



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WILDLIFE BUREAU

INFORMATIONAL SERIES

VENOMOUS SNAKES OF CONNECTICUT

Timber Rattlesnake and Northern Copperhead

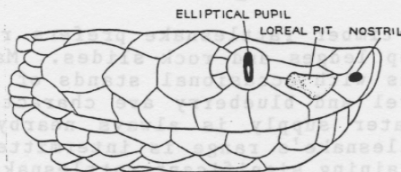
General

Of the 14 species of snakes native to Connecticut, only 2 are poisonous; they are the timber rattlesnake (Crotalus horridus) and the northern copperhead (Agkistrodon contortrix).

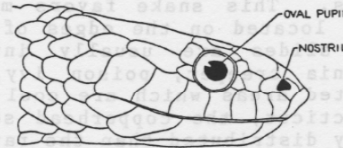
Both of these snakes belong to the "pit viper" family, so named because of the facial pits located on each side of the snake's head between the eye and nostril. These pits contain nerve endings sensitive to radiant heat and help the snake detect warm-blooded prey in the darkness. Non-poisonous snakes do not have these heat-sensitive pits.

Pit vipers are generally heavy-bodied snakes with narrow necks, wide, arrow-shaped heads, and vertically-elliptical (catlike) pupils. Non-poisonous snakes in Connecticut have oval pupils.

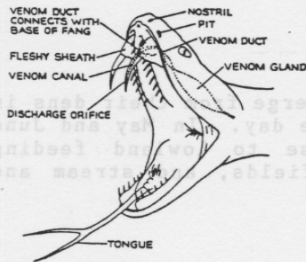
VENOMOUS



NON-VENOMOUS



HEAD OF PIT VIPER



Two well-developed, venom-conducting fangs are located in the front of the mouth. These are shed periodically and replaced. Each fang is connected to a venom gland, one on either side of the face. Venom is pumped through the fang channel by muscular action. It should be stressed that the primary purpose of this venom is to immobilize prey and to aid in digestion. Venom is not always released during the bite. Non-poisonous snakes do not have specialized fangs or venom glands.

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It is important to remember that neither the timber rattler nor the northern copperhead are aggressive and neither will pursue or attack humans if given a chance to retreat.

Identification

TIMBER RATTLESNAKE--Unlike most rattlesnakes, this species has 2 color phases; a yellow phase and a black phase. Identifying characteristics include: 1) the yellow or black, blunt, and broad-shaped head which is unmarked; 2) the dark brown or black chevron-shaped cross bands with striking, thin yellow borders; 3) the dark, unmarked tail; and 4) the rattle on the tip of the tail. Average length is 3 to 3.5 feet, though some rattlers have grown to 6 feet.

COPPERHEAD--The head is a copper color with a thin line on each side of the face that separates the richer copper color of the top from the lighter color of the sides. On the rest of the body is a series of dark brown to reddish hour-glass shaped cross bands which are narrow in the middle and broad on the sides. The background color is beige to tan. Average length is 2 to 3 feet. Consult a field guide for visual illustration.

Habitat and Range in Connecticut

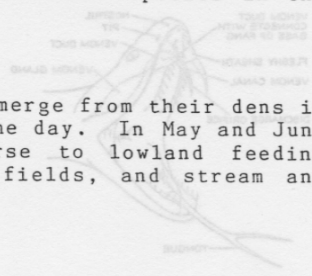
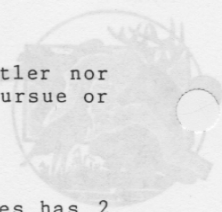
The timber rattlesnake prefers remote, mountainous terrain with steep ledges and rock slides. Many different types of deciduous trees with occasional stands of conifers are present. Mountain laurel and blueberry are characteristic plants of the den area. A water supply is always nearby. In Connecticut, the timber rattlesnake's range is intermittent with only a handful of towns sustaining significant rattlesnake populations.

The copperhead prefers trap-rock ledges with extensive rock slides. This snake favors moist, damp habitats with many den sites located on the edges of swamps, streams, and rivers. The rock slides are usually interspersed with deciduous trees, Virginia creeper, poison ivy, and dead tree debris. Densely forested areas which are cool and moist are usually nearby. In Connecticut, the copperhead seems to be more abundant and more widely distributed than the rattlesnake.

Both species of snakes use the deep crevices and fissures of their den sites to hibernate. The den site is usually south-, southeast-, or southwest-facing to take advantage of the warm sunlight. It is uncommon to find both of these species in the same den in Connecticut.

Activity

Both the copperhead and the rattlesnake emerge from their dens in mid-April to bask on the ledges during the day. In May and June most of the snakes at the den disperse to lowland feeding grounds--stone walls, pasture and crop fields, and stream and



river bank areas. During the summer, the snakes become mostly nocturnal to avoid the intense heat of the day. In September and October the snakes gradually return to their den sites and resume the day-time basking habit. Both species probably travel less than 2 miles from the den during this seasonal cycle.

Reproduction

Mating may occur anytime during the snake's active season, with births usually taking place from August to late September. The young are born alive, fully armed with fangs and venom; they receive no maternal care.

A female timber rattlesnake gives birth to an average of 6 to 14 young which are 8 to 10 inches long. A female copperhead gives birth to 3 to 10 young which are 7 to 9 inches long.

Food Habits

Both the rattlesnake and copperhead feed on a variety of prey. The rattlesnake has a more limited diet, feeding almost entirely on warm-blooded rodents and birds. The copperhead will, in addition, take certain insects, reptiles, and amphibians. They secure their prey by lying in a suitable spot and waiting for a small animal to pass by. Typical food hunting activity consists of lying motionless for long periods with intervals of careful and intensive prowling. Since snakes are cold-blooded, their metabolism does not require daily feeding.

Defense

Both species have similar defense mechanisms: 1) the snake lies motionless using its protective coloring to avoid detection; 2) if detected, the snake warns the intruder by coiling and flattening or inflating the body in order to appear larger, vibrating the tail, and then retreating; 3) if actually seized or cornered, the snake sprays musk from a vent in its tail to discourage the enemy, and finally strikes and bites. The venom of poisonous snakes is primarily used to obtain food; its use as a defensive weapon is secondary. Most authorities believe that more people die each year, nationwide, from bee stings or lightning than from poisonous snake bites.

Status

Both the timber rattlesnake and the northern copperhead are unique species and are an important part of Connecticut's natural history. Many experts agree that both species may be in danger due to their limited range here and to indiscriminate killing and collecting. Reports of poisonous snake sightings and inquiries for further information should be directed to: New England Herpetological Associates, P.O. Box 191, Pleasant Valley, Connecticut 06063; (203) 693-4131.

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References and Further Reading

Conant, R., 1975. A field guide to the reptiles and amphibians of eastern and central North America. Houghton Mifflin Co., Boston, MA.

Peterson, R. Connecticut's venomous snakes--timber rattlesnake and northern copperhead. Conn. D.E.P. Nat. Res. Cen. Bull. No. 103.



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