



SOUTHERN RINGNECK SNAKE (*Diadophis punctatus punctatus*)

Jim Merri

Florida's Nonvenomous Snakes

By Craig N. Huegel and David G. Cook

Depending on your point of view, Florida is either blessed or cursed with a rich diversity of snakes. Our 44 species of snakes are found in every conceivable habitat, from coastal mangroves and salt marshes to freshwater wetlands and dry uplands, and many species thrive in residential areas. Therefore, you can expect to encounter snakes occasionally wherever you live or travel in Florida.

Many people have negative attitudes toward snakes because of superstitions or folklore that have no basis in fact. In reality, snakes cause few problems, and many are beneficial in reducing populations of rodents and other pests. Since just six of Florida's snake species are venomous, and only four of these are

widespread, the snakes you encounter are most likely to be nonvenomous. This article introduces some of the most commonly seen nonvenomous Florida snakes.

What are snakes, anyway? Far from being slimy and wormlike, snakes are reptiles and, like lizards, turtles and crocodylians, are covered with hard, dry scales. They are bony, too, and the secret to their slithering ability lies in the complex coordination of ribs, muscles and broad belly scales that propel them fluidly in search of food or shelter. Snakes are strictly carnivores; they must find, subdue and eat other animals to survive. The ways they accomplish this without the benefit of arms and legs are awe-inspiring.

While having no legs is an obvious, common characteristic, snake species differ in many ways, such as food and habitat preferences, behavior when confronted and reproductive habits. About half of Florida's snakes give birth to live young while the others lay eggs. The number of young or eggs differs greatly among species, but most newly born or hatched snakes appear by late summer.

There are just a few species that are commonly seen in developed areas, although any snake may occasionally be found in urban settings. By recognizing common nonvenomous snakes and understanding something of their habits, you can take a more relaxed attitude toward them and appreciate them as an integral part of Florida's wildlife.

Racer and Coachwhip

One of Florida's most familiar snakes is the "blacksnake" or, more properly, the southern black racer. Aptly named for its coloration and speed, the black racer is common in a wide variety of habitats, most frequently in brush- or shrub-covered areas near water.

The adult racer is a slender, satiny snake, plain black or slate gray with a white or gray chin and throat. Maximum length is about 70 inches, but most are 36–60 inches long. Persons otherwise familiar with snakes are often "stumped" by young black racers, which are colored very differently from the adults. For a year after hatching, racers are slate gray with regular rusty brown blotches running down the back. Black racers shouldn't be mistaken for the threatened eastern indigo snakes, which also are large, shiny and black. Indigos are much heavier, often have a rusty or red chin and throat, and are much more local in distribution.

Black racers are nervous, irritable and fast-moving. When given a chance to escape, they generally do so very quickly. However, racers, especially juveniles, will not hesitate to bite when cornered. They also vibrate their tails when they feel threatened, causing some people to mistake them for rattlesnakes.

Unlike many snakes, the black racer hunts actively during daylight hours,

one reason why they are frequently noticed. The eyes, with their rich, chestnut-brown irises, are large in relation to its head, betraying the racer's keen vision.

Part of the racer's success is due to its wide diet; they have been referred to as "slithering garbage pails." Racers capture a tremendous variety of animals, including other snakes, lizards, frogs, birds, rodents and insects. While hunting in open areas, the racer often raises its head high above the ground, cobra-style, to survey its surroundings better.

Many of these characteristics are shared with the racer's larger cousin, the eastern coachwhip. This snake can be over 8 feet long and frequents dry, open habitats including pine flatwoods, sandhill and scrub. It's an active hunter and quick to bite in self-defense. Typically, its head and front quarter of the body are black to dark brown, which fades to light tan on the remainder of the body and tail.

Rat Snakes

There are only two species of rat snake native to Florida, but they are so variable in color and pattern you'd think there were many more. The red rat or "corn" snake is the only large, red-orange snake likely to be encountered in developed areas of Florida. Because of its color, this snake is frequently mistaken for the dissimilar, venomous copperhead.

Actually, the copperhead is rare in Florida and found only in the heavily timbered counties flanking the Apalachicola River.

The red rat snake varies in color but usually is some shade of yellowish-tan to orange, with a row of large, dark-edged red or rusty blotches down the center of the back. The black-and-white belly resembles a piano keyboard.

The other species of rat snake has several names to match its appearance, which varies in different parts of the state. Young of this species are gray with irregular darker gray blotches on the back. In the panhandle, the adults retain this color pattern and are known as the gray rat or "white oak" snake. Throughout most of the peninsula, however, the adults are orangish with four narrow, brown stripes running the length of the body. These are commonly called yellow rat or "chicken" snakes.

The red rat snake may grow to a length of 72 inches, but averages 30–48 inches. The gray and yellow rat snakes may reach a body length of 84 inches, but those most commonly seen are 42–72 inches. Both species are found throughout Florida in almost every habitat, but are shy and secretive, spending most of their time in trees, under brush and mulch piles, or inside old buildings and other structures. Rat snakes are the best climbers of Florida's snakes, thanks to powerful constricting muscles and

Jim Merli



RED RAT or CORN SNAKE
(*Elaphe guttata*)

Jim Merli



YELLOW RAT SNAKE
(*Elaphe obsoleta quadrivittata*)

Dale Jackson

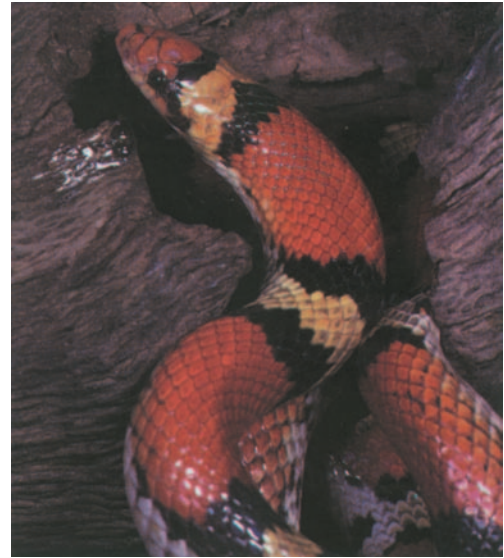


GRAY RAT SNAKE
(*Elaphe obsoleta spiloides*)



Jim Merit

Although the scarlet kingsnake (l) (*Lampropeltis triangulum elapsoides*) and northern scarlet snake (r) (*Cemophora coccinea copei*) resemble the venomous coral snake, they are harmless. In contrast, the coral snake has a black snout, not red. Its red bands are bordered by yellow, not black.



Jim Merit

specially edged belly scales that they press into tiny irregularities in order to climb vertically up tree trunks and other surfaces.

Young rat snakes feed mostly on lizards and frogs, but adults graduate to rodents and birds, which they kill by constriction. They are quite useful in controlling rats and mice. In late spring to early summer, females lay up to 30 eggs, which hatch in mid- to late summer. Rat snakes tame easily, but will defend themselves aggressively when cornered. When threatened, they may also vibrate their tails rapidly.

Kingsnake

The kingsnake is a large, powerful snake found throughout mainland Florida in a variety of habitats, often near water. Although normally between 36 and 48 inches, it is known to reach 82 inches in length.

The kingsnake color pattern varies almost as dramatically as that of the rat snakes. In north Florida, most are the eastern kingsnake variety, which is shiny black with narrow crossbands of white or light yellow. Most central and south Florida specimens are the Florida kingsnake variety, with many indistinct crossbands on a yellow and black “salt and pepper” background. Some populations are intermediately speckled or blotched, but all varieties have the distinctive kingsnake chin marked by black and yellow.

The kingsnake is an egg-laying constrictor, feeding primarily on rodents, birds and reptiles. Its reputation as the “king of snakes” probably stems from its fondness for eating other snakes, including rattlesnakes and other pit vipers, whose venom does not harm the kingsnake. Persons not keen about having many snakes on their property should be careful to safeguard their local kingsnakes!

Hognose Snakes

The eastern and southern hognose snakes are two of Florida’s least offensive, yet most maligned nonvenomous snakes, due to their appearance and exaggerated defensive stunts. Hognose snakes are found in upland habitats and prefer dry, sandy woods and fields. The eastern hognose is found throughout mainland Florida while the southern hognose occurs only in the northern half.

Both hognose snakes are rather stout-bodied and have alternating brown and tan or yellow blotches, although some eastern hognoses are solid black above, with no sign of pattern. Young hognose snakes, which hatch in summer or fall, are gray with black markings. Eastern hognoses may reach 45 inches, but commonly are 20–23 inches long; the southern hognose never exceeds 24 inches. The peculiar upturned snout, which is

most dramatic in the southern hognose, is specially designed for digging out toads, their major prey.

Many types of nonvenomous snakes are killed by Floridians each year out of fear or ignorance, but hognoses, because of their defensive antics, are more likely to be targeted. When alarmed, hognose snakes will hiss, puff and jerk about, raise their head, and flatten their neck into a convincing, cobra-like hood. They may even strike but don’t open their mouth. If this doesn’t frighten away their attacker, they then thrash about, spew out a foul-smelling musk, roll over, and play dead, often with the mouth open and tongue dragging on the ground. Despite the hognose’s dramatic display to ward off attack, the strategy backfires with people and the harmless snakes are often killed.

In contrast, the smaller but similarly patterned pigmy rattlesnake will coil, strike and bite savagely if molested. Pigmy rattlers do not have the sharply upturned nose of the hognose snakes and possess a tiny rattle that makes a barely audible buzzing sound.

Garter and Ribbon Snakes

In Florida, any snake you could describe as “striped” is nonvenomous, and the most familiar are probably the garter and ribbon snakes. These closely related species are common in a variety of habitats,



Kevin Engle

EASTERN COACHWHIP
(Masticophis flagellum flagellum)



Tom Evans

GARTER SNAKE
(Thamnophis sirtalis)



Barry Mansell

RIBBON SNAKE
(Thamnophis sauritus)



FWC

REDBELLY WATER SNAKE
(Nerodia erythrogaster erythrogaster)



Barry Mansell

BANDED WATER SNAKE
(Nerodia fasciata fasciata)



Barry Mansell

EASTERN MUD SNAKE
(Farancia abacura abacura)



Barry Mansell

BROWN WATER SNAKE
(Nerodia taxispilota)



Barry Mansell

ROUGH GREEN SNAKE
(Opheodrys aestivus)



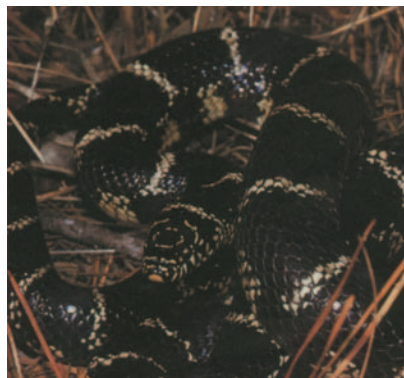
Kevin Engle

FLORIDA PINE SNAKE
(Pituophis melanoleucus mugitus)



Kevin Engle

SOUTHERN BLACK RACER
(Coluber constrictor priapus)



Jim Merit

EASTERN KINGSSNAKE
(Lampropeltis getula getula)



Jim Merit

FLORIDA KINGSSNAKE
(Lampropeltis getula floridana)

mostly near water or wet areas. Garter snakes are quite variable in color. They may be black, brown or greenish on a background checkerboard of small black spots, and most individuals have three obvious stripes on the back and sides running the length of the body. These stripes may be green, blue, yellow or tan. Garter snakes are fairly slender; their maximum length is about 48 inches, but most are 18–26 inches.

Ribbon snakes are colored similarly to garter snakes, but usually lack the background checkerboard pattern, and the back stripe may be faint or absent. As the name implies, ribbon snakes are exceedingly slender, and don't grow longer than 40 inches. They are excellent climbers, often taking refuge in low shrubs.

Large garter snakes may eat small rodents, but their common diet consists of worms, minnows, frogs and toads. They often are quite aggressive when cornered and expel a foul-smelling musk when handled. Ribbon snakes feed mostly on small fish, frogs and lizards. They are quick-moving and nervous, preferring to flee when given any chance to do so. Ribbon snakes rarely bite, but do release a strong-smelling musk when handled. Both species bear live young.

Water Snakes and “Moccasins”

Some people mistakenly call all snakes they see near water “water moccasins,” but only the cottonmouth water moccasin is venomous. Most of the snakes seen along Florida rivers and lake edges are harmless water snakes. There is ample room for confusion, however, since both cottonmouths and water snakes may be very dark with rough scales, may attain lengths over 4 feet, and can be relatively thick-bodied.

Water snakes are distinguished from venomous cottonmouths by their behavior and their “face.” Cottonmouths tend to stay put when encountered, often coiled and, if sufficiently harassed, will give the open-mouth display that gives them their name. Harmless water snakes,



EASTERN HOGNOSE SNAKE (*Heterodon platirhinos*) in defensive posture.

Jim Merit



EASTERN HOGNOSE SNAKE playing dead.

Jim Merit

which commonly bask stretched out on tree branches over water, are more likely to seek immediate escape into the water when encountered. Also, cottonmouths usually swim with their entire body on top of the water, whereas water snakes are more likely to escape underwater or swim with only their head at the surface.

The face of a cottonmouth has a more “sinister” appearance due to the broad scale that protrudes like a shelf above each eye. Its head has an angular, “chiseled” aspect, and Florida cottonmouths always have a dark brown band that runs across the side of the head through the eye. The nonvenomous water snakes have no protruding scales over the eyes, so they appear more “bug-eyed,” and the head typically has a more rounded aspect.

Four of the largest and most commonly seen water snakes include

the plainbelly, banded, brown and Florida green water snakes. The plainbelly water snake frequents the banks of large rivers in the panhandle and northern peninsula (Suwannee River drainage), whereas the other three are common in rivers, lakes and ponds statewide. All are proficient hunters of fish, frogs and other aquatic animals and have long teeth for holding slippery prey. Thus, harmless water snakes, notorious for fiercely defending themselves, typically bite and draw blood when captured. Although nonvenomous, such bites are painful and, like all animal bites, should be washed thoroughly to avoid infection. Water snakes bear their young alive and sometimes abundantly; Florida green water snakes can have litters as large as 100!

Ringnecks and Other Little Snakes

All the snakes discussed so far are relatively large, but the most abundant snakes in Florida are seldom more than 12 or 14 inches long. Although common in most gardens and backyards, these diminutive snake species are easily overlooked due to their secretive habits.

A good representative is the southern ringneck snake, a distinctive little snake that is shiny black or dark gray above, with a bright orange or yellow neck ring. The belly is a startlingly bright orange or yellow with a row of black half-moons down the center. Ringnecks spend most of their lives under mulch or leaf litter, where they feed on small lizards, earthworms, slugs and salamanders. They are fairly social and often are found in groups of two or three. The ringneck is one of the least aggressive animals in the world and almost never attempts to bite people. Even if it should try to bite, its mouth and teeth are too small to cause a wound. When seriously threatened, ringnecks defend themselves by thrashing about and expelling musk. The four to seven eggs laid in midsummer hatch 40–50 days later into tiny snakelings, only 4 inches long!

What To Do When You See a Snake

What should you do when you come upon a snake? Just stand back and observe it. Snakes don't purposefully position themselves to frighten people. They'd much rather avoid encounters and usually will flee. You can try to figure out what kind it is by using this article or one of the other references listed.

There is no good reason to kill a snake except in the unlikely situation of a venomous snake posing immediate danger to people or pets. Snakes usually bite people only if they are molested; it's their only means of self-defense. Even a venomous snake in the woods or crossing the road poses no threat and should be left alone. Also, most larger snakes travel in large areas, so one you see in your yard today may be far away tomorrow.



FLORIDA CROWNED SNAKE (*Tantilla relicta*)

Jim Merit



REDBELLY SNAKE (*Storeria occipitomaculata*)

Jim Merit

Other small but abundant Florida snakes include the Florida brown, Florida redbelly, smooth earth, rough earth, pine woods and Florida crowned snakes.

For Further Reading

A brochure with photos and information about the six venomous snakes in Florida, titled "Florida's Venomous Snakes," is available from the regional offices of the Florida Fish and Wildlife Conservation Commission. To find out more about the snakes in our area, we recommend the following books:

Amphibians of Eastern and Central North America. Third edition, expanded. By Roger Conant and Joseph T. Collins. 1998. Houghton Mifflin, Boston (Peterson Field Guide Series). 450pp.

Florida's Snakes: A Guide to Their Identification and Habitats. By R. D. Bartlett and Patricia P. Bartlett. 2003. University Press of Florida, Gainesville. 182pp.

A Field Guide to Snakes of Florida. By Alan Tennant. 1997. Gulf Publishing, Houston. 257pp.

A Field Guide to the Reptiles and Amphibians of Florida. Part One: The Snakes. Second edition. By Ray E. Ashton Jr. and Patricia S. Ashton. 1988. Windward, Miami. 176pp.

This Agency does not allow discrimination by race, color, nationality, sex, or handicap. If you believe you have been discriminated against in any program, activity or facility of this agency, write to: Florida Fish and Wildlife Conservation Commission, 620 S. Meridian St., Tallahassee, FL 32399-1600, or to Office for Human Relations, USFWS, Dept. of Interior, Washington, D.C. 20240