

Eastern Ribbonsnake (*Thamnophis saurita*)

Family Colubridae (Natricinae)

Subspecies: Northern Ribbonsnake (*Thamnophis saurita septentrionalis*)

Updated 2025



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Description/Identification: The Eastern Ribbonsnake is a very long, and slender bodied species of Gartersnake usually measuring from about 18.1 to 26.0 inches in total body length. The tail from the cloacal or ventral scute is very long, and may comprise as much as a third of the entire length, while in other Gartersnake species, the tail usually comprises about one-fourth or less of the total length. There are about 17 to 19 scale rows, and the scales are heavily keeled. There are also about 7 pure white unmarked supralabials. The tongue is forked, and pinkish or red, and black tipped, and the anal, or ventral scale is undivided. The pupils are normally round, on a color of reddish, reddish-brown, or yellowish-brown of the irises of the eyes. Eastern Ribbonsnakes have 2 rows of subcaudals on the underside of the tail past the ventral opening, numbering about 24 to 33 rows. On the inside of the mouth, Eastern Ribbonsnakes have one to two rows of tiny, recurved teeth on the maxillae and lower quadrate bones of their upper and lower jaws which are normally covered by a fleshy membrane, and an enlarged pair of rear-maxillary teeth on the upper jaw. These teeth, however, are too small to easily or effectively puncture human skin.

The head and neck are usually fairly distinct from the body, and Eastern Ribbonsnakes may also have one or more lighter white parietal spots atop their heads, where, if present, are usually not connected. The upper labials, chin, and throat are pure, unpatterned white in color, and the unpatterned head is a darker black or brown than the rest of the body ground color. The eyes are also fairly large as well.

The ground color on the rest of the body ranges from black to dark brown, with three bright, yellow to white longitudinal dorsal stripes running from the back of the head and neck, through the tail, but becoming more faded on the tail. The lateral stripes cover scale rows 3 and 4, and beneath the stripes on the first and second scale rows and on the lateral edges of the underside and ventral surface is a richer brown or reddish-brown longitudinal stripe. The rest of the ventral or undersurface is a plain, unmarked white, cream, or yellow, grading more into yellow towards the tail.

The sexes of Eastern Ribbonsnakes are very similar in appearance, aside from there being slight sexual dimorphic characteristics in that females are larger than males, and have proportionately shorter tails than do males. Examination for the hemipenes in males may also be needed.

Neonate and juvenile Eastern Ribbonsnakes are similar in appearance to the adults.

Ribbonsnakes are commonly confused with other Gartersnakes (*Thamnophis spp.*). The pure white chins and labials, much more slender bodies, and presence (if any) of the parietal spots

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atop the heads, as well as proportionately much longer tails, and lateral stripes on scale rows 3 and 4 distinguish the Eastern Ribbonsnake from all other of Wisconsin's Gartersnake species. Both species of Ribbonsnakes are also much rarer in Wisconsin, than the other three species of Gartersnakes with which they may be confused with.

After death, the pigmentation begins to break down in both Ribbonsnakes and Gartersnakes, giving them a much more bluish or bluish-gray stripes or appearances than during actual life. In Wisconsin, the subspecies occurring is also known as the Northern Ribbonsnake (*Thamnophis saurita septentrionalis*).



© WDNR. Missing: Door County, WI.

Range and Distribution: Eastern Ribbonsnakes range from southern and southeastern Canada, from southern Ontario, Quebec, and Nova Scotia, through the New England States, to lower Michigan, and south all of the way to Florida, and west to the periphery of eastern Illinois, to Mississippi and eastern Louisiana. In Wisconsin, Eastern Ribbonsnakes are very rare, and are only found in isolated pockets of six counties scattered throughout the state.

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Ventral/Belly View. © Novah21.

Habitat: Eastern, or Northern Ribbonsnakes are a semi-aquatic species of snake, being most commonly associated with open sphagnum bog relict habitats south of the tension zone in Wisconsin. Northern Ribbonsnakes are very rare in Wisconsin, and population densities of where they do occur are low. Wisconsin is on the extreme northwestern edge of these snakes' range.

Feeding and Diet: Eastern or Northern Ribbonsnakes are insectivorous and carnivorous, feeding on a variety of small, soft-bodied invertebrate and vertebrate prey. A large portion of their diets may include earthworms, soft bodied insects and insect larvae such as caterpillars, small frogs, and salamanders, as well as also small fish, amphibian larvae, or other similar soft-bodied prey. As with other Gartersnakes, Ribbonsnakes simply chase down or overpower their food with their mouths and jaws prior to ingesting.

Natural History: Due to their rarity and secrecy, relatively little is known about the natural history or reproduction of eastern, or Northern Ribbonsnakes in Wisconsin, although, like other Gartersnakes, they likely emerge from overwintering by late March or through April, remaining active throughout the year until September or October. In Wisconsin, Eastern Ribbonsnakes probably overwinter in underground burrows, rocky crevices, ant mounds, or burrows within the wetland banks or beaver or muskrat lodges.

Eastern Ribbonsnakes are primarily diurnal, active hunters, although they may become more nocturnal or crepuscular during the hotter summer months. These fast moving and wary snakes rely on their speed or striped coloration to evade capture or detection, and they may also forage for food and seek refuge from escape over across water, or above ground in low bushes and vegetation, more frequently than other Gartersnake species. In fact, the type name for the genus "Thamnophis" translates to "bush" snake. Eastern Ribbonsnakes may bask up in these elevated bushy locations as well.

If captured or handles, Northern Ribbonsnakes are inoffensive, seldom attempting to bite, although they will thrash and emit a foul-smelling musk when they are handled. Mating and copulation likely takes

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place shortly after emerging from overwintering in April, and Northern Ribbonsnakes, like other Gartersnakes, are ovo-viviparous, giving birth to about 3 to 26 young measuring about 7.1 to 9.0 inches in length, and are given no parental care afterwards, fending on their own after they emerge.

Eastern, or Northern Ribbonsnakes are very rare in Wisconsin, and as such, are a state of Endangered species. The most likely conservation causes affecting these snakes' rarity in the state probably have to do with Wisconsin being on the extreme northwestern periphery of their range, as well as extreme habitat fragmentation and susceptibility to loss and degradation.

Eastern Ribbonsnakes can be predated upon by many different species of birds (such as crows, turkeys, kestrels, hawks, owls, and other birds of prey, and wading birds such as herons, cranes, egrets, and bitterns), other larger snakes, and a number of different carnivorous or predatory mammals including domestic cats, foxes, skunks, shrews, raccoons, otters, mink, moles, and opossums. Large, predatory fish, snapping turtles, and large North American Bullfrogs will also eat Ribbonsnakes as well.

Conservation Status: In Wisconsin, eastern, or Northern Ribbonsnakes are currently listed as a State of Wisconsin "Endangered" Species. They are thus regulated and protected along with all other of Wisconsin's herptiles. Eastern Ribbonsnakes are currently not protected or regulated federally. Eastern Ribbonsnakes are currently IUCN Red-List Least Concern (LC).