Timber Rattlesnake Fact Sheet

Timber Rattlesnake
*Crotalus horridus*

New York Status: Threatened
Federal Status: Not Listed

Description

Measuring from 3-4.5 feet (91-137 cm) or more in length, the timber rattlesnake is the largest venomous snake in New York. The record length is 74 ½ inches (189 cm). Timber rattlers impress one as being very stocky; they are large snakes. Despite their size, cryptic coloration allows them to be easily concealed. Two color patterns are commonly found: a yellow phase, which has black or dark brown crossbands on a lighter background color of yellow, brown or gray, and a black phase, which has dark crossbands on a dark background. Black or dark brown stippling also occurs to varying degrees, to the extent that some individuals
appear all black. Scales are ridged, giving this rattlesnake a rough-skinned appearance. The timber rattler has a broadly triangular head with many small scales on the crown of the head bordered by a few large scales, unlike the massasauga rattlesnake which has nine large scales on the top of the head.

Like other members of the pit-viper family, the timber rattlesnake has a temperature-sensitive opening, or pit, on either side of the face between and a little below the eye and nostril. This sensory organ is used to detect prey and potential predators. Another feature distinctive of rattlesnakes is the rattle itself. This structure is made of loosely attached horn segments. A new segment is added each time the snake sheds. When vibrated, the rattle makes a buzzing sound characteristic of a disturbed rattlesnake.

Life History

Timber rattlesnakes are active from late April until mid-October, although in northern New York they may not emerge until mid-May. Upon emerging from the den, they are very lethargic. Little feeding occurs early in the spring. Mating occurs in the spring and fall. Males are especially active at this time, seeking out females by following the pheromone (sex attractant odor) they emit. The gestation period is 4-5 months. Females give birth to 4-14 (average 9) young every three to five years during late August to mid-September. The young are approximately 1 foot (30 cm) in length at birth and emerge singly from the female, encased in a transparent membrane which is shed in a few minutes. Each is equipped with venom, hollow fangs and a tiny rattle segment called a "button." Their skin has a velvety texture and the coloring is essentially the same as the adult’s. They remain in the area for 1-2 weeks before shedding their skin and dispersing. The young follow the adult’s scent trail back to the den. Males are sexually mature in 5 years, females in 7-11 years. Their average life span is 16-22 years, with a maximum age of about 30 years. During winter, dozens of timber rattlers may congregate together in a den to hibernate below the frost line.
in association with copperheads (*Agkistrodon contortrix*), other snakes, and skinks (*Eumeces spp.*). Dens are generally on open, steep, south facing slopes with rock fissures or talus surrounded by hardwood forests.

Adults shed their skin every one or two years, with the average being every 1.4 years. A new rattle segment is added each time shedding occurs. Snakes with a complete set of rattles are rarely seen, however, since the rattles regularly break off. This rattler feeds primarily on small mammals, but occasionally takes small birds, amphibians and other snakes. The venom, which is used primarily to immobilize prey, can be fatal to humans if the bite is untreated. However, in New York there have been no records of human deaths attributable to rattlesnakes in the wild during the last several decades. Contrary to popular opinion, a rattlesnake will not pursue or attack a person unless threatened or provoked.

**Distribution and Habitat**

The range of the timber rattler extends from southern New Hampshire south through the Appalachian Mountains to northern Georgia and west to southwestern Wisconsin and northeastern Texas. Populations were once found on Long Island and in most mountainous and hilly areas of New York State, except in the higher elevations of the
Adirondacks, Catskills and Tug Hill region. They are now found in isolated populations in southeastern New York, the Southern Tier and in the peripheral eastern Adirondacks.

Timber rattlesnakes are generally found in deciduous forests in rugged terrain. In the summer, gravid (pregnant) females seem to prefer open, rocky ledges where temperatures are higher, while the males and non-gravid females seem to prefer cooler, thicker woods where the forest canopy is more closed. Rattlers generally migrate from 1.3 to 2.5 miles (2 to 4 km) from their den each summer, with a maximum movement of 4.5 miles (7.2 km) observed.

**Status**

Although still fairly common in some local areas, the timber rattlesnake has been extirpated or greatly reduced in numbers in most areas where it was once numerous due to unregulated collection and indiscriminate killing. A contributing factor was the bounty system under which a reward was paid for each timber rattler killed. Bounties were outlawed in New York State in 1971. Even in areas without bounties, the snake was severely persecuted by local residents or overcollected for the pet and curio trade. Timber rattlesnakes reproduce at a low rate, making for slow population growth. Factors such as development, illegal collecting, and the continual disturbance of forests by recreational users will likely prevent or hinder population recovery for many areas.

**Management and Research Needs**

The New York State Department of Environmental Conservation coordinates a program to monitor and map, using a Geographic Information System, the remaining populations in New York State. Surveys are in progress to identify existing den sites and assess each population’s size, reproductive success and any threats to existing habitat. Protection of habitat is now a primary concern. Collecting rattlers from the wild is now prohibited, but poachers are still active in
supplying the black market pet trade.

**Additional References**


Drawing by Jean Gawalt

Map adapted from Conant and Collins (1998) and Tyning (1992)