

Ontario's Sssnakes!!

A Quick Reference Guide

Welcome to our quick reference to Ontario's snakes. Each has an important place in our environment, and encounters with snakes should be positive experiences instead of fearful ones. We hope to assist you in identifying any snakes you are fortunate enough to find. Species at risk are noted and an approximate distribution map is included for some species. Major threats to snakes in Ontario are discussed on page eight. This information is only an introduction. A list of suggested readings is included for your reference.

Snakes with stripes



Photo by Jeff Hathaway

Eastern Garter Snake: Probably the most commonly encountered snake. Named after the fancy striped garters historically worn by men, they are usually dark in colour with three yellowish stripes from head to tail, though the pattern may be faint. Reddish-orange markings along the sides are common. Extreme variations occur, such as melanism- an all black form found in some isolated populations. Excellent swimmers, these snakes will eat frogs and fish, as well as worms and sometimes mice. Most are 50-70 cm, but large individuals may be over one 1 m in length. They have scent glands that exude a strong musk if caught, and some individuals will bite.



Sciensational Sssnakes!!

Conservation through Education

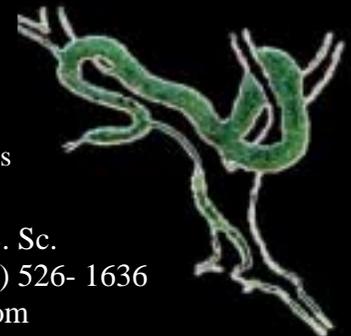
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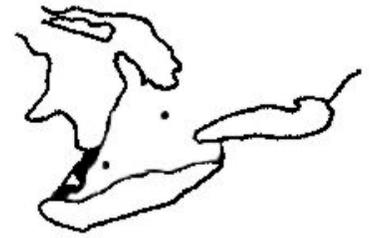
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Red-sided Garter Snake: Virtually identical to the eastern garter snake, but found only in northwestern Ontario, close to the Manitoba border. Despite the name, not all of them have red on the sides.

Butler's Garter Snake: A smaller (less than 50 cm) but very similar snake to the eastern garter. It is found only in southwestern Ontario in certain locations, usually near wetlands. These garters have smaller heads, and the lateral stripes are on different scale rows (2, 3 and 4 instead of just 2 and 3, for those who like to count). Designated as a vulnerable species in Ontario. Butler's Garter Snakes feed on worms and leeches.



Northern Ribbon Snake: Similar to the eastern garter snake, but the ribbon snake is slimmer with more defined stripes, which are found on different scale rows (3 and 4). A small white spot (visible in the photo below) is present just in front of each eye. Like garter snakes, ribbon snakes are diurnal (active during the day), and are often found basking in the sun. Ribbon snakes are widely distributed across southern Ontario but localised around the wetlands they require. They may reach about 75 cm in length.



Photo by Jeff Hathaway

Did you know that in Ontario, snakes are found as far north as James Bay??? Only Eastern Garter Snakes survive that far north here, but in western Canada the Red-sided Garter Snake is even found in the Northwest Territories, around Wood Buffalo National Park. They're among the most cold-hardy reptiles in the world! Since there are few suitable hibernation sites (called hibernacula) so far north, hundreds or even thousands of snakes may all share the same one for the winter.

Queen Snake: Rarely seen, this semi-aquatic snake is a very picky eater, preferring freshly moulted crayfish. Queen Snakes are light brown with a yellow stripe along each side and three to five narrow dark stripes along the back. The light coloured belly may also have four brown stripes. This threatened species is found along the shores of only a few rivers in southwestern Ontario. Shoreline modification and dam construction have eliminated much of its former habitat. Queen Snakes average about 50 cm in length, and like all of Ontario's striped snakes, they give birth to live young.

Eastern Massasauga Rattlesnake: Ontario's only venomous species, these are small snakes (to about 70 cm) with large dark blotches down the back and smaller blotches on the sides. Easily recognizable by the segmented rattle on the tail, which is used to warn possible predators away if sitting still and relying on its camouflage doesn't work. This snake will bite in self-defense as a last resort, often not injecting venom. They are usually found around Georgian Bay, where wetlands and rocky areas are nearby. Two small remnant populations are located near Windsor (around Ojibway Prairie) and Port Colbourne (in Wainfleet Bog). Massasaugas feed on mice, voles, and other small mammals. Like all rattlesnakes, massasaugas give birth to live young, which are born with fully functional venom glands. They are designated as threatened in Ontario, and are endangered throughout much of their range in the United States.



Photo by Don Pogue

Fast Facts:

There have only been two human deaths from rattlesnake bites in Ontario- bee stings and lightning strikes both kill more people every year. The last death in Ontario due to a bite from a massasauga was 40 years ago.

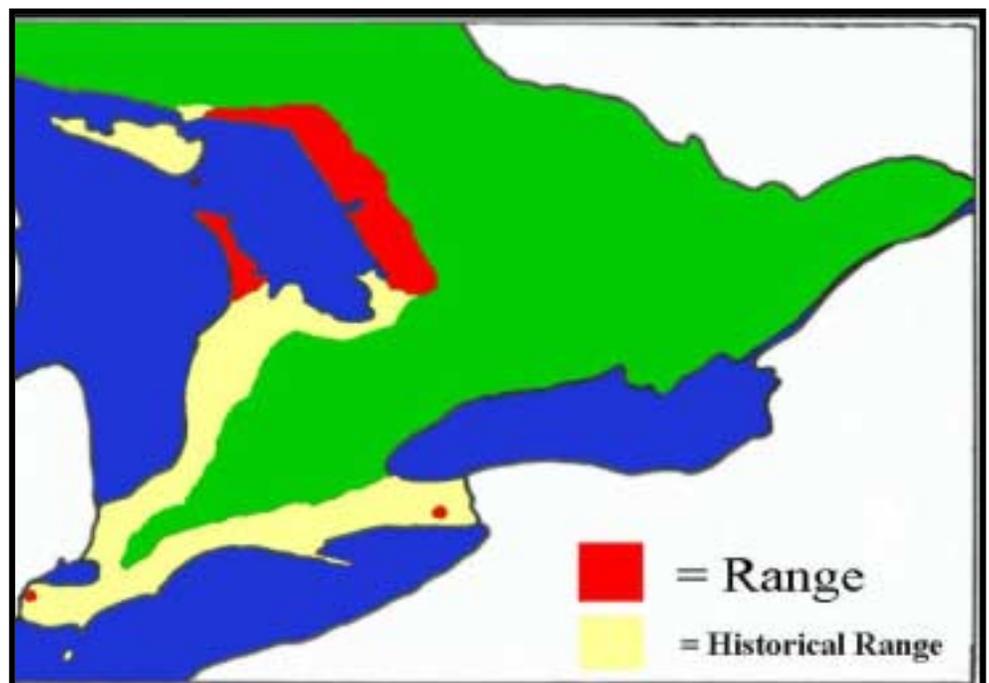
On average, about four people are bitten by rattlesnakes in Ontario each year, usually on their feet. Please wear shoes and long pants when you're in rattlesnake habitat.

If you are bitten, don't panic, but do go to the hospital.

Rattlesnake's Range:

Massasauga rattlesnakes have been wiped out from much of their historical range in Ontario. Recovery efforts are under way to help ensure their survival.

Sadly, one snake species, the Timber Rattlesnake has been extirpated from Ontario. It used to be found along the Niagara escarpment. They were largely eliminated by the late 1800's, and the last one was seen in 1941 near Niagara Falls.



Eastern Milk Snake: A slender species, with a beige background and brown to reddish blotches on the back. The belly has a black and white checkerboard pattern. They are often mistaken for rattlesnakes since they will vibrate their tail rapidly when threatened, which can produce a buzzing sound if it contacts the ground. Once believed to milk cows, hence the name, but like all snakes they only drink water! Farmers now realize the great benefit of this snake, as its primary diet is rodents. Milk snakes also prey on other snakes, including venomous species, as they are immune to the toxins. These snakes rarely exceed one metre in length. Milk snakes are found throughout southern Ontario.



Photo by Jeff Hathaway

Northern Water Snake: Commonly seen along lakeshores and ponds, they spend their time near or in the water because that is where their food lives- fish and frogs! By eating diseased fish, which are easier to catch, they help to keep fish populations healthy. These snakes are large bodied with a blotched back, which fades to plain black or brown in some adults. They will bite if restrained or otherwise threatened in the wild, but they are not dangerous in any way. Water snakes are a protected species though not considered to be 'at risk.' They are found throughout southern Ontario, sometimes as far north as Sudbury.



Photo by Don Pogue

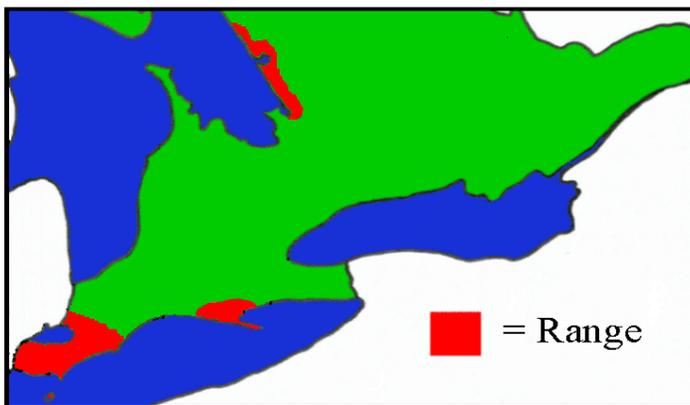
Some people confuse the water snake with a species found only in the US, the venomous water moccasin.

Lake Erie Water Snake: A subspecies of the Northern Water Snake found only on islands in western Lake Erie. It is typically grayish with a reduced pattern, and is designated as endangered.



Photo by Jeff Hathaway

Eastern Fox Snake: A mild-tempered, large (to 1.6 m) species with brown blotches on a creamy yellow background. Their belly has black blotches on white. Due to their coppery head colour, they are sometimes mistaken for a species not found in Ontario, the venomous copperhead. When threatened, wild specimens will release a strong musk and often vibrate their tails, thus they are often mistaken for rattlesnakes. Mainly rodent feeders, fox snakes also eat small birds and eggs. A threatened



species, they have a disjunct range along Lake Erie and Georgian Bay that represents the majority of their global habitat. The future of the Eastern Fox Snake depends upon the people of Ontario!

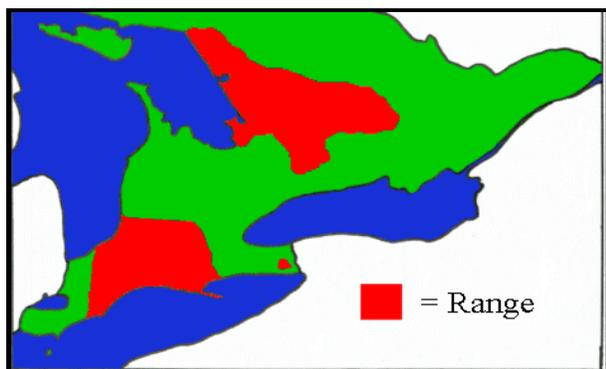
Eastern Hognose Snake: A meeting with this wonderful actor would not soon be forgotten. Although harmless and inoffensive, when threatened this snake will rear up, flatten its neck like a cobra, and hiss loudly! The mouth may gape open while hissing, but it always closes before the next act- the snake will strike at the threat, but since the mouth is closed they never bite. All of this is too scare predators away, but if it doesn't work, the hognose snake has a final act. It will roll over onto its back and play dead! If righted, the snake will roll back over again. Hognose snakes are stout bodied, and extremely variable in appearance. They may be blotchy brown, all black, olive green, or anything in between. Some even have yellow or red patches near the head. Adults may reach 80 cm. Hognose snakes feed almost exclusively on toads. Due to their frightening behaviour, these snakes are often killed by people who think they are dangerous. They are declining and are designated as vulnerable in Ontario.



Photo by Don Pogue



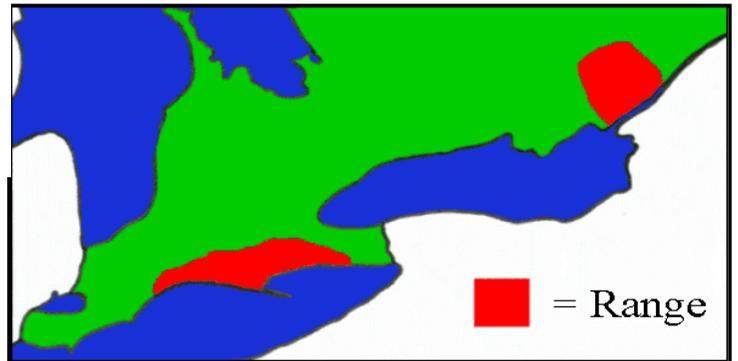
Photo by Don Pogue



Black Rat Snake: The largest snake in Ontario, often reaching lengths greater than two metres! When young, these snakes are blotched, but they darken with age and may become uniformly black. This beautiful snake is often seen in trees, usually in areas away from water. As the name suggests, rat snakes are rodent eaters, though they will also eat birds. They lay their eggs in damp locations like rotten logs, and sometimes compost piles. Black Rat Snakes are a threatened species in Ontario, found in the rocky countryside north and east of Kingston. A separate population near Lake Erie has been virtually wiped out, but small numbers persist in a few areas where the forest habitat they require is still intact.



Photo by Jeff Hathaway



The record length of a black rat snake is 2.56 m, which gives it the record of the longest snake in Canada! A close second is the Bull Snake, found on the prairies, at 2.54 m.

Snakes with uniform colouration

Brown (or DeKay's) Snake: Brown with a beige belly, and often small black spots along the back. This small (up to 40 cm) snake is sometimes found when moving rocks or pieces of wood. Very timid, the Brown Snake does not bite or musk. Because it eats slugs and worms, this snake is a gardener's friend! They are nocturnal, and can be found even in urban areas throughout southern Ontario where patches of habitat exist.

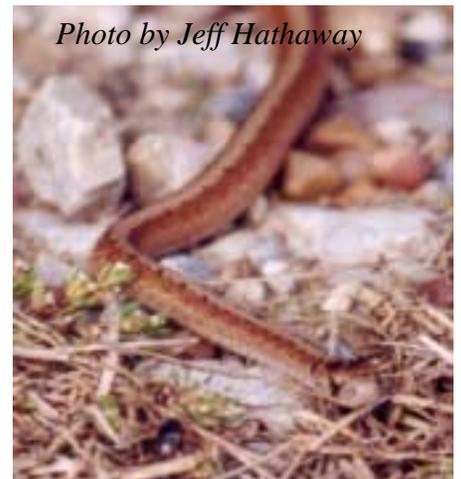


Photo by Jeff Hathaway

Snakes have no eyelids, but they do have a clear scale, called a brille, over each eye for protection.



Photo by Jeff Hathaway

Northern Red-Bellied Snake: Similar to the brown snake, but even smaller, and as the name implies, it has a red (or orange) belly. The back may be plain brown or gray. Very secretive, this snake is usually only discovered when a hiding place is exposed. Slugs are its main diet, so this is also an excellent garden snake. A very timid snake, it has never been known to bite in self-defense. Red-bellies are found as far north as Lake Superior, but they do not seem to survive in urban areas like brown snakes manage to do.

Northern Ring-Necked Snake: Ontario's most secretive snake. It is dark on the back, with a bright yellow or orange belly and a matching ring around its neck. Nocturnal and shy, it can be sometimes be found when looking under rocks or logs. This small snake feeds on earthworms, slugs, salamanders and other snakes. It is found as far north as the Sudbury area.



Photo by Scott Gillingwater

Smooth Green Snake: A beautiful bright green snake to behold. The green snake does not defend itself if caught, but it is a fast mover. Ontario's only insect-eating snakes, they love to eat grasshoppers, crickets, caterpillars and also spiders. They may grow to about 50 cm in length, and are very slender.



Photo by Jeff Hathaway



Blue Racer: These are long (to 1.8 m) and slender snakes. They are a uniform bluish-gray as adults, but the young are blotched. An endangered species in Ontario, they are now found only on Pelee Island in Lake Erie. As the name suggests, they are very fast snakes, preferring dry and relatively open habitat.



Photo by Jeff Hathaway

There are two projects which keep track of Ontario's snakes, and where they can be found. The Natural Heritage Information Centre in Peterborough records the locations of species at risk throughout Ontario, while the Georgian Bay Reptile Awareness Program focuses on sightings of reptile species in the Georgian Bay area.

YOU CAN HELP! *If you see a snake that is one of the species at risk, report your sighting on the web at:*

The Natural Heritage Information Centre: www.mnr.gov.on.ca/mnr/nhic

Georgian Bay Reptile Awareness Program: www.gbayreptiles.com

Suggested Reading:

The ROM Field Guide to Amphibians and Reptiles of Ontario. Ross MacCulloch. 2002. Published by the Royal Ontario Museum and McClelland & Stewart.
-An excellent guide with lots of great identification photos.

A Field Guide to Reptiles and Amphibians: Eastern and Central North America. Roger Conant & Joseph Collins. 1998. Houghton Mifflin Company.
-The authoritative guide on the subject.

Amphibians and Reptiles of the Great Lakes Region. James Harding. 1997. University of Michigan Press.
-A great book with lots more information than the guides.

The Eastern Massasauga Rattlesnake Stewardship Guide. A Resource and Field Guide for Living with Rattlesnakes in Ontario. Eastern Massasauga Rattlesnake Recovery Team.
-Lots of information about rattlesnakes!

Threats to Ontario's Snakes

Almost all of Ontario's snake species have declined dramatically over the last century, and their ranges have shrunk drastically. Many have been designated as vulnerable (also called special concern), threatened, or endangered in our province. Conservation issues are much more prominent now than in the past, but there are still numerous threats to the continued survival of our snakes, including:

Habitat Loss: Possibly the greatest single threat to wildlife of all types, loss of habitat imperils many species of snakes. Most of Ontario's snakes are found in the southern half of the province, and a few are found only in the Carolinian Zone along the north shore of Lake Erie. Southern Ontario has been dramatically altered by human activities such as deforestation, agriculture, and urbanization. While a few species have managed to adapt to the effects of human encroachment, most have not, and some are now restricted to islands of habitat amid the sea of human development. Draining or filling of wetland habitat has been particularly harmful for some species- southern Ontario has lost over 70% of its wetlands over the last 200 years. Many habitat restoration projects are now underway, but there is much to be done. You can do habitat restoration in your own backyard- provide snakes with rotting logs to lay eggs in, piles of rocks to bask on, or boards to hide under. You could even build an artificial hibernaculum!

Road mortality: Another major problem for snakes- being run over on roads. This can reduce or eliminate a population even where habitat remains suitable. Snakes are more seriously affected by roads than other wildlife because they don't simply cross the roads- they bask on them! Road surfaces get warm during the day, and stay warm until well after dark, so snakes often crawl out onto the road after sundown to soak up the heat. Few drivers watch out for snakes, and some even swerve intentionally to hit them if they see them. Reducing road mortality is critical to conserving many of our snake species. Unfortunately, modifying roads is very expensive, so little has been done so far.

Persecution: Snakes are often intentionally harassed or killed by people who mistakenly think they are evil, scary, or simply useless. This is not only unwarranted and ecologically unsound, it is also illegal in Ontario! Unfortunately, this doesn't stop people, and many snakes are still killed every year. If we could prevent the intentional persecution of snakes, it would go a long way towards conserving some species. Education is the best tool to achieve this goal, along with enforcement of the law where possible.

Collection: Snakes are sometimes caught by people and taken home to be kept as pets. This is also illegal, except under specific circumstances or permits allowed by law for scientific or educational purposes. Please leave the wildlife in the wild! When collection is permitted and necessary, please ensure that it is done in the least harmful manner possible. While collection may have definite impacts on a few species or populations, this threat is usually fairly minor compared to the others listed here.

Subsidized Predators: Many animals prey upon snakes. Some of these predators, notably raccoons and skunks, have adapted very well to human development, and their populations have increased accordingly. These increased numbers of predators eat a much greater number of snakes than can be sustained, so the snakes may be reduced or eliminated from the local area. Feral cats are also major predators of snakes in southern Ontario!

Ontario's snake species are protected and regulated in our province by the Ministry of Natural Resources through the Fish and Wildlife Conservation Act and the Endangered Species Act. You can find information about either of these Acts through the MNR website: www.mnr.gov.on.ca.