TIMBER RATTLESNAKE — LIFE HISTORY THROUGH THE SEASONS

Scientific name: *Crotalus horridus*

Color phases: dark phase (black) to light phase (yellow or gray), with dark brown or black crossbands.

Mating season: primarily mid-July through early September.

Birthing: litter of 8-12 in late August through mid-September every 3-4 years.

Maturity: 5-9 years.

Longevity: 30+ years

Mortality rate: 10-12% annual mortality in adults, possibly higher for immature snakes. Timber rattlesnakes are eaten by coyotes, foxes, raccoons, opossums, domesticated and feral cats, eagles, hawks, owls, turkeys, and even other snakes.

Black racer eating a rattlesnake

Spring: Prompted by favorable ground and air temperatures Pennsylvania's timber rattlesnakes emerge from their six-month hibernation during late April or early May.

Most dens are found on south-facing slopes under a heavy tree canopy. Snakes emerging from hibernation seek sunny, open, south-facing rocks for basking.

Basking raises a snake's body temperature. This helps ward off parasites and infection, restores metabolism after hibernation and facilitates shedding. It is crucial to pregnant females. Emergence basking may last from several days to several weeks depending upon the weather and individual needs. Male snakes and non-pregnant females begin dispersing into the surrounding forest hunting mice, voles, and other small rodents. Pregnant females remain at basking areas near their home den through the summer. They warm their bodies to ensure optimal development of their embryos.

Summer: Rattlesnakes move through their home ranges in a loop-like pattern over the summer. They start at the den with the spring emergence and return to the den in the fall. Along the way, the rattlesnake stops periodically to forage throughout small areas for several days. An adult rattlesnake will typically travel along a similar pathway and through the same general area during each active season of its life covering several miles a year.

Snakes use their tongues to smell and locate rodent travel runways on the forest floor. Rattlesnakes are "sit and wait" predators. In an ambush position snake's often lay their head on top of a fallen log and wait for a rodent to pass by.

Their strike, injection of venom, and release of prey seem instantaneous, serving to protect the snake from a retaliatory bite. The stricken prey may hobble out of sight but shortly succumbs. The rattlesnake easily follows the scent trail to find its meal, already partially digested by the venom.

The frequency of encounters between humans and timber rattlesnakes increases in July and August when male snakes actively seek mates. Mature males may travel up to six miles trying to intersect the scent trails of receptive females. This activity often coincides with hot, dry summer weather leading to the misconception that rattlesnakes are "coming down for water."

Near the end of August the pregnant females give birth to live, fully-developed young. Within about 10 days of birth, the newborn snakes shed their skins and disperse for several weeks of foraging and dodging predators.

Fall: Rattlesnakes usually return to the same den each year throughout their lifetime. Youngsters follow the adults' scent trails to denning sites by mid-October.

With its folding fangs, heat-sensing pit organs, and keratin rattle, rattlesnakes are arguably the most specialized reptile in the world. With your cooperation, timber rattlesnakes will remain a valuable component of Pennsylvania's forests.

Light phase rattlesnake

Dark phase rattlesnake

PENNSYLVANIA'S STATE FORESTS TIMBER RATTLESNAKE HABITAT

Pennsylvania's 2.2 million acres of State Forest lands provide the largest blocks of timber rattlesnake habitat remaining in the Northeast. Through cooperative ecosystem management, DCNR has an opportunity to contribute to the conservation and continued survival of this species in North America.

The presence of timber rattlesnakes is one of the components that give a wild flavor to Penn's Woods.

Worldwide the importance of venomous snakes is being recognized not only for their role as both predator and prey but for their medical value. Promising breakthroughs in treatments for hypertension, heart attack, and cancer are attributed to snake venom research.

Pennsylvania experienced a major decline in its timber rattlesnake population during recent decades attributed mainly to direct killing when they are encountered, poaching, and land development. This decline prompted the Pennsylvania Fish & Boat Commission (charged with fish, reptile, and amphibian management) to implement regulations to check the uncontrolled exploitation of the species.

We urge all State Forest users including recreational visitors, camp lessees, logging, mineral, rights-of-way contractors, and fuelwood cutters to tolerate and avoid harming timber rattlesnakes and to abide by all applicable regulations.

REGULATIONS

- Persons who hunt, capture, kill, or possess timber rattlesnakes must have a Venomous Snake Permit and attached Timber Rattlesnake Possession Tag.
- Damage to habitat is prohibited.
- Selling timber rattlesnakes or parts thereof is prohibited.

Timber rattlesnakes are protected under specific regulations by the Pennsylvania Fish & Boat Commission. For more information, consult the most recent "Pennsylvania Summary of Fishing Regulations and Laws" supplied with fishing licenses or direct questions to:

Pennsylvania Fish & Boat Commission
Natural Diversity Section
450 Robinson Lane, Bellefonte, PA 16823
http://fishandboat.com

AVOIDING & TREATING SNAKEBITES

Snakebites from chance encounters between timber rattlesnakes and people in State Forests is rare. Rattlesnakes are generally secretive and docile and normally choose to move away, hide, or issue a warning buzz to avoid a confrontation.

When cornered, surprised, or touched, the possibility of a rattlesnake striking in defense (sometimes without warning) becomes more likely.

Most people who are bitten by venomous snakes are either handling or attempting to pick up the snake.

Maintain a minimum 3-foot distance between yourself and a rattlesnake.

IN THE RARE EVENT OF A SNAKE BITE:

- If possible, immobilize the affected area and transport the patient immediately to the nearest medical facility. Do not attempt first aid measures such as incision, suction, tourniquets, alcohol, or drugs.
- Reassure the patient and remain calm.

The pit near the snake's eye is a heat sensing organ that helps locate prey.

Dealing with Nuisance Rattlesnakes

Rattlesnakes that take up temporary residence in high use areas in or near dwellings or parks should be removed. It is best to contact the local Waterways Conservation Officer of the Pennsylvania Fish & Boat Commission to move problem snakes.

When considering the well-being of both people and snakes, nuisance snakes do not need to be moved far. Displacing rattlesnakes long distances has been shown to drastically affect behavior and jeopardize survival.

Relocations of not more than 200 yards will keep the snake near a recognizable home range and discourage it from returning to the spot where it had a negative encounter.

SAFETY PRECAUTIONS

In known timber rattlesnake territory during the active season – April to October common-sense precautions will minimize serious encounters with rattlesnakes.

- Wear loose-fitting, full-length pants and high-topped (8") leather boots. Walk at a normal pace so you will not surprise a snake.
- Look for rattlesnakes before you sit down; reach into, over or under brush, logs or rocks.
- Be aware that rattlesnakes are attracted to certain structures to hunt for mice or to bask. Be especially cautious near open, sunny rock-piles, logs or boards. Snakes may also be found around sheds or equipment.
- Never attempt to pick up a rattlesnake, even one that appears to be dead.

For More Information

DCNR Bureau of Forestry
PO Box 8552
Harrisburg, PA 17105-8552
Phone: 717-787-3444
www.dcnr.state.pa.us/forestry

pennsylvania
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

TIMBER RATTLESNAKES

in Pennsylvania's State Forests

Pennsylvania Bureau of Forestry