

Gophersnake (*Pituophis catenifer*)

Family Colubridae (Colubrinae)

Subspecies: Bullsnake (*Pituophis catenifer sayi*)

Updated 2025



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Description/Identification: The Bullsnake, which is the only subspecies of the Gophersnake occurring in Wisconsin and eastern half of the United States, *Pituophis catenifer sayi*, is a large species of heavy-bodied colubrid snake ranging in total adult length from 47.2 to 78.7 inches. Bullsnares are the largest species of native snakes in Wisconsin. The scales are keeled to heavily keeled, and there are about 27 to 37 scale rows in total. The head is proportionately small, and is about the same width, or only slightly differing from the neck and rest of the body. The head is also sloping, spade-shaped or slightly pointed, and has a large, slightly upturned, cornified and enlarged triangular rostral scale at the end of the snout. The anal or ventral scale is single and undivided. The tongue is forked, and black in color, and the pupils are normally rounded, with yellowish, or brownish-yellow irises of the eyes. Bullsnares have 2 rows of subcaudal scales on the underside of their tails, past their ventral opening, numbering about 22 to 32 rows. On the inside of the mouth, Bullsnares 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. These teeth, however, are not large enough to cause anything more than a superficial laceration, however.

Bullsnares can be highly variable in their colors and patterns from head to tail, which can sometimes give them the appearance of being three separate snakes. The head has a yellow, brown, to yellow-brown base color, and is heavily mottled with dark flecks and mottling on the top, and a dark ocular band may run through the eyes, sloping forehead, and to the back of the quadrate jaw. The labials along the upper and lower jaws are also marked with dark, heavy labial bars. A pair of large, irregular, dark black blotches may fuse on the nape or neck, leading into a very dark mottled black and white to yellow or cream colored anterior-most portion of the snake.

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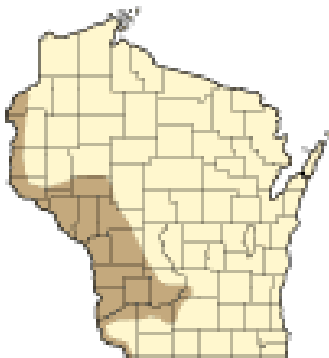
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At about mid-body, this dark coloration and patterning usually lightens to a tan, yellowish, or cream ground color, and there are then about 38 to 53 larger, irregular, dark brown, reddish, or reddish-brown saddle shaped dorsal blotches along the mid-body. One to two rows of lighter brown to reddish brown spots or irregular blotches and flecks occur along the sides, or laterals at midbody. Towards the tail, and posterior portions of the snake, the ground color becomes a brighter yellow to golden yellow with darker brown or black square or rectangular shaped dorsal blotches alternating with a row of smaller lateral blotches along the sides posteriorly. At the tail beyond the ventral scute, this pattern finally becomes banded or ringed with about 8 to 15 black or dark brown rings.

The undersurface, or ventral surface is a white or cream color, pale yellow, or pale pinkish with scattered, irregular black or dark brown rectangular ventral patterning. Very young hatchling or juvenile Bullsnaes are similar in appearance to the adults, but have less distinctive blotching, and a duller yellow, grayish, or brownish color.

Eastern Hog-nosed Snakes (*Heterodon platirhinos*) can be confused with Bullsnaes, but are proportionately much shorter and thicker-bodied, and have much more strongly upturned rostral scales, and the anal plate is also divided. Eastern Milksnaes (*Lampropeltis triangulum*) have smooth scales as opposed to keeled scales, and adult milk snakes are much smaller than adult Bullsnaes. Eastern Foxsnaes (*Pantherophis vulpinus*) also might be confused with Bullsnaes, but have more weakly keeled scalation, larger, and usually less or unpatterned heads. Foxsnaes also do not hiss loudly or as raspily as Bullsnaes do. Foxsnaes and Bullsnaes have been known to hybridize in Wisconsin, Iowa, and Minnesota, however, and are known informally as “Bullfoxes”, and can have much more variable, intermittent morphological characteristics between the two species.

Finally, Wisconsin’s two rattlesnake species, the Eastern Massasauga (*Sistrurus catenatus*) and the Timber Rattlesnake (*Crotalus horridus*) both are rattlesnaes, and have distinct and obvious rattles at the ends of their tails, whereas Bullsnaes (and other harmless species in Wisconsin) do not, instead having pointed, tapering tails.



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Range and Distribution: Bullsnaes have a very broad range, ranging from south-central Alberta and southwestern Saskatchewan, through Montana, southeast through the central U.S. Great Plains states to Texas, and into the northern Mexico territories of Guadalupe and Tamaulipas. These snakes range further east in the U.S. to Wisconsin and central Illinois, and there are a few disjunct populations in northeastern Illinois, northwestern, and southwestern Indiana. Bullsnaes begin to intergrade with other western U.S. “Gophersnae” subspecies in narrow band from about southern Colorado, northeastern New Mexico, and west-central Texas.

In Wisconsin, Bullsnaes are found primarily along the Mississippi and lower Wisconsin Rivers in the Unglaciated Driftless Region of western and southwestern Wisconsin. An isolated, disjunct population occurs in the northwestern Wisconsin (Burnett County), but the extent of this range remains undetermined. Records from southeastern Wisconsin are probably older museum records.

Habitat: In Wisconsin, Bullsnaes are most strongly associated with deep, sandy or loamy soiled habitats, or steep, south, southwest, or west facing bluff prairies, hillsides, or rocky cedar glades, with exposed sandstone, limestone, or dolomite boulders and rock outcroppings. Dry sand prairies or dry mesic prairies, old fields, farmland or agricultural areas, oak savannas, pine barrens, or open oak-pine-juniper barrens and open, sandy woodlands, particularly with ample pocket gopher, or other small mammal burrows in the vicinity, can also be suitable Bullsnae habitat. These large, active snakes require relatively large, undisturbed tracts of the above habitats.

Feeding and Diet: Bullsnaes are carnivorous, and feed primarily on a wide variety of rodents or other small mammals. Rats, mice, chipmunks, squirrels, rabbits, and pocket gophers are prime prey sources for these large snakes. Small ground nesting birds and bird’s eggs will also be eaten, and more rarely, frogs, or other amphibians, or other smaller reptiles. These snakes are strong and powerful constrictors, using their jaws to grasp their prey, and then their muscular coils to either constrict them, or to trap and pin their prey against burrow walls in more enclosed spaces. Smaller prey, however, may simply be overpowered and swallowed live without the use of constriction. Bullsnaes are also capable of eating other snakes, including rattlesnaes, but very rarely are known to do so, eating much more primarily small mammals and birds.



Great Basin Gophersnae (but very similar).

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Ventral/Belly View. © CaliforniaHerps.com

Natural History: Bullsnaes are the largest native snake species in Wisconsin, with their largest maximum recorded length being 105 inches, or up to approximately 7 to 8 feet. Bullsnaes begin to emerge from overwintering during the warm, sunny days from mid to late April or May, where they usually spend time basking at or near their dens and overwintering sites. Bullsnaes may overwinter in deep, south, southwest, or west exposed rock crevices, fissures, or cavities, or mammal burrows or holes along open bluff prairies or hillsides. Bullsnaes may also overwinter in large mammal burrows, pocket gopher burrows, or in some areas, nearby foundations or rock retaining walls. They will often overwinter with other associated snake species including Common Gartersnaes, North American Racers, Central Ratsnaes, Eastern Milksnaes and Eastern Foxsnaes, as well as Timber Rattlesnaes. Bullsnaes are also good climbers and swimmers, but are primarily terrestrial snakes.

Bullsnaes will mate most oftentimes during the spring or fall, shortly after or before overwintering, and mating may last for a couple of weeks prior to them dispersing for the summer afterwards. Male Bullsnaes which encounter one another may combat with one another by pushing, shoving, entangling, and/or biting at one another. This similar behavior is similar between male and female mating pairs. Male and female Bullsnaes are similar in size and appearance to one another, aside from males being somewhat larger than females, and having proportionately longer, less tapering tails than females, as well as having the presence of hemipenes.

Bullsnaes are oviparous, laying approximately 5 to 19 large white adherent eggs by late June or early to mid-July. These eggs may be laid in an excavated nest or burrow in sandy or loamy soil along the edges of sand blows or dunes, or underneath large exposed flat rocks or outcroppings. The eggs incubate for approximately 50 to 60 days before hatching by mid to late August or September, where the hatchlings are large, measuring about 15.1 to 17.3 inches and receiving no further parental care, fending on their own upon hatching.

Bullsnaes are primarily diurnal snakes, although they may become more nocturnal or crepuscular during hotter, humid, or overcast weather or conditions. During the summer after emergence and mating, Bullsnaes disperse throughout the surrounding area, where they will spend much more of their time underground in pocket gopher or other mammal burrows, underneath large boards or sheets of tin, or deeper within brush piles or other piles of logs, tin, or other junk or debris. They are excellent burrowers, using their large, cornified rostral scales and keeled scales to excavate through the sandy or loamy soil in search of prey or sheltering opportunities. They may also be seen on the move crossing roads or highways, or through more forested areas with their suitable habitats nearby.

A Bullsnae's first line of defense is to remain cryptic and still, in order to avoid being seen or detected. If they are detected, they will readily dive or retreat for cover into a burrow, rock crevice, brush pile, or other junk or debris pile. If a Bullsnae is cornered, or if escape is not possible, they will readily rattle their tails against dry leaves, grass, or against objects to create a loud and disturbing buzzing sound.

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much like a rattlesnake. These snakes are also well known for raising and flattening their heads, while coiling the forward thirds of their bodies into a defensive strike posture, and for producing a very loud, drawn out, raspy sounding hissing. A triangular flap or fold of cartilage located inside their mouths at their throats towards the base of their tracheas enable Bullsnares to make these loud hissing. Some individuals, further may then strike or bite readily, but others can be much more of a bluff, being hesitant to actually strike, or striking only with their heads or mouths closed.

The origin of the name “Bullsnake” is uncertain, with several different beliefs attributed to this name. Some say it is from these snakes commonly being found in or near bull and other cattle pastures. Others believe this name may have stemmed from their large sizes and strong, powerful, muscular bodies said to be as “strong as a bull”. Others, still believe that the name “Bullsnake” may have come from their loud hissing, which can sometimes sound like the snorting or bellowing of a bull. As with many snakes, Bullsnares may also defecate or excrete a pungent-smelling musk or odor from their cloacas when threatened or first handled. Some individuals can be fairly calm and placid even when first handled or picked up, while others can become much more irritable and willing to actively hiss and strike.

Despite their large sizes, and intimidating defensive displays, Bullsnares are harmless and non-venomous species of snakes which are also very beneficial to the farmer and gardener. According to Vogt. 1981, a single adult Bullsnake can save the farmer at least \$400 in rodent and other pest control each year, just by consuming mice, rats, pocket gophers, or other small mammals. This makes Bullsnares, as well as all other snakes, a friend of the farmer and excellent forms of natural rodent control.

Despite their larger sizes, Bullsnares can still have a number of other natural predators that can include a number of large birds such as birds of prey (hawks, owls, eagles), turkeys, some other snake species, and a number of carnivorous or predatory mammals including weasels, skunks, opossums, raccoons, foxes, coyotes, mink, domestic cats, domestic dogs, and bobcats.

Conservation Status: In Wisconsin, Bullsnares are listed as a “Special Concern”, or “Protected Wild Animal” species under N.R. 16. These snakes are regulated and protected along with all other of Wisconsin’s herptiles under N.R. 16. Bullsnares, or Gophersnares, are currently not protected or regulated federally. Bullsnares, or Gophersnares, are currently IUCN Red-List Least Concern (LC).