

# A Quick Reference Guide to Ontario's

# Snakes

Over half of Ontario's snake species are at risk... and one species has already disappeared.



This guide was created by *Sciensational Sssnakes!!* as part of the **Reptiles at Risk on the Road** project. We hope that you find it helpful. For more information about our activities, please visit [www.reptilesatrisk.org](http://www.reptilesatrisk.org) or [www.scisnake.com](http://www.scisnake.com)



Assistance for this project was provided by the Ministry of Natural Resources.



# Eastern Garter Snake

Status: Not At Risk

*Thamnophis sirtalis*

Eastern Garter Snakes are probably the most commonly encountered snake in Ontario. Named after the striped garters historically worn by men, they are usually dark in colour with three yellow stripes running from head to tail. Garter Snakes show individual variation. Some individuals may possess red or orange markings along the sides, some are missing stripes, and some are even entirely black (melanistic). These snakes are generalists, occupying a wide variety of habitats including farms, fields, forests and wetlands. Garter Snakes will eat frogs, fish, worms, salamanders, slugs, insects, and sometimes small mammals. The abundance, versatility and diurnal (daytime) habits of this snake make it frequently seen in our province. These snakes regularly reach 70cm, but large individuals

may be over one 1 m in length.

**Red-sided Garter Snake** (subspecies *infernalis*):

Almost identical to the Eastern Garter Snake (subspecies *sirtalis*), but found only in northwestern Ontario, close to the Manitoba border. Despite the name, not all of them have red on the sides.



### Similar Species:

Red-Sided Garter Snake, Butler's Garter Snake, Northern Ribbon Snake, Queen Snake.

# Northern Ribbon Snake

Status: Special Concern

*Thamnophis sauritus* (subspecies *septentrionalis*)

Similar to the Eastern Garter Snake, the Ribbon Snake is slimmer with well defined stripes. A small white stripe 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 wetland specialists, and largely eat frogs and fish. There is a lack of knowledge about these snakes in large part due to their similar appearance to the Garter Snake. They may reach about 75 cm in length.



### Similar Species:

Eastern Garter Snake, Butler's Garter Snake, Red-Sided Garter Snake.

# Butler's Garter Snake

Status: Threatened

(*Thamnophis butleri*)

A smaller (less than 50 cm) but very similar snake to the Eastern Garter. These garters have relatively smaller heads, and the lateral stripes are on different scale rows (2, 3 and 4 instead of just 2 and 3) compared to Eastern Garter Snakes. It is found only in south-western Ontario in a few locations, usually near wetlands. Butler's Garter Snakes feed on worms and leeches.

**Similar Species:** Eastern Garter Snake, Northern Ribbon Snake, Queen Snake, Red-sided Garter Snake.



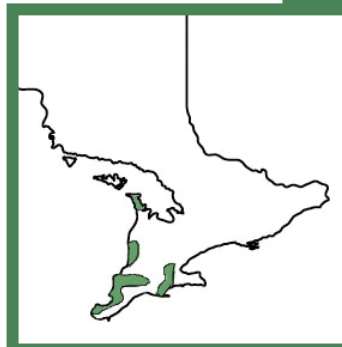
# Queen Snake

Status: Threatened

(*Regina septemvittata*)

Rarely seen, this semi-aquatic snake is a very picky eater, consuming only freshly moulted crayfish. Queen Snakes are brown with a beige or cream belly. The best feature to identify this snake is the four dark lines running from head to tail along the light coloured belly. No other Ontario snake has a striped belly. This species was once only known from the shores of a few rivers in southwestern Ontario. However it has been recently sighted in Bruce Peninsula National Park and more populations could exist in other areas of Ontario. Shoreline modification and dam construction have eliminated much of its former habitat. Queen Snakes reach an average of about 50 cm in length, and they give birth to live young.

**Similar Species:** Northern Water Snake, Eastern Garter Snake, Brown Snake.



# Northern Water Snake

(*Nerodia sipedon*)

Status: Not At Risk

Commonly seen along the shores of lakes and ponds, Water Snakes spend their time near the water because that is where their food lives: fish and frogs! By eating diseased or injured fish which are easier to catch, they help to keep fish populations healthy. These snakes are large bodied with a blotched back, often fading to plain black or brown in adults. They will bite if restrained or harassed 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 and central Ontario.

**Lake Erie Water Snake (subspecies *insularum*) Endangered:** A subspecies of Water Snake found only on islands in western Lake Erie. It is typically grayish with a reduced pattern compared to Northern Water Snakes (subspecies *sipedon*); however identification of these two species is best done using geography. The isolation of their home (Pelee Island) is one reason for their designation as Endangered.



**Similar Species:**  
Black Rat Snake,  
Eastern Hognose Snake,  
Lake Erie Water Snake.

# Eastern Massasauga Rattlesnake

(*Sistrurus catenatus*)

Status: Threatened

Ontario's only venomous species, this is a small rattlesnake (about 70 cm long) with large dark saddles on the back and smaller blotches on the sides. The Massasauga is easily recognized by the segmented rattle on the tail, which is used to warn possible predators away. The primary defense of the rattlesnake is to remain still and rely on its excellent camouflage. This snake will bite in self-defense only as a **last** resort, and sometimes does not even inject venom (dry bite). They are usually found around Georgian Bay, near wetlands and rocky areas and in two very small pockets in southern Ontario (Ojibway Prairie and Wainfleet Bog). Massasaugas feed primarily on small mammals. Like all rattlesnakes, Massasaugas give birth to live young, which are born with functional venom glands. Living near Massasaugas is easy due to their docile nature and fear of

humans. Leaving them alone is the best course of action if they are encountered in the wild.



**Similar Species:**  
Eastern Milk Snake,  
Eastern Fox Snake,  
Northern Water Snake,  
Eastern Hognose Snake.



# Eastern Milk Snake

(*Lampropeltis triangulum*)

Status: Special Concern

The Milk Snake is a slender snake with a beige background and black, brown or reddish blotches on the back. The belly has a black and white checkerboard pattern. They are often mistaken for rattlesnakes because they will vibrate their tail rapidly when scared. They do not have a rattle, but this behaviour can produce a buzzing sound if the tail contacts the ground. The name stems from the belief that this species milks cows, but like all snakes they only drink water! We now realize the great benefit of this snake, as its primary diet is rodents. Milk Snakes can also prey on other snakes including venomous species. These snakes rarely exceed one metre in length. Milk Snakes are found throughout southern and central Ontario.

## Similar Species:

Eastern Fox Snake,  
Black Rat Snake (juv),  
Blue Racer (juv)  
Eastern Hognose Snake,  
Massasauga Rattlesnake,  
Northern Water Snake



# Eastern Hognose Snake

(*Heterodon platirhinos*)

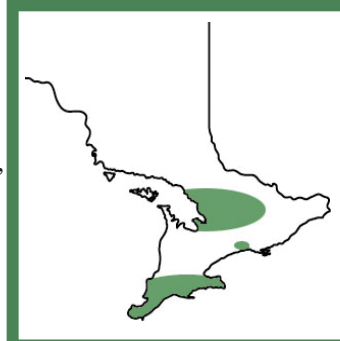
Status: Threatened

A meeting with this actor will not be forgotten. Although harmless, when scared this snake will rear up, flatten its neck like a cobra, and hiss loudly! The mouth may be open while hissing, but it always closes before striking. This act is meant to scare predators away, but if it doesn't work the Hognose Snake will play dead! If righted, the snake will roll back over again. Due to their frightening behaviour, these snakes are often killed by people who assume they are dangerous. Hognose Snakes are stout bodied, and extremely variable in colour. They may be blotchy brown, all black, olive green, and even yellow or red! Most have darker blotches on either side of the head (like ear patches). The best feature to use to identify this snake is its behaviour! All individuals have a specialized scale resembling a pig's snout (hence the name 'hognose'). They use this nose to dig into the sandy soils that they live in.

Adults range from 50 – 120 cm. Hognose Snakes prefer eating amphibians.

## Similar Species:

Northern Water Snake,  
Massasauga Rattlesnake,  
Eastern Milk Snake,  
Blue Racer (juv),  
Black Rat Snake (juv),  
Eastern Fox Snake



# Black Rat Snake

Status: **Threatened/Endangered**

(*Pantherophis spiloides* [*Elaphe obsoleta*])

This is the largest snake in Ontario, sometimes reaching lengths greater than two metres! When young, these snakes are blotched, but they darken with age and may become uniformly black. The belly is decorated with a faint checkerboard pattern often with a uniformly white/pale neck and chin. This beautiful snake is often seen in trees, and forest edges are their preferred habitat. 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 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. In this Lake Erie area they are listed as Endangered.



## Similar Species (adult):

Northern Water Snake,  
Blue Racer,  
Eastern Garter Snake

## (juvenile):

Eastern Milk Snake,  
Eastern Fox Snake,  
juvenile Blue Racer,  
Eastern Hognose Snake,  
Northern Water Snake,  
Massasauga Rattlesnake

# Eastern Fox Snake

Status: **Endangered**

(*Elaphe gloydi*)

Fox Snakes are a mild-tempered, large (up to 1.8 m) snake. Their back is patterned with brown blotches on a creamy yellow background, and their belly has black blotches on yellow or white. Due to their coppery head colour, they are sometimes mistaken for the venomous Copperhead (not in Ontario). Wild snakes will often vibrate their tails when scared causing them to be mistaken for rattlesnakes. In fact, other improper names for the Eastern Fox Snake are “Hardwood Rattler”, and “Whomper”. Fox Snakes do not resemble foxes, and were named such because the first specimen was collected by Reverend Charles Fox. Mainly rodent feeders, the harmless Fox Snake also eats small birds. They can be found in three areas of Ontario: 1) Essex-Kent, 2) Haldimand-Norfolk, and 3) eastern Georgian Bay coast. These areas encompass over 70% of the Eastern Fox Snake’s

global range. The future of the Eastern Fox Snake depends upon the people of Ontario!



## Similar Species:

Massasauga Rattlesnake,  
Eastern Milk Snake,  
Eastern Hognose Snake,  
juvenile Blue Racer,  
juvenile Black Rat Snake,  
Northern Water Snake.

# Blue Racer

Status: Endangered

(*Coluber constrictor*)

These are long (to 1.8 m) and slender snakes. They are a uniform bluish-gray as adults, but the young are brown or gray and blotched. Populations in Ontario are now restricted to Pelee Island in Lake Erie. As the name suggests, they are very fast snakes, preferring dry and relatively open habitat. They may be confused with the melanistic (black) form of the Eastern Garter Snake. Remember that geography is often helpful in identifying snakes - juvenile Black Rat Snakes look very similar to juvenile Blue Racers, but they do not live on Pelee Island!

## Similar Species (adult):

Eastern Garter Snake (melanistic)

## (juvenile):

Eastern Fox Snake,  
Eastern Milk Snake,  
Black Rat Snake (juv)



# Timber Rattlesnake

Status: Endangered/Extirpated

(*Crotalus horridus*)

Timber Rattlesnakes used to live along the Niagara escarpment in Ontario. A combination of factors including habitat loss and human persecution (see Threats to Ontario's Snakes on page 9) resulted in this species of rattlesnake disappearing from Ontario by the late 1800's. The last known individual was spotted in 1941 near Niagara Falls. Sadly, many species of snakes still living in Ontario today are still disappearing. Massasauga Rattlesnakes have been eliminated from much of their historic range, and Blue Racers are now confined to Pelee Island only. While not everyone appreciates snakes to the same degree, we should realize that all animals form a web of interactions that make up the ecosystems around us.

Removing species weakens the whole ecosystem. Conserving all species, whether they are snakes, birds, lichens, or fish, can help keep these ecosystems around in the future.



[www.reptilesatrisk.org](http://www.reptilesatrisk.org)  
Reptiles At Risk on the Road



# Smooth Green Snake

(*Opheodrys vernalis*)

Status: Not At Risk

This brilliant green snake is an incredible sight to behold! The Smooth Green Snake does not defend itself if caught, but it is a fast mover. Ontario's only insectivorous snakes, they love to eat grasshoppers, crickets, caterpillars and also spiders. They may grow to about 50 cm in length, and are very slender. The bright colour is a great camouflage in the grassy environments it inhabits, and it will even sway slightly to blend in to the grass as if being blown by the wind.

**Similar Species:** None, but have been misidentified as young Blue Racers since they may turn blue after death. Juvenile Blue Racers are a blotchy snake, not uniformly blue like the adults.



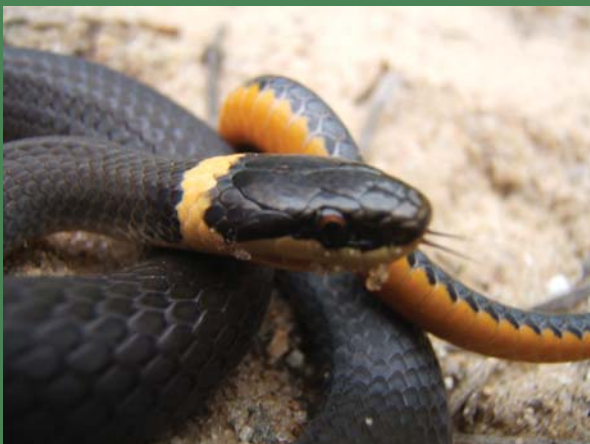
# Northern Ringneck Snake

(*Diadophis punctatus*)

Status: Not At Risk

The Ringneck Snake is one of Ontario's most secretive snakes. It is dark gray on the back, with a bright yellow or orange belly and a matching ring around its neck. Nocturnal and shy, it can sometimes be found when looking under rocks or logs. This small snake feeds primarily on salamanders and other snakes. It is found as far north as the Sudbury area.

**Similar Species:**  
Northern Redbelly Snake





# Brown Snake

(*Storeria dekayi*)

Status: Not At Risk

Brown snakes (also called Dekay's Snakes) are brown or greyish with a beige belly. Paired flecks are often present in two lines down the back of the snakes. 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, although it may flatten its body to appear larger. 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 suitable habitat exist.



## Similar Snake:

Northern Redbelly Snake,  
Northern Ringneck Snake



# Redbelly Snake

Status: Not At Risk

(*Storeria occipitomaculata*)

The Redbelly Snake is similar to the Brown Snake. Distinguishing features include the lack of paired dark flecks along the back, and the presence of a light patch at the base of the head. True to its name, the belly is red or orange. Their body colour may also be reddish in colour (see photo for a 'grey' redbelly and a 'red' redbelly comparison). 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 is not known to bite in self defense. Redbellies are found as far north as Lake Superior, but they do not seem to survive in urban areas like Brown Snakes manage to do.

## Similar Species:

Brown Snake,  
Northern Ringneck Snake.



# In Ontario, there are many threats to snakes

Almost all of Ontario's snake species have declined dramatically over the last century. Conservation activities are much more prominent now than in the past, but there are still numerous threats to the continued survival of our snakes.

## The most important threats to snakes are:



**Habitat Loss:** Most of Ontario's snakes are found in the southern half of the province, with a few found only in the Carolinian Zone along the north shore of Lake Erie. This area has been altered heavily by agriculture, and urbanization. While a few species have adapted to these changes, many have not. Some are now restricted to islands of habitat amid the sea of development. Many habitat restoration projects are now underway, but there is much to be done.

**Restore snake habitat** to your own backyard by providing snakes with rotting logs or mulch piles to lay eggs in, piles of rocks or logs to bask on, or boards to hide under. You could even construct an artificial hibernacula!



**Persecution:** Snakes are often intentionally harassed or killed by people who mistakenly think they are evil, or scary. This is not only unwarranted and ecologically unsound, but is also illegal in Ontario! Unfortunately 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.

Snakes are generally scared. They are prey for many larger animals, and will exhibit a variety of behaviours aimed at reducing their chances of being eaten. Many rely on not being seen, so their colouration and behaviour allow them to camouflage into their environment. **Escape is usually the first line of defense**, so give wild snakes some space to retreat. Other behaviours include 'musking', pooping, throwing up a recent meal, or biting. None of these things can actually harm a human (with the bite of the Massasauga being the one exception), however the snake is scared and stressed. Whenever possible, leave wild animals be. Enjoy watching them in their natural habitat without trying to capture or restrain them.





**Road mortality:** Another major problem for snakes is 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 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. 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. Ecopassages like those built in Banff, Alberta, or Florida could be vital to the persistence of wildlife around roads.



**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. Outdoor cats are also major predators of snakes in southern Ontario! You can help by reducing the garbage available to wildlife at your homes and campsites, and keeping pets indoors or on a leash.



**Collection:** Snakes are sometimes caught by people and taken home to be kept as pets. This is illegal and results in the removal of breeding individuals from the wild; a serious blow to already struggling populations. Please leave the wildlife in the wild!

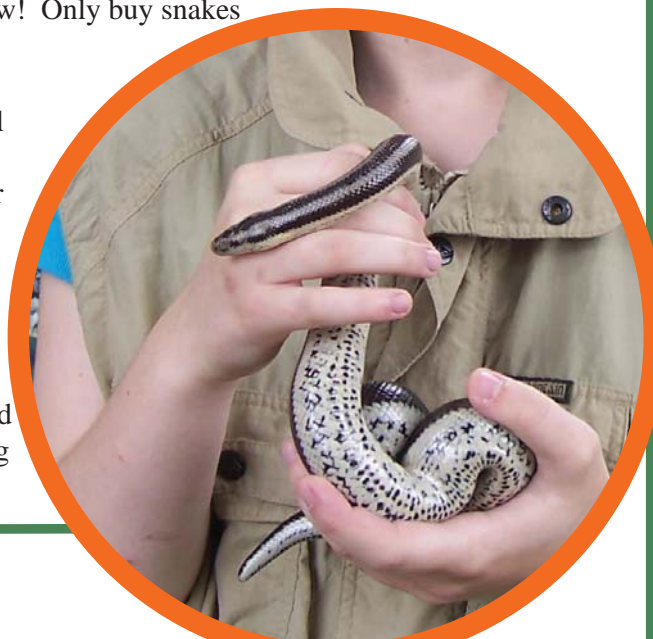
## Pet Snakes *do's and don'ts...*

**Do** lots of research before you bring home a pet snake. Read books and websites about snake care! Different species need different things to stay healthy, and you need to be able to provide that for a snake in a tank. Figure out important information like size of the adult snake. Many species can grow into huge snakes!

**Don't** take a snake from the wild, or buy a snake that was taken from the wild. This is hurting wild populations of snakes, and is often against the law! Only buy snakes born in captivity.

**Do** keep your snake and its container clean. All animals can produce bacteria in their gut (like salmonella). Keeping cages clean will keep your snake healthy and also reduce the risk of getting salmonella. Washing your hands is a good idea after handling any pet, and before you eat.

**Don't** let your pet snake go in the wild if you don't want it anymore. Find someone who would like a pet snake, and save them the cost of buying one. Always be responsible for your pet.



# Get Involved!

## Ontario Herpetofaunal Atlas Program

([www.ontarionature.org/herpetofaunal\\_atlas.html](http://www.ontarionature.org/herpetofaunal_atlas.html))

Report sightings of snakes, other reptiles, even amphibians!  
Understanding where these creatures live can help us protect areas for them to survive in the future

Naturalist groups are a great way to experience many facets of wildlife and nature. To find one in your area check out:

[www.ontarionature.org/network/groups\\_regions.php](http://www.ontarionature.org/network/groups_regions.php).

Visit **Scales Nature Park** [www.scalesnaturepark.ca](http://www.scalesnaturepark.ca) for a first hand look at most of Ontario's native snakes (and many other reptiles and amphibians of Canada). Located near Orillia, Ontario

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

## For More Information

[www.carcnet.ca](http://www.carcnet.ca) - Information, quizzes, and conferences about Canadian reptiles and amphibians

[www.scisnake.com](http://www.scisnake.com) - Information about Ontario snakes, pet snakes, and outreach programming

[www.cosewic.gc.ca](http://www.cosewic.gc.ca) - Read reports on why Ontario's snakes are listed as endangered, threatened, or special concern

<http://www.torontozoo.com/AdoptAPond/snakes.asp> - Check this site out for some species guides for Ontario snakes!

Snakes are **not always COLD**. They keep their body temperature just right by laying in the sun or hiding in the shade.

**Did you know** that in Ontario, snakes are found as far north as James Bay???

That's the Eastern Garter Snake! Garter Snakes across Canada live in northern environments, making them one of the most cold tolerant snakes around!

**The Water Snake is NOT a Water Moccasin.** The **only** venomous snake in Ontario is the Massasauga Rattlesnake.

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