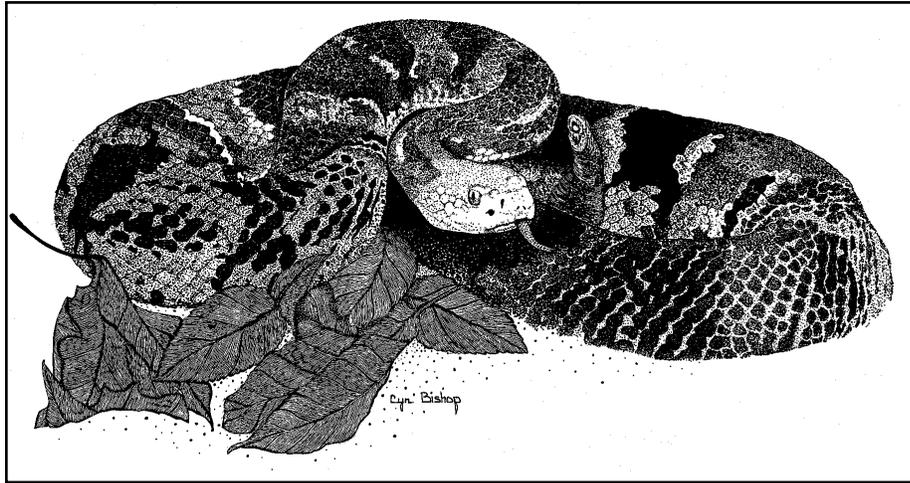


Timber Rattlesnake

Scientific Name: *Crotalus horridus horridus*



State
Endangered
Species



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Introduction

The timber rattlesnake is one of two rattlesnakes native to Ohio (the Eastern massasauga is the other one) and one of three poisonous snake species in the state. Although engendering fear in many, the timber rattler is considered a fairly docile, rather than aggressive animal. It will bite and its venom is harmful; however, it only attacks or behaves aggressively when provoked.

Further, the opportunities for encountering the timber rattlesnake are few and far between. There are simply few timber rattlers in Ohio and most of them are found in southeast and south-central Ohio counties. Additionally, these snakes are very secretive in nature and difficult to locate. Encountering one in the wild would be a rare occurrence.

This snake's reclusive behavior also contributes to our lack of in-depth knowledge of the species. Obviously, it is difficult to study a small number of secretive animals. Nonetheless, we do know a little of this snake and this information helps explain its rarity.

It can be a long-lived species, but rattlesnakes have a low productivity rate and their young experience a high mortality rate. Consequently, timber rattler populations are low throughout their currently established range in Ohio. To maintain a "stable" timber rattlesnake population, authorities believe that a minimum of about 40 individuals are required and there should be an even age distribution within the population.

Description

The timber rattlesnake can be yellow, gray, brown, or black and frequently, but not always, have dark brown, rust, or black blotches (bands) across the back and down the sides. With brown or black phases, banding may not be readily apparent. Young are always cross banded in their yellow phase; however, the colors are more subdued. People often confuse the timber rattler with other snakes; among those that it is commonly mistaken for are the Eastern milk snake, fox snake, Northern water snake, and Eastern hognose snake.

Adults have rattles located on the end of a short tail and a new rattle segment is added each time the snake sheds its skin; a single button is present on newborn rattlesnakes instead of a rattle segment (the first rattle develops when the snake sheds for the first time). Counting rattle segments is not a way of telling how old the snake is however. These snakes will shed two to four times a year, adding a segment each time. A timber rattlesnake can live 25 or more years in the wild; however, the average is much less.

The timber rattler is a "pit viper"; it has a heat-sensing depression located between the eye and nostril. The pupils of their eyes are elliptical.

The average male timber rattler is 43.5 inches long; females on average are 38.5 inches long. The maximum authenticated length for a timber rattlesnake is 59 inches. In Ohio, a typical adult timber rattlesnake is 38 to 40 inches in length and eight to nine inches around.

The average weight for these snakes is two pounds for a male and 1.3 pounds for a female.

The maximum weights for snakes of this species are 3.9 pounds for a male and 3.1 for a female; Ohio's largest recorded weight was for a 3.3-pound individual.

The timber rattlesnake can be found throughout most of the eastern U.S. and parts south. They range from southern New Hampshire and the Lake Champlain region to northern Georgia and west. They can be found north of the Mississippi embayment, to Illinois, southwest to Wisconsin into northwest Arkansas and north-east Texas. Confirmed sightings in Ohio have been limited to southeast and south-central counties. As many as 21 Ohio counties were once home to timber rattlesnakes; today they have been confirmed in only eight counties.

Habitat and Habits

By definition, habitat is any area that provides an animal the basics for survival: cover or shelter, food, water, and space. Timber rattlesnakes use three distinct habitat types to meet these needs: 1. The denning habitat which is used for overwinter cover. This area typically consists of rocky hillsides with underground crevices. These sites frequently are south-facing slopes with open or relatively open canopy cover. Dens are communal areas and up to 200 snakes in one den have been reported in New York and Virginia. However it is more common for there to be only 30 to 100 snakes in a den site. Further, denning sites are not exclusive to one species; copperheads and black snakes are frequently found in the communal den with timber rattlesnakes. Biologists believe the timber rattlers will use the same denning site for an extensive period of time, possibly hundreds of years. 2. A summer habitat is used for cover by males and barren females. This habitat site usually consists of mixed deciduous or coniferous forests with nearly closed canopy, heavy leaf litter and little herbaceous cover, and a few rocks or fallen trees. Pregnant females use areas of this type that are closer to the denning site than do other snakes. 3. A transient habitat is an area near the den. Characteristically, these areas are similar to the denning site and the summer habitat in terms of the number of trees and canopy closure; this type of habitat is frequently used as summer range by pregnant females.

Timber rattlers will migrate from the denning site in the spring (mid-April through mid-May) and to their summer habitat and back to the den in the fall (mid-September through mid-October). The average home range sizes for timber rattlesnakes are 160 acres for males, 42 acres for barren females, and 9 acres for pregnant females.

In wooded habitat, the timber rattlesnake is a "sit-and-wait" ambush predator of small mammals. Their preferred foods include shrews,

moles, bats, mice, rats, chipmunks, young groundhogs, gray and fox squirrels, rabbits, weasels, quail and other birds, and bird eggs, but they will also eat insects, toads, lizards, and other snakes.

The venom of this snake causes massive hemorrhaging in its prey. The prey will run off after being bitten, but they soon die; the snake follows the scent trail to the animal. The timber rattler will ingest its prey whole and head first by using a seesaw type of head motion along with drawing its jaw in and out. Venom also aids food digestion in addition to its role in killing prey.

The weather has a significant role in the timber rattlesnakes' activity level. They are most active in the spring and fall when temperatures are mild; during the summer, when days are hot and humid, the snake will shift its activities to twilight and nighttime hours.

Reproduction and Care of Young

Timber rattlesnakes attain sexual maturity late in life. Based on an 11-year study of the species in New York, most females do not become sexually mature until they are about nine or ten years of age in the northern portions of their range. This is likely a factor that contributes to their low population numbers. The snake must live a long while before it can reproduce. And even then few snakes are added to the population.

Most adult female timber rattlers reproduce only two to four times in their lifetime. Eight to 10 young are produced per litter (about every three to four years) in the northern portions of their range; generally 12 are produced in the southern portion. At birth rattlesnakes are about 12 inches long and weigh less than an ounce.

Timber rattlesnakes are ovoviviparous which means their offspring develop within the body of the female in thin, membranous shells. The female lays these eggs and the young will hatch from them shortly after being expelled from her body (this usually occurs in September). From that point on, the young snakes are on their own and mortality for immature timber rattlers is high. Young survivors will use the scent trail of their parents to make their way to the den site for overwintering.

Management Plan

The timber rattlesnake is classified as endangered in Ohio, and as a result is protected under the law. Current management plans are limited to protecting existing populations as opposed to increasing their occupied range. The Division has funded research on this species through its Wildlife Diversity Grants project. The Division is also trying to educate the public and dispel the many negative stereotypes about this and other species of snakes in the state.

Viewing Opportunities

The timber rattlesnake is greatly affected by the presence of human beings; it relies on seclusion for most of its life activities. Viewing of this species is discouraged in the interest of minimizing the disturbance of these animals and protecting existing populations and their habitats.

Do Something Wild!

The timber rattlesnake is among the majority of wildlife species in Ohio that are not hunted. All these animals are vital parts of our overall ecosystem and contribute to wildlife diversity in the state. Helping us manage and research these species are the generous citizens of Ohio. With money they either donated through the state income tax checkoff or their direct contribution to the Endangered Species Special Account, the Division is able to study and obtain important information about rare species like the timber rattlesnake.

Tax time is not the only time you can help us with this effort. Contributions to our Endangered Species and Wildlife Diversity Program are accepted throughout the year. To make a donation, please send a check to: Endangered Species Special Account, Ohio Division of Wildlife, 2045 Morse Road, Bldg. G, Columbus, Ohio 43229-6693. All contributions, whether made on your income tax return or directly, are tax deductible.



At a Glance

Mating: Unknown

Peak of Breeding Activity: Mid-July through September. Sperm is stored until the following June when fertilization of the egg occurs.

Gestation Period: Thought to be 105 days, but this is speculation.

Young are Produced: Mid-August through mid-September. The female seeks out a birthing den and stays there 7-10 days. Young are expelled developed, but encased in a thin membranous sack from which they quickly emerge.

Litter Size: 8-10 young

Adult Weight: The heaviest recorded timber rattler in Ohio weighed 3.3 pounds, although the average is 2 pounds for males and 1.3 pounds for females.

Adult Length: Average is 38-40 inches in Ohio. Ohio timber rattlers average 8-9 inches in circumference.

Life Expectancy: These snakes can live 22-25 years in the wild; however, they usually live between 12 and 18 years.

Migration Patterns: Migrates from communal denning site to summer range in spring (April-May) and back to the wintering den in the fall (September-October). Nearly all the rattlers from a given den can be found within a 2.5 mile radius from that den.

Feeding/Activity Periods: Active during the day in the spring and fall; at night during the summer.

Typical foods: They are opportunistic feeders that rely heavily on small mammals (mice, voles, chipmunks, rabbits, squirrels) for their diet.

Native to Ohio: Yes

Active or Potential Nuisance Species: No. Low populations in the state make this an extremely rare animal to encounter; however, people's perception, fear, and misunderstanding of snakes in general, and rattlesnakes in particular, result in the idea that if any rattlesnakes exist then so do problems.

The timber rattlesnake is a state endangered species and is afforded full protection under the law.