitats, mostly near water.

Gartersnakes vary widely in color. They can be brown, black or greenish with a checkerboard pattern of small, black spots. Most individuals have three obvious stripes on the back and sides that may be green, blue, yellow or tan. Gartersnakes are usually slender and about 18-26 inches long, but they may reach up to 48 inches.

Large gartersnakes will sometimes eat small rodents, but their primary diet consists of worms, small fish, frogs and toads. They often are aggressive when cornered

and will expel a foul-smelling musk if handled.

Ribbonsnakes are similar in color to gartersnakes, but usually lack the checkerboard background pattern, and the center stripe may be faint or absent. As the name implies, ribbonsnakes are exceedingly slender, and do not grow longer than 40 inches.

Ribbonsnakes feed mostly on small fish, frogs and lizards. They are quick-moving and easily startled, rapidly fleeing if given the opportunity. Ribbonsnakes rarely bite but will release a foul-smelling musk as a defense mechanism. Gartersnakes and ribbonsnakes give birth to live young.

### **Watersnakes and "water moccasins"**

Many people call any snake they see in or near water a "water moccasin" and presume it is venomous. However, most of the snakes seen along Florida rivers, lakes and waterways are harmless watersnakes; only the cottonmouth is venomous. Some watersnakes grow very dark and thick-bodied and attain lengths up to 5 feet. Watersnakes are distinguished from cottonmouths partly by their behavior when frightened. The cottonmouth usually coils and stands its ground and may show its white-lined mouth, while watersnakes are quick to escape into the water.

While cottonmouths swim with their entire body on top of the



Mangrove saltmarsh watersnakes vary in color from almost black to grayish-olive, to brown or rusty orange, and usually have darker bands on the back. Photo by Daniel Parker.

water, often with the head raised, most watersnakes swim entirely under the water or with only their head showing at the surface. A good look at the head should help you distinguish a watersnake from a cottonmouth. Watersnakes have a more rounded head with a round pupil and lack the cottonmouth's flat, triangular head, its horizontal dark mask on the face and the eyebrow-like scales protruding above the eyes that give it a "sinister" aspect.



The brown watersnake has square blotches on its back, alternating with smaller blotches on the side. Photo by Kevin Enge.



As its name implies, the plain-bellied watersnake has a uniformly yellow or reddish-orange belly and neck, and a dark body that may have a reddish-brown pattern. Photo by Pierson Hill.

The four largest and most commonly encountered watersnakes are the plain-bellied, banded, brown and Florida green watersnakes. The plain-bellied frequents the banks of large rivers in the Panhandle and northern peninsula (Suwannee River drainage). The other three species prefer rivers, lakes, ponds and other waterways throughout the state. The southern watersnake is the most commonly encountered, as it frequents man-made backyard ponds, retention ponds and drainage ditches.



The southern hog-nosed snake has dark spots on a lighter background and a more upturned and pointy snout than the eastern hog-nosed snake, whose coloration is quite variable, ranging from mostly yellow to tan, olive, brown, gray, orange or reddish-brown with dark blotches. Photo by Kevin Enge.

All are proficient hunters of fish, frogs and other aquatic animals, and are well-equipped with long teeth for holding slippery prey. They can be defensive when frightened and readily bite when cornered. As with any animal bite, the wound should be thoroughly washed and disinfected to avoid infection.

Watersnakes give birth to live young. The Florida green watersnake may give birth to more than 100 babies.

### Hog-nosed snakes

Hog-nosed snakes are two of Florida's least offensive but most maligned nonvenomous species due to their appearance and exaggerated defensive behaviors. Hog-nosed snakes are found in upland habitats and prefer dry, sandy woods and fields. The eastern hog-nosed snake is found throughout mainland Florida, whereas the southern hog-nosed snake is found in the northern half of the state.

Both hog-nosed snake species are stout-bodied. The eastern species has alternating dark and tan or yellow blotches, but many specimens are solid black with no sign of a pattern. Young hatch in summer or fall and are gray with black markings.

The eastern species can reach up to 45 inches but commonly reaches



Hog-nosed snakes are known for their defensive behaviors. When threatened, they assume a “cobra-like” appearance with a flattened head and neck and hiss loudly. They may strike, but with a closed mouth. If that doesn’t work, they may flop on their back, convulse, defecate and vomit, then play dead, belly up, mouth open and tongue out. Eastern hog-hosed by Kevin Enge.

about 20-30 inches in length. The southern species does not exceed 24 inches. The peculiar upturned snout, most dramatic in the southern species, is designed for digging up toads, its major prey.

Many types of nonvenomous snakes are killed by humans each year out of fear or ignorance, but hog-nosed snakes are more likely to fall victim because of their exaggerated defensive behaviors. When an eastern hog-nosed snake is frightened, it will hiss and puff up while jerking and thrashing. It usually flattens its neck into a cobra-like hood and may gape widely or bluff-strike with a closed mouth. If this doesn’t frighten away the attacker, the hog-nosed will thrash wildly, spew foul-smelling musk, roll over and play dead. An open mouth with a tongue lolling out is usually enough to convince most predators that the snake is already dead. The smaller southern species, which resembles a pygmy rattlesnake, cannot flare its neck as dramatically. These behaviors backfire when humans become frightened and mistake hog-nosed snakes, which are sometimes called “puff adders,” for more dangerous snakes.

### Ring-necked and other small snakes

Most of the commonly-recognized snakes in Florida are large, but small snake species are far more abundant than large ones. Most of the small snakes are a foot or less in length.

These diminutive species may be common in back yards and gardens but are easily overlooked because of their size and secretive behaviors, which often include burrowing.

A good representative is the southern ring-necked snake. It is shiny black or dark gray with a

bright orange or yellow neck ring and belly, which has a row of dark half moons down the center.

Ring-necked snakes spend most of their time in leaf litter or under objects, where they feed on small lizards, earthworms, slugs and salamanders. They are fairly social and are often found in groups of two or three. They lay four to seven eggs during mid-summer that hatch into 4-inch-long babies.

Florida’s diversity of other small snakes includes brownsnakes, red-bellied snakes, earthsnakes, queensnakes, swampnakes, pine woods littersnakes and crowned snakes.



Adult Florida brownsnakes average 7-10 inches, are rusty-brown or grayish, have a light band across the back of the head and a dark spot under the eye. Photo by Kevin Enge.



The queensnake is brownish to olive-green with a light stripe low on the side of its body. Photo by Pierson Hill.



The striped swampsnake has adapted well to nonnative water hyacinth mats where it finds crayfish, its favorite prey. Photo by Jake Scott.

## Nonnative species

Warm weather, many types of habitats and easily accessible water make Florida an inviting place for both native and nonnative wildlife. Unfortunately, many of the species taking up residency in the state can have a negative impact on native species. For example, populations of nonnative Burmese pythons, northern African rock pythons and boa constrictors have become established in southern Florida after being released or escaping from pet owners or animal dealers.

A Burmese python can reach 20 feet in length and weigh more than 200 pounds. Light-colored with dark brown blotches bordered in black down its back, it swims well and is a good climber. Pythons kill by constriction, asphyxiating prey before swallowing it whole. Females lay as many as 100 eggs during late spring, remaining with the nest until the eggs hatch in summer.

Due to their large size, pythons pose a risk to many native animals, including listed species. They prey mostly upon mammals and birds but may also eat alligators. They are sometimes eaten by alligators. Pythons have been implicated in severe declines of some mammal populations in the Everglades.

Burmese pythons are well-established in and near Everglades National Park in Miami-Dade, Monroe and Collier counties. A population of the similar-looking northern African rock python is apparently confined to a small area in western Miami, where eradication efforts are underway.

Another large, powerful constrictor making southern Florida its home is the boa constrictor, which has been reproducing in the 444-acre Deering Estate in Miami since the 1970s. It



Nonnative pythons pose a risk to many native animals. Photo by Tim Donovan.

feeds on lizards, birds and mammals both on the ground and in trees.

Common boas occasionally reach a length of 13 feet but are typically about 8 feet long. The back is usually yellowish, grayish or light brown with dark brown saddles, and the tail saddles are often reddish-colored. They typically are active at night or during twilight hours, and they climb well. They give birth to 15-40 live young.

The smallest nonnative snake is the Brahminy blindsnake, sometimes called the flower pot snake. It is the most widespread terrestrial snake species in the world due to its close association with humans and parthenogenetic mode of reproduction (development of embryos occurs without fertilization by males).

This small, very slender snake resembles a wiry worm and burrows in loose, moist soil, primarily for termites and ant pupae. It is sometimes found in houses, particularly those with termites. Less than 6 inches long, it has a blunt, rounded tail that

resembles the head and has vestigial eyes that appear as black dots beneath translucent scales. The back is dark gray, brown or black.

Brahminy blindsnakes are introduced into new areas in potted plants and new soil but they do not harm Florida's native species and instead, provide food for some.



The Brahminy blindsnake is the world's most widely distributed snake. Photo by Bill Love.

## Listed species

Seven Florida snake species are listed by the U.S. Fish and Wildlife Service and/or the Florida Fish and Wildlife Conservation Commission (FWC) as threatened. The eastern indigo snake and the Atlantic saltmarsh watersnake are listed as threatened by both agencies. The Key ring-necked snake, Florida pinesnake, short-tailed kingsnake, rim rock crowned snake and the Lower Keys population of the Florida brownsnake are listed by the FWC as threatened.

The threatened eastern indigo snake is perhaps the best known of the listed species. It is one of the largest nonvenomous snakes in the United States. An adult can reach 6-8.5 feet in length. It is thick-bodied with smooth, shiny blue-black scales and often a reddish chin and throat. Young indigos are lighter in color and usually have a faint banded pattern.

Historically, the eastern indigo snake was found from southern Georgia to the Florida Keys and west to southern Mississippi, but today it is mostly restricted to peninsular Florida and southern Georgia, where it is often found in association with gopher tortoise burrows in well-drained scrub and sandhill habitats. The indigo readily moves through a variety of habitats, especially those that border marshes and swamps, in search of prey such as mammals, birds, young turtles, frogs and other snakes, including rattlesnakes and other pitvipers.



The nonvenomous eastern indigo snake is state and federally protected as a threatened species. Photo by Kevin Enge.

# List of Florida Snakes

- ◊ **Apalachicola kingsnake**, *Lampropeltis meansi*
- ◊ **Black pinesnake** – see Pinesnake
- ◊ **Black racer or snake** – see North American racer
- ◊ **Black swampsnake**, *Liodytes pygaea*
  - South Florida swampsnake, *Liodytes pygaea cyclas*
  - North Florida swampsnake, *Liodytes pygaea pygaea*
- ◊ **Blindsnake** – see Brahminy blindsnake
- ◊ **Boa constrictor**, *Boa constrictor*, **nonnative**
- ◊ **Brahminy blindsnake**, *Indotyphlops braminus*, **nonnative**
- ◊ **Brownsnake** – see Dekay's brownsnake
- ◊ **Brown watersnake**, *Nerodia taxispilota*
- ◊ **Burmese python**, *Python bivittatus*, **nonnative**
- ◊ **Canebrake rattlesnake** – see Timber rattlesnake
- ◊ **Coachwhip** – see Eastern coachwhip
- ◊ **Common gartersnake**, *Thamnophis sirtalis*
  - Blue-striped gartersnake, *Thamnophis sirtalis similis*
  - Eastern gartersnake, *Thamnophis sirtalis sirtalis*
- ◊ **Copperhead** – see Eastern copperhead
- ◊ **Coral snake** – see Harlequin coralsnake
- ◊ **Cornsnake** – see Red cornsnake
- ◊ **Cottonmouth** – see Florida cottonmouth
- ◊ **Crayfish snake** – see Glossy swampsnake, Striped swampsnake
- ◊ **Crowned snake** – see Florida crowned snake, Rim rock crowned snake, Southeastern crowned snake
- ◊ **Dekay's brownsnake**, *Storeria dekayi*
- ◊ **Diamondback rattlesnake** – see Eastern diamond-backed rattlesnake
- ◊ **Dusky pygmy rattlesnake**, *Sistrurus miliarius barbouri*
- ◊ **Earth snake** – see Eastern earthsnake, Rough Earthsnake
- ◊ **Eastern coachwhip**, *Coluber (=Masticophis) flagellum flagellum*
- ◊ **Eastern copperhead**, *Agkistrodon contortrix*
- ◊ **Eastern diamond-backed rattlesnake**, *Crotalus adamanteus*
- ◊ **Eastern earthsnake**, *Virginia valeriae valeriae*
- ◊ **Eastern indigo snake**, *Drymarchon couperi*
- ◊ **Eastern kingsnake**, *Lampropeltis getula*
- ◊ **Eastern mudsnake**, (*Farancia abacura abacura*)
- ◊ **Florida brownsnake**, *Storeria victa*
- ◊ **Florida cottonmouth**, *Agkistrodon conanti*
- ◊ **Florida crowned snake**, *Tantilla relicta*
  - Central Florida crowned snake, *Tantilla relicta neilli*
  - Coastal dunes crowned snake, *Tantilla relicta pamlica*



Glossy swampsnake by Pierson Hill.



Scarletsnake by Kevin Enge.

- Peninsula crowned snake, *Tantilla relicta relicta*
- ◊ **Florida green watersnake**, *Nerodia floridana*
- ◊ **Florida kingsnake**, *Lampropeltis floridana*
- ◊ **Florida pinesnake** – see Pinesnake
- ◊ **Glossy swampsnake**, *Liodytes rigida*
  - Eastern glossy swampsnake, *Liodytes rigida rigida*
  - Gulf swampsnake, *Liodytes rigida sinicola*
- ◊ **Green watersnake**, *Nerodia cyclopion*
- ◊ **Harlequin coralsnake**, *Micrurus fulvius*
- ◊ **Hog-nosed snake**, *Heterodon*
  - Eastern hog-nosed snake, *Heterodon platirhinos*
  - Southern hog-nosed snake, *Heterodon simus*
- ◊ **Indigo snake** – see Eastern indigo snake
- ◊ **Kingsnake**, *Lampropeltis getula*
- ◊ **Midland watersnake**, *Nerodia sipedon pleuralis*
- ◊ **Mole kingsnake** – see Northern mole kingsnake, South Florida mole kingsnake
- ◊ **North American racer**, *Coluber constrictor*
  - Brown-chinned racer, *Coluber constrictor helvigularis*
  - Everglades racer, *Coluber constrictor paludicola*
  - Southern black racer, *Coluber constrictor priapus*
- ◊ **Northern African rock python**, *Python sebae*, **nonnative**
- ◊ **Northern mole kingsnake**, *Lampropeltis rhombomaculata*
- ◊ **Pygmy rattlesnake** – see Dusky pygmy rattlesnake
- ◊ **Pinesnake**, *Pituophis melanoleucus*
  - Black pinesnake, *Pituophis melanoleucus lodingi*
  - Florida pinesnake, *Pituophis melanoleucus mugitus*
- ◊ **Pine woods littersnake**, *Rhadinaea flavilata*
- ◊ **Plain-bellied watersnake**, *Nerodia erythrogaster*
- ◊ **Queensnake**, *Regina septemvittata*
- ◊ **Rainbow snake**, *Farancia erythrogramma*
  - Common rainbow snake, *Farancia erythrogramma erythrogramma*
  - Southern Florida rainbow snake, *Farancia erythrogramma seminola*
- ◊ **Ratsnake**,
  - Gray ratsnake, (*Pantherophis alleghaniensis*)
  - Yellow ratsnake, (*Pantherophis quadrivittatus*)
- ◊ **Red cornsnake**, *Pantherophis guttatus*
- ◊ **Red ratsnake** – see Red cornsnake
- ◊ **Redbellied snake**, *Storeria occipitomaculata*
- ◊ **Ribbonsnake**, *Thamnophis saurita*
  - Blue-striped ribbonsnake, *Thamnophis saurita nitae*
  - Eastern ribbonsnake, *Thamnophis saurita saurita*
  - Peninsula ribbonsnake, *Thamnophis saurita sackenii*
- ◊ **Rim rock crowned snake**, *Tantilla oolitica*
- ◊ **Ring-necked snake**, *Diadophis punctatus*
  - Key ring-necked snake, *Diadophis punctatus acricus*
  - Southern ring-necked snake, *Diadophis punctatus punctatus*
- ◊ **Rough earthsnake**, *Haldea striatula*
- ◊ **Rough greensnake**, *Opeodryas aestivus*
- ◊ **Saltmarsh watersnake**, *Nerodia clarkii*
  - Atlantic saltmarsh watersnake, *Nerodia clarkii taeniata*
  - Gulf saltmarsh watersnake, *Nerodia clarkii clarkii*
  - Mangrove saltmarsh watersnake, *Nerodia clarkii compressicauda*
- ◊ **Scarlet kingsnake**, *Lampropeltis elapsoides*
- ◊ **Scarletsnake**, *Cemophora coccinea*
  - Florida scarletsnake, *Cemophora coccinea coccinea*
  - Northern scarletsnake, *Cemophora coccinea copei*
- ◊ **Short-tailed kingsnake**, *Lampropeltis extenuata*
- ◊ **Smooth earthsnake** – see Eastern earthsnake
- ◊ **South Florida mole kingsnake**, *Lampropeltis occipitolineata*
- ◊ **Southeastern crowned snake**, *Tantilla coronata*
- ◊ **Southern copperhead** – see Eastern copperhead
- ◊ **Southern watersnake**, *Nerodia fasciata*
  - Banded watersnake, *Nerodia fasciata fasciata*
  - Florida watersnake, *Nerodia fasciata pictiventris*
- ◊ **Striped swampsnake**, *Liodytes alleni*
- ◊ **Timber rattlesnake**, *Crotalus horridus*
- ◊ **Water moccasin** – see Florida cottonmouth
- ◊ **Watersnakes** – see Brown watersnake, Florida green watersnake, Green watersnake, Midland watersnake, Plain-bellied watersnake, Saltmarsh watersnake, Southern watersnake



Florida green watersnake by Kevin Enge.



Eastern earthsnake by Pierson Hill.



Rough earthsnake by Pierson Hill.



Florida crowned snake by Kevin Enge.



Red-bellied snake by Jake Scott.



Black swampsnake by Kevin Enge.



Eastern mudsnake (baby) by Kevin Enge.



Pine woods littersnake by Kevin Enge.



Southern hog-nosed snake by Kevin Enge.



Gulf saltmarsh watersnake by Kevin Enge.



Striped swampsnake by Jonathan Mays.



Peninsula ribbonsnake by Kevin Enge.



Rainbow snake by Kevin Enge.



Red cornsnake by Kevin Enge.



Florida pinesnake by Kevin Enge.



Eastern kingsnake by Jonathan Mays.



It may be difficult to distinguish a southern watersnake (left) from a Florida cottonmouth (head raised) without a good view of their heads. Watersnakes lack the triangular head with a dark mask and scales protruding above the eye that are characteristics of the cottonmouth. Photo by Bill Love.

### What to do when you see a snake

When you see a snake, don't panic. You are much more likely to see a nonvenomous snake than a venomous one. If you are able, just stand back and observe the snake.

Remember, snakes would rather flee than fight. They only bite as a defense mechanism, and then usually only after giving ample warning. Even a venomous snake would prefer not to waste its precious venom on something it can't eat, like a human.



Nonvenomous mimics, such as the scarlet kingsnake, have red snouts and red body bands bordered by black. Top photo by Kevin Enge, bottom by Bill Love. The venomous harlequin coralsnake (right) has a black snout and red bands bordered by yellow.



Harlequin coralsnake by Kevin Enge.

### Venomous or harmless

Coralsnakes have black noses and yellow-and-red bands next to each other, whereas harmless mimics have red noses and black-bordered yellow bands. A rhyme some people use to remember the difference between a venomous coralsnake and harmless mimics reads; "Red touch yellow, kill a fellow. Red touch black, friend of Jack."

Watersnakes have a more rounded head with a round pupil, and lack the cottonmouth's flat, triangular head, its horizontal dark mask on the face and the eyebrow-like scales protruding above the eyes that give it a "sinister" aspect.

