



Native Snakes of Rhode Island



Although many cultures around the world respect snakes and revere them as symbols of renewal and fertility, in our society the relationship between humans and snakes primarily involves apprehension. Unfortunately, the fear that many people have for these legless members of the reptile family is based largely on learned behavior and misinformation. Therefore, this pamphlet was created to educate people about the species of snakes they might see here in Rhode Island, and to suggest how to handle unexpected encounters. Although some species appear menacing and may bite when threatened, snakes are generally much more afraid of you than you are of them, and no native Rhode Island snake poses any threat to life, limb, or property. Native snakes are a natural and important part of healthy ecosystems and are fascinating creatures worth understanding more fully.

It is important to note that **NO SPECIES OF NATIVE RHODE ISLAND SNAKE IS VENOMOUS**. Timber rattlesnakes (*Crotalus horridus*) were once found in Rhode Island, but disappeared nearly fifty years ago. There are still rattlesnake populations in Connecticut and Massachusetts but none of these occurs near Rhode Island's borders. Copperheads (*Agkistrodon contortrix*) are also found in southern New England, but have never been documented in Rhode Island. Lastly, although there are many stories about water moccasins in Rhode Island, these tales obviously refer to common water snakes because the real water moccasin, or cottonmouth as it is sometimes known (*Agkistrodon piscivorus*), is a southern species found no further north than the state of Virginia.

Allegheny ratsnake (*Pantherophis alleghaniensis*)



Description: Formerly referred to as black rat snake, this species is black in color, with light areas often visible between the scales. Although similar in size and color to the black racer, a rat snake does not have the same glossy appearance as the black racer because its scales are roughly keeled, rather than smooth. Rat Snakes are muscular and deliberate animals that like to climb, but racers are energetic animals usually seen gliding quickly over the ground. The belly of the Allegheny rat snake is a mottled

dark and light pattern. This is the largest snake found in Rhode Island, with adults averaging 42-72", although they can grow to 8 ft. in length in other parts of their range. Juvenile snakes are light gray with a row of darker rectangular blotches along their back. These blotches darken and merge as the snake matures until the dark adult pattern is achieved.



Life History: Allegheny rat snakes are more common in the southern United States and only reach the edge of their range in New England. In Rhode Island they do not occur statewide but are only found in the extreme southwestern portion of the State, primarily within the towns of Hopkinton and Exeter. These snakes can be found in a variety of habitats, from woodlands and fields to river bottoms. Allegheny rat snakes are muscular and readily climb. They may reside in hollow trees,

outbuildings and old barns. Their diet mainly consists of small mammals and birds, which they subdue by constriction. They also eat bird eggs. Despite their size, Allegheny rat snakes are generally slow-moving and not particularly aggressive, but they can bite if threatened. Like many local species, they can vibrate their tail rapidly when frightened, a behavior that may contribute to their being mistaken for rattlesnakes.

Eastern gartersnake (*Thamnophis sirtalis sirtalis*)



Description: The Eastern gartersnake is the most common and widespread of all New England snakes. These snakes are highly variable in coloration but are usually recognizable by having a narrow tan or yellow stripe down the middle of the back, with broader stripes on either side. Between the stripes is usually a spotted black or brown pattern. The belly of the gartersnake is generally pale yellow or green. When mature, these snakes are generally 18-26", although they can reach 48" in length. Gartersnakes are similar to, but chunkier and drabber than the closely related ribbonsnake.

Life History: Gartersnakes inhabit almost any type of habitat, from wetlands to rocky hillsides and residential areas. They are often spotted basking in the sun on rocks, hedges, and concrete surfaces around houses. In spring and autumn, gartersnakes often find their way into basements. They enter water freely and can feed on fish or tadpoles. These snakes primarily prey upon earthworms and amphibians. Although these animals are not overly aggressive, gartersnake saliva seems to be toxic to the small animals upon which they prey, and some people may develop a rash if bitten.



Eastern hog-nosed snake (*Heterodon platirhinos*)

Description: The Eastern hog-nosed Snake is characterized by its thick body and upturned snout. The patterning on this species is highly variable, from the light yellowish background with dark checks, to a completely gray coloration. Hognose snakes are generally 20-33" long when mature, but some individuals can grow to 45".



Life History: The defining feature of a hog-nosed snake's habitat is sandy soil and they may be found in sandy woodland and grasslands. In Rhode Island, these snakes are more common in interior areas than along the coast. Toads appear to be their prey of choice, but various other small animals may be taken as well. Hog-nosed snakes have large teeth in the back of their mouths to aid in swallowing struggling toads. When threatened, they can perform an impressive display by puffing up, flattening their head, and hissing loudly. This display has earned them the colloquial name of "puff-adder". Since they can assume this cobra-like appearance, these snakes often fall victim to people who are convinced they are venomous, although they pose no threat at all and in fact are among the most docile of Rhode Island's local snake species.



Eastern milksnake (*Lampropeltis triangulum triangulum*)



Description: The eastern milksnake is boldly patterned, with darkly outlined reddish brown blotches on a light gray background. The belly has a checkered pattern of dark squares on a light background, and the snake has an overall glossy appearance. This species of snake generally reaches 24-36" at maturity, although they can grow to 52" in length.

Life History: Milksnakes are often found around barns, houses, and other man-made structures. Contrary to the popular myth that they feed on cow's milk, this species of snake instead prefers to prey upon small mammals. Milksnakes inhabit a wide variety of natural habitats, including woodlands, fields, and the outskirts of wetland areas. They are primarily nocturnal but are seen more often during the day in spring and fall, when they are basking more. If threatened or cornered, milksnakes assume an impressive but harmless display. They will coil in an S-shaped striking position and often vibrate their tails rapidly to make a whirring noise. Because of this behavior and their bold patterning, milksnakes are frequently mistaken for copperheads, which do not occur in Rhode Island.

Eastern ribbonsnake (*Thamnophis sauritus sauritus*)



Description: The eastern ribbonsnake is a slender, long-tailed snake that is boldly patterned with three yellow stripes on a dark brown background. Their belly is pale yellow or white, and that coloration is separated from the back stripes by a dark brownish band. At maturity, they are generally 18-26" long, but they can grow to 38".



Life History: Ribbonsnakes are adept at moving both on land and in the water, and this species is typically found near wetlands, streams and pond margins. Most active in the spring, which is also when they mate, they may become dormant if rainfall is not abundant enough to provide favorable habitat. They rarely bite, although they will secrete a foul smelling musk if handled.

Smooth greensnake (*Opheodrys vernalis*)



Description: The Smooth Greensnake has a bright lime-green back without a pattern, and a white or yellow underbelly. At maturity, they are generally 12-20" long, but they can grow up to 26".

Life History: With a coloration promoting concealment in green vegetation, the greensnake is most commonly found in habitats like grassy meadows or open woodlands. In Rhode Island, greensnakes are found nearly throughout, but are more common in coastal regions than in the interior. They can even be found in weedy vacant lots within urban areas. This species breeds through the spring and late summer, depositing clutches of 3-12 eggs in nesting sites under debris or within rotten logs. The greensnake feeds primarily on insects, although it will occasionally prey upon snails and salamanders.



Eastern wormsnake (*Carphophis amoenus amoenus*)



Description: The wormsnake, appropriately, has an appearance that closely mimics that of an earthworm. The dorsal surface is plain brown, and the belly is a pinkish color. Smooth scales give the snake a shiny appearance. Wormsnakes are generally 7-11" at maturity, although they can reach 13" in length.

Life History: Wormsnakes are most commonly found in moist woodland habitats with sandy substrates. These snakes are very rarely seen in the open, but are found beneath stones, boards or inside rotting logs. They feed primarily upon earthworms and soft-bodied insects. Wormsnakes have tiny mouths and rarely bite, but they can release a strong odor when threatened.

Northern black racer (*Coluber constrictor constrictor*)



Description: The northern black racer is a large, shiny black snake with a silky appearance because of its smooth scales. At maturity, black racers are generally 36-60" long, but they can reach up to 73" (more than 6 feet). The throat of the Black Racer is white and the belly is an unmarked grayish blue color. While in the juvenile stage, the black racer is grayish with a series of dark ovals along the back, an appearance that changes as the snake matures.

Life History: Black racers can be found in a wide variety of dry terrestrial habitats. They are territorial and maintain discrete home ranges. They usually emerge from hibernation in April, and breed from May through early June. This snake has a varied diet, with prey including small mammals, birds and frogs. Appropriate to its name, the black racer can move very quickly, and will typically flee from danger. However, if cornered, it may respond

by rearing up and striking. When agitated, these snakes often vibrate their tail rapidly, which creates a buzzing noise. This behavior leads many people to mistake them for rattlesnakes.

Northern brownsnake (*Storeria dekayi dekayi*)



Description: The brownsnake is pinkish tan in color. It has a broad lighter colored stripe down its back, bordered by darker spots. The belly of the snake is usually a buff or pinkish color. These snakes are small, generally 9-13” at maturity, with some individuals growing to 20”.

Life History: Brownsnakes emerge from hibernation and mate after the ground thaws in the spring months. They can be found in a wide variety of natural habitats, but are most commonly encountered in developed or residential areas. They prefer to feed upon earthworms and slugs, and it is not uncommon to find a number of these snakes grouped together under piles of debris. Brownsnakes rarely bite, but will release musk if threatened.



Northern red-bellied snake (*Storeria occipitomaculata occipitomaculata*)



Description: Besides their characteristic red belly, this snake is distinguishable by the 3 pale-colored spots around the neck just behind the head. The dorsal surface can range from rufous brown to nearly black in color. At maturity these snakes are generally 8-10”, occasionally reaching 16” in length.

Life History: Woodlands are the preferred habitat of red-bellied snakes, but they can be found in a wide variety of habitats, including near bog or marsh areas. These snakes are more common in rural western Rhode Island than elsewhere in the state, and are unknown from coastal areas and islands. They are secretive, and usually hide under rocks, logs, or in rotten stumps. These snakes may release musk when handled, but they rarely bite.



Photograph Courtesy
of: USFWS,
Matt Smokoska

Northern ring-necked snake (*Diadophis punctatus edwardsii*)



Description: The northern ring-necked snake is named for the golden yellow collar just behind its head. The dorsal body of the snake is bluish-gray in color, but the belly is yellow and either unmarked or sometimes with some small black dots. Smooth scales give the ring-necked snake a satiny appearance. At maturity, ring-necked snakes are 10-15”, sometimes reaching up to 25” in length.

Life History: The ring-necked snake is a secretive species that tends to reside in moist woodland areas where there is an abundance of cover. Typical habitats include ledges and piles of debris, where they find their favored prey species, including salamanders, earthworms and small frogs. These snakes are generally nocturnal, but can be active during the day in spring or fall, particularly during rainstorms. These snakes often find their way into the basements of homes, especially older homes that have rough stone foundations. ring-necked snakes are docile and rarely bite, but they can release a foul-smelling musk when handled.



Photo courtesy of J. DeMeo

Northern watersnake (*Nerodia sipedon sipedon*)



Description: The northern watersnake is a thick bodied snake with a highly variable pattern. Their dorsal pattern is gray or brown with have reddish brown cross-bands or blotches. Larger snakes are darker above and the bands are less obvious. The beautiful underparts of water snakes have a series of red half-moon markings extending from the throat to the tail. These snakes are generally 24-42” long when mature, although they can grow up to 55” in length.

Life History: As indicated by its name, the watersnake is usually found in and around wetland, lake and stream habitats. Very capable swimmers, these snakes can move quickly on and beneath the surface of the water. They are often observed around the edges of water bodies, searching for prey or basking. Their preferred foods include fish, frogs, tadpoles and salamanders, although small mammals, birds and insects are also taken. In the spring months, it is not uncommon for landowners to find these snakes in yard areas away from water. Watersnakes are territorial and curious animals - they sometimes approach bathers and fishermen. Their first instinct is to retreat quickly to water when confronted, but if they are cornered, they will not hesitate to bite. Bites from this species sometimes bleed profusely but are not dangerous.

Snake Encounters

In the State of Rhode Island, it is not uncommon to encounter a snake. Every part of the state harbors one species or another, and they are often found in residential and urban areas. Therefore, snakes may be seen as they bask on patios and doorsteps, seek refuge within tool sheds, or explore a cool basement during the heat of summer. When a snake is seen, the most important thing to keep in mind is not to overreact. Remember that there are no venomous snakes currently inhabiting Rhode Island’s woodlands and fields. Snakes are a natural and important part of the ecosystems here in the northeast, and it is very possible for them to peaceably coexist with their human neighbors.

If at all possible, the best thing to do when a snake is found on your property is to leave it alone. Because snakes are cold blooded, they most often come out into the open to regulate their body temperature by sunning themselves. If this is the case, they will eventually leave the area of their own accord. If for some reason it is not possible to allow the snake to remain where it is, perhaps because it is in a high traffic area or within a dwelling,

there are several simple, humane, nonlethal methods of relocation that one might use. If you are not at all comfortable around snakes, to the point where you cannot perform these types of removal tasks, call a pest removal professional.

Out-of-doors Encounters:

- Good snake habitat consists of exposed, rocky areas surrounded by thick vegetation, precisely the condition that homeowners try to cultivate around their decks and gardens. Therefore, removing all potential to attract snakes is not a practical or desirable option for most landowners.
- For snakes found outside, on doorsteps, driveways, etc., a gentle spray from a garden hose or a squirt bottle will often work quite well to encourage them to move on.
- If these are not readily available, a gentle prodding or a broom will also do the job.

Indoors Encounters:

- If a snake is found in a basement, the prescribed method of removal is to use a broom to sweep it into a garbage can large enough to prevent it from crawling out. Then relocate it outside.
- Keep in mind that snakes are more likely to feel threatened and act aggressively when they are cornered.
- For a more persistent and less urgent situation, another method is to place piles of damp burlap bags or cloth in spots where snakes are likely to be found. Cover each pile with a dry burlap bag to slow evaporation, and leave the piles for 1 to 2 weeks. After this time, pick up the piles with a large shovel in the middle of the day, when the snakes are most likely to be underneath, and relocate them.
- Once the snake is removed, determine the point of entry and seal it to prevent future trespass. Snakes cannot bore through wood and cannot create their own holes to access buildings. All openings to the outside larger than ¼ inch should be sealed. Corners of doors and windows, especially in window wells, as well as plumbing and electrical entrances are often problem areas. Access points such as bulkheads and ground-level doors can be sealed with weather-stripping. Holes in concrete foundations should be patched with mortar. For holes in wooden buildings, a fine mesh hardware cloth or sheet metal will work well. Smaller holes can be filled with putty or sealer. In instances where complete sealing is not an option, such as a dryer vent, constructing a cage or lid of fine wire mesh to enclose the opening will be the best solution.

Repellents, Fumigants, Toxicants and Traps:

- A number of snake repellants have been recommended over the years, but none have been consistently effective and we do not recommend their use. Unless the questions of access and habitat are addressed, removing or killing an individual snake does not preclude another from taking its place. In Rhode Island, no action is nearly always the best course of action.
- There are no registered toxicants for repelling snakes and there are currently no legal fumigants for killing snakes. Beyond this, such products would be excessively expensive, impractical and unnecessary, considering that these snakes are completely harmless.

- One method used by researchers to capture snakes is a funnel trap with drift fences. A funnel trap is cylindrical wire mesh structure, using the same basic concept as a lobster pot. One or both ends of the cylinder are fitted with entrance funnels, with the narrow end located within the body of the trap. Because such traps are not available commercially, they must be hand-fabricated, a process which makes their use unappealing and time-consuming. Traps are therefore impractical for indoor use.
- Some sources recommend using glue boards to capture snakes. Because this process can become a very messy and inhumane method of snake capture, we encourage the use of alternate methods. Glue boards can be hazardous to pets, non-target wildlife and small children, as well as being traumatic for the snake. Removing a snake from a glue board can be a difficult and messy task, and will require closer personal contact with the snake than most people who would resort to this method are comfortable with.

There is no situation that would necessitate the wounding or death of a native Rhode Island snake. Indiscriminant killing of snakes and other native wildlife is illegal and unethical. Local snakes are never aggressive unless threatened, and they are not a problem for people if given the proper respect and space.

Conclusion

Rhode Island has a wide and colorful variety of native snakes. These species are interesting and valuable components of ecosystems throughout the Northeast. Their adaptation to different habitats and locales, along with increasing development of their habitat, occasionally puts them in contact with people. Despite the inborn and learned phobias that many people possess towards snakes, these encounters need not be overly dramatic or tragic to any party involved. This publication seeks to educate the public about the types of snakes one might encounter in Rhode Island, and where they are most commonly found. Additionally, people should take note of the simple, humane methods of dealing with snake encounters. In this way, we should be able to coexist with our native snake species peacefully and without incident.

Selected References

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