



Northern Pacific Rattlesnake

Scientific name: *Crotalus oreganus oreganus*

The Northern Pacific Rattlesnake is a stout snake, distinguished from all other B.C. snakes by 3 features; a rattle on the end of its tail, a very distinct neck, and a broad, triangular head. Even their faces are unique – rattlesnakes have fairly large eyes with vertical pupils, a long, dark cheek patch, and they have deep pits between their nostrils and their eyes that contain heat-sensing cells. The only species of rattlesnake found in B.C., the Northern Pacific Rattlesnake, also is the only truly venomous species in our province.

Rattlesnakes have a series of dark blotches surrounded by a lighter-coloured halo running down the back. Towards the tail, the blotches occasionally become bands that circle the body. This colouration is particularly bright and crisp on juveniles. As they mature and reach their adult size of between 60 cm and 1.5 m, the colours of their heavily keeled scutes (ridged scales) become muted. Other species often are misidentified as Rattlesnakes because Rattlesnake colouration is somewhat similar to other blotched snakes. The most commonly misidentified species are the Gopher Snake and the Western Terrestrial (Wandering) Garter Snake. However, neither of these species have a rattle, nor do they have vertical pupils.

The Northern Pacific Rattlesnake generally is a quiet, non-aggressive snake. Their first response to potential danger is to stay quiet and camouflaged. Their second response is escape. If cornered, however, rattlesnakes will rattle their tails vigorously while forming an aggressive coil with the head raised and the neck in an 's' shaped curve. Striking is a last resort, usually employed if cornered by a persistent predator or occasionally when suddenly stepped on (when the snake is facing immediate physical injury).

What to do if you encounter a rattlesnake

If you hear a rattlesnake, stop immediately. Locate the snake. If you are close to the snake, remain still and allow the snake to calm down and back away. Once you are one snake body length away, step back and go around the snake. Remember, all snakes including rattlesnakes are protected under B.C.'s Wildlife Act. It is illegal to kill or harm snakes, or to remove them from the wild.

If you encounter a dead rattlesnake, don't touch it! The biting reflex remains intact even after death.

Making a living

The Rattlesnake life cycle begins in late summer to fall. This is the time that males seek females out to mate. Actually, males 'sniff' females out – the fat of a female Rattlesnake in good reproductive condition gives off an odour attractive to males. As a female moves about her habitat, the odour leaves a trail for the males to follow.

During the winter, Rattlesnakes hibernate in traditional underground dens (hibernacula) that they share with other snakes (both Rattlesnakes and snakes of other species). Rattlesnakes return to the same hibernacula year after year, making these sites critical for their survival. They emerge from the hibernacula as soon as temperatures warm up in spring. Most of the snakes disperse away from the den to summer hunting grounds. Pregnant females, however, stay close to the den and spend the summer basking at rookeries, south-facing cliffs or slopes that provide heat and shelter during the development of their young.

Rattlesnakes are live-bearing, and typically give birth to between 2 and 8 young in mid-September to October. Females do not eat while pregnant, and often return to the den to hibernate soon after giving birth. This means a female may go over 1 year without eating! In fact, female rattlesnakes only reproduce every 2 to 3 years because they need time to regain the weight lost during the previous pregnancy.

Neonate (newborn) Rattlesnakes are fully venomous but lack a rattle. Neonates have a small, modified scale at the tip of their tail called a button. The rattle is created through a series of skin sheds – each time the skin is shed, a new piece of hardened, loosely interlocking skin is added to the end of the button, creating the next segment of the rattle.

Many Rattlesnakes don't survive their first winter, as they usually don't eat before going into hibernation. They also are vulnerable to predation by a wide variety of animals such as raptors, badgers, black bears, striped skunks, and other snakes. In fact, carnivores such as badgers and bears can kill even adult Rattlesnakes.

What's for dinner?

Rattlesnakes are passive predators, often waiting for prey to find them. They locate prey by sensing the prey's body heat through their facial heat pits. Once prey is located, a Rattlesnake strikes quickly and injects the prey with venom through its long, hollow fangs. The fangs normally are folded back against the roof of the mouth, but during a strike, the fangs flip forward. Because the fangs are such important hunting tools, Rattlesnakes make replacement fangs! Most times there are a pair of fangs behind the existing set in case of breakage.

Rattlesnake venom acts by digesting tissues and interfering with the nervous system. Scientists believe that venom evolved as a tool to get prey without getting hurt – unlike non-venomous snakes, rattlesnakes don't have to wrestle with their prey. Also, venom might help snakes get more nutrition from their prey by beginning digestion before the prey is swallowed whole.

Juvenile Rattlesnakes mainly eat shrews, deer mice, and voles. Additionally, adults eat pocket gophers, wood rats, marmots, squirrels, the occasional bird, and rarely, other snakes.

Places and spaces

The Northern Pacific Rattlesnake is found only in the Thompson Okanagan region of B.C. Their known range extends from the Kootneys west to Lillooet, and north to Kamloops and Cache Creek. Within this area, Rattlesnakes can be found in Bunchgrass, Ponderosa Pine, Interior Douglas-fir, and in restricted portions of Montane Spruce and Engelmann Spruce-Subalpine Fir.

Rattlesnakes require 3 critical habitats: hibernacula, rookeries, and summer hunting grounds. Typically, hibernacula are located in talus slopes and rock outcrops, usually in south-facing fissures in the rock. Rookeries usually are within 400 m of the den. During the summer, non-pregnant Rattlesnakes use the valley bottoms and adjacent slopes as hunting grounds. Depending on the position of the hibernacula, Rattlesnakes may travel up to 3 km to reach good summer range. During the summer, Rattlesnakes appear to be mainly crepuscular (active at dawn and dusk). Pay attention when driving through known rattlesnake habitat, as these snakes often bask on the edge of the warm road during these twilight periods.

Past, present, and...future?

The survival of Rattlesnakes depends on the preservation of their habitat. Entire populations can be destroyed with the loss of a single hibernaculum. Right now, this species is not in danger of extinction. As with most of our reptiles, however, their

habitat is restricted to one of the most heavily populated areas in B.C. In recognition of their sensitivity to habitat loss, Rattlesnakes are blue-listed provincially, meaning they are a species of special concern.

Another threat faced by these snakes is human fear and persecution. Rattlesnakes are valuable predators, and likely an important control agent for some species of small mammals. By learning about Rattlesnakes, and sharing that knowledge with others, we can all help dispel fears about these unique snakes.