

Plains Gartersnake (*Thamnophis radix*)

Family Colubridae (Natricinae)

Subspecies: None currently recognized

Updated 2025



© Mike Day (Both)



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Description/Identification: The Plains Gartersnake is a medium sized species of Gartersnake, ranging from about 20.1 to 28.0 inches in total, average adult length. The head is somewhat sorter and less well-distinct from the neck than in the Common Gartersnake (*Thamnophis sirtalis*), and the body is also somewhat thicker and more heavier-bodied. Plains Gartersnakes have about 17 to 21 scale rows in total, from posterior to anterior, and as with other Gartersnakes, the scales are heavily keeled, and the anal or ventral scale is single and undivided. The tongue is forked, and a pinkish to reddish in color and is black-tipped, and the pupils of the eyes are normally round, with reddish, orangish, or reddish-brown irises. Plains Gartersnakes have 2 rows of subcaudals on the underside of the tail past the ventral opening, and which number about 26 to 40 rows. On the inside of the mouth, Plains Gartersnakes 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 dorsum ground color ranges from a blackish, dark brown, to dark olive-brown in color, with two rows of small, alternating dark spots above the lateral stripes, and one row beneath. The mid-dorsal longitudinal stripe is usually a brighter yellow, orangish, or yellow-orange, the lateral stripes covering scale rows 3 and 4 are lighter white, yellow, or yellowish-orange. The labial scales and upper jaws are usually boldly marked with black or dark brown sutures, and the tops of the heads are an unpatterned darker brown or olive-brown from the rest of the body. The undersides, or ventral surfaces are a plain, unmarked white or cream-color, to pale yellow or greenish-yellow with small, dark pencil-point spots lining the margins of the ventral scales. Plains Gartersnakes can be distinguished from the other Gartersnake species, such as the Common Gartersnake, which they may be confused with, by lateral stripes on scale rows 3 and 4

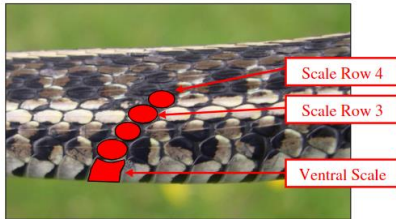
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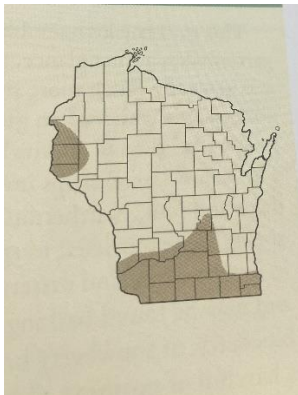
(as opposed to 2 and 3 on the Common garter), brighter yellow or orange mid-dorsal stripe, and more heavily marked labials, and from the two Ribbonsnakes in Wisconsin by their heavier bodied, lack of orbital spots on the head, and lack of pure white, unmarked labials.



Plains Gartersnake (Thamnophis radix) Lateral Stripes, © WDNR *Gartersnake Identification Guide*

Male and female Plains Gartersnakes are similar in appearance, but are dimorphic, with females being larger than males, and having proportionately shorter tails (and the absence of hemipenes when probed). Neonate and juvenile Plains Gartersnakes are similar in appearance to the adults but are brighter in color. In some areas and in some populations in southeastern Wisconsin, Plains Gartersnakes hybridize with the Butler's Gartersnake (*Thamnophis butleri*), making positive identification more difficult. Genetic testing and analysis of specimens can sometimes be the only way of reliably identifying and diagnosing specimens, as pure species or hybrids, in some of these cases. Neonate Plains Gartersnakes usually range from between 5.1 and 7.0 inches in length.

After death, the pigmentation begins to break down in Gartersnakes, giving them a much more bluish or bluish-gray stripes or appearances than during actual life. No subspecies of the Plains Gartersnake are currently recognized.



© WDNR.

Range and Distribution: Plains Gartersnakes range from southeastern Alberta, through southern Saskatchewan, and southern Manitoba, Canada, south through the central. Great Plains states in the United States, from eastern and central Montana, through the extreme northern tips

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of Texas, Oklahoma, and New Mexico, and east to Wisconsin, Illinois, and disjunct populations in north-central Ohio and northwestern Indiana. In Wisconsin, Plains Gartersnakes occur in about the southern-third of the state, but are most common in extreme southeastern Wisconsin (most notably Racine County), and are more of an uncommon snake in south-central Wisconsin. A single visual record also exists for Dunn County in northwestern Wisconsin.

Habitat: Plains Gartersnakes inhabit semi-moist, open to semi-open upland habitats including dry mesic to mesic prairies, dry rocky, or dry bluff prairie hillsides, oak savannahs, old fields, grassy meadows, and vacant lots and city parks. These habitats are especially favored when they are nearby or adjacent to open canopy wetlands such as nearby marshes, wet fields, ponds, or near streams or rivers. Areas of low canopy vegetation are most preferred. They are usually found in drier habitats further from water than the Common Gartersnake, although both species can be found in the same general areas.



Ventral/Belly View. © Reptiles and Amphibians of Iowa.

Feeding and Diet: Plains Gartersnakes are carnivorous, and will feed primarily on earthworms and other worms, larger, soft-bodied insects and insect larvae, small fish, and amphibians such as frogs or salamanders. As with other Gartersnakes, Plains Gartersnakes simply chase down or overpower their food with their mouths and jaws prior to ingesting.

Natural History: Plains Gartersnakes will emerge and become active in the year as early as late March or through April, where they will emerge from their overwintering locations from underneath sidewalks or postholes, small mammal burrows, ant mounds, sinkholes, or old stone foundations, where they may overwinter individually, or with up to hundreds or, in some areas, even thousands of other snakes, both Gartersnakes, and other small snake species in the area. Plains Gartersnakes are primarily diurnal, and have not been found to be as nocturnal or crepuscular as the Common Garter snake.

Mating most commonly takes place shortly after they emerge in the spring, and large “breeding” balls or “mating” balls may sometimes be seen, where many smaller males all attempt to court with or breed with the same single female. Mating and copulation can also sometimes take place in the fall in some areas. As with other gartersnakes, Plains Gartersnakes are ovoviviparous, giving birth to live young by mid to late August or September, where an average litter may range from about 5 to 25, although much larger litters of up to 92 have been reported.

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After mating, Plains Gartersnakes disperse for the season, and provide no parental care for their young, as is the case for the majority of snakes. They usually spend most of their time hunting and foraging for food, or seeking shelter underneath rocks, logs, boards, trash or other debris, or in underground burrows when they are not active on the surface. The Plains Gartersnake's first, and primary defense are their striped patterns, which can make them cryptic and difficult to spot in the grass. When they are fleeing, or darting away, their striped patterning also breaks up the snake's outlines, making them more difficult to capture.

Plains Gartersnakes are usually a more mild-mannered species of gartersnake than the Common Gartersnake, being less likely to opt to bite, although some captured individuals may attempt to bite. As with other Gartersnakes, Plains Gartersnakes will also often emit a bad or foul-smelling musk and defecate as a deterrence when they are captured or handled as well.

Plains Gartersnakes 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 Gartersnakes as well.

Conservation Status: In Wisconsin, Plains Gartersnakes are currently listed as "Special Concern" species. They are also regulated and protected along with all other of Wisconsin's herptiles under N.R. 16. Plains Gartersnakes are currently not protected or regulated federally. Plains Gartersnakes are currently IUCN Red-List Least Concern (LC).