

Identifying Minnesota's Venomous Snakes

Only two of the seventeen snake species found in Minnesota are venomous. The identification of these species is further simplified by the fact that both of these snakes are rare in Minnesota, and are only found in the southeastern part of the state. However, in spite of this, a great many harmless snakes are misidentified and killed unnecessarily. This pamphlet will assist you in the identification of the two venomous species in Minnesota and will list additional harmless species that are often confused with them.

Timber Rattlesnake

Crotalus horridus

This is the more "common" of the two venomous snakes found in Minnesota, although the timber rattlesnake certainly cannot be considered a common species by any means! Timber rattlesnakes are listed as a Threatened species in Minnesota. Timber rattlesnakes have never been abundant in Minnesota, and are only found along the bluffs in the extreme southeastern portion of the state. They are rapidly declining due to destruction of habitat, woody plant invasion in the open prairie areas on the bluffs and human persecution. The state offered a bounty on these snakes until 1989. Many documented populations are now extirpated, and the existing populations are teetering dangerously close to extinction.

Timber rattlesnakes may be yellow, brownish or gray with darker chevrons with jagged edges across the body. The chevrons may actually be spots on some specimens, especially in the neck region. The tail is sooty black with an obvious tan rattle at the end. The head is triangular or diamond-shaped and is unmarked. The pupil of the eye is elliptical and there is a heat-sensitive pit positioned between the eye and the nostril.

Most references say to look for a diamond- or triangular-shaped head, elliptical eyes and the presence of a heat pit on a venomous snake. While this is true, there are problems with using each of these characteristics as field marks. First, many non-venomous snakes, such as water snakes, garter snakes, bullsnakes and hognose snakes, will spread their jaws, giving their heads a triangular or diamond appearance. Second, if you happen upon a snake in the wild and can tell if it has elliptical pupils or heat pits, then you are too close! These two characteristics simply cannot be seen from a safe distance.

A rattling sound is also not a good way to distinguish between a venomous and harmless snake. Timber rattlesnakes are usually passive snakes that are slow to strike or even rattle, so there may not be a distinct rattling sound even if the snake is a rattlesnake. Conversely, a good number of Minnesota's large harmless snakes will vibrate their tails when they are alarmed. Although they have no rattle, if their tail vibrates against leaves or grass, it may produce a rattling sound.

The best thing to look for on a timber rattlesnake is a patterned body with an all-black tail with a tan rattle at the end. When the rattlesnake rattles, it holds its tail up off the ground and produces the sound without the tail striking against anything. All Minnesota's large patterned snakes, with the possible exception of the rat snake, have patterned or ringed tails. Also, instead of holding their tails high in the air, harmless snakes must hold their tails close to the ground to produce any sound. Also, remember where you are at. If you are not in southeastern Minnesota, the snake is very likely a harmless species.

Massasauga

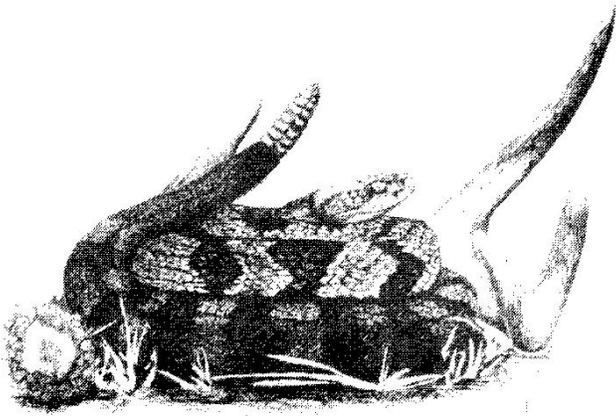
Sistrurus catenatus

These snakes are the most confusing to identify from harmless species, but they are also the rarer of Minnesota's two venomous snakes. This species is listed as Endangered in Minnesota. In fact, there has not been an actual documented specimen from Minnesota. There are supposedly two records from Minnesota, but the

backgrounds on both are very dubious. These snakes may occur in the extreme southeastern part of the state but if documented, they would unquestionably be the rarest snake we have. Massasaugas are usually less than three feet in length. Unfortunately, they look similar to many of our harmless snakes.

Massasaugas are brown or gray with darker brown blotches on the back and smaller spots on the sides, with a small dark rattle at the end of the tail. Similar-looking snakes include fox snakes, hognose snakes, bullsnakes and water snakes. Information about the shape of the head, pupils, heat pits, the rattle and the associated problems using these features for identification (see the timber rattlesnake section) hold true for the massasauga as well. In this case, if you are in southeastern Minnesota and you are unsure of what species of snake you have found, just leave it alone. Do not attempt to collect or kill it.

The timber rattlesnake is listed as a Threatened species in Minnesota, and the massasauga is listed as an Endangered species in Minnesota. They are both protected by law and it is illegal to harm, collect or harass them. Any activities involving Minnesota's Threatened and Endangered species require a permit. However, we do need your help to better document these snakes. Any sightings of either species are welcomed. Identifiable photographs can be taken from a safe distance. It is also important to record the exact location, date, habitat, weather conditions and your name with proper contact information. The reports can be sent to the Minnesota DNR or the Minnesota Herpetological Society.



Although this pamphlet will not cover first aid for venomous snake-bite, the best thing to do is to get the victim to the nearest hospital immediately. A little awareness can prevent most bites.

To avoid being bitten, stay aware of your surroundings and watch where you step. Remember that southeastern Minnesota is the only area in the state where venomous snakes naturally occur.

Wear sturdy, high hiking boots and watch where you step, place your hands or sit. Carrying a stick and using it to prod before stepping or sitting may help. If you see a snake and do not know what it is, walk away or around it. Do not attempt to kill it. Snakes, including venomous species, are beneficial in controlling rodent populations.

Snake bites from the two native species of venomous snakes are very rare in Minnesota: the last bite in the state was in 2011, and there have been NO deaths from a wild snake bite in Minnesota since 1868. **Most bites occur when a person is attempting to kill, handle or otherwise harass the snake.** If you are fortunate enough to find a venomous snake in Minnesota, take a few moments to stop and enjoy observing an animal that most other people do not get to see.

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FURTHER READING

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