

Amphibians & Reptiles on the Niagara Escarpment

By Fiona Wagner

For anyone fortunate enough to be hiking the Bruce Trail in the early spring, it can be an overwhelming and humbling experience. That's when the hills awaken to the resounding sound of frogs - the Wood frogs come first, followed by the Spring Peepers and Chrous frogs. By summer, seven more species will have joined this wondrous and sometimes deafening cacophony and like instruments in an orchestra, each one has their unique call.



Spiny Softshell Turtle

Photo: Don Scallan





Like an oasis in a desert of urban development, the Niagara Escarpment is home to more than 30 reptiles and amphibians, including several at risk species such as the Dusky Salamander and Spotted Turtle (both endangered) as well as the threatened Jefferson Salamander. It is the diversity of the escarpment's varied habitats, including wetlands, rocky outcrops and towering old growth forests, that make it an ideal place to observe and experience both rare and common species.

"It's the magic of an ice cave in August, to a fern that walks, to a salamander that lays its eggs on land. That's what being out on the trail is all about," says Bob Johnson, curator Amphibians and Reptiles,

Toronto Zoo. "It's this sheer diversity and the density of some of these experiences. I'm hooked for that reason. You'll never know what you're going to find."

When and where to go

While it's possible to see amphibians and reptiles from March to October, you'll have more success if you think seasonally, says Johnson. "That's so you don't go out in the wrong season and do a lot of invasive investigation to find something that's hiding now, but in the spring, it's doing what it wants to do and it's everywhere doing it."

While many amphibians and reptiles can be quite secretive, if you time your visit right the abundance

of some of these creatures can be an astonishing experience, says Don Scallen, a teacher and vice president of Halton North Peel Naturalist Club. Don hits the Trail in early spring to watch the rare and local Jefferson salamanders and their more common relative, the Yellow Spotted salamander.

"A good night for salamander migrations would be early to mid April when it's been raining during the day. You literally have to watch your step because there are so many salamanders bubbling out of the ground, they're just that numerous," he says. "They're all headed to their breeding pools where they congregate. We've seen masses of these creatures in one small area of



one pond in particular. It's a wondrous thing to watch -- something you don't want to miss in the springtime if you live in the area.

Spring is primetime but even then, weather and time of day plays a role. "The main thing to remember when looking for reptiles and amphibians is they are exothermic, so they don't control their own body temperature," says Joe Crowley, Ontario Herpetofaunal Atlas Project Coordinator for Ontario Nature. "If it's really cold, they'll be hiding underground. If it's really hot, they'll be hiding in shade so the ideal temperatures are between 15 and 25 degrees Celsius."

That's why if you're out and about on cool and sunny morning, you're

likely to see the more common snakes such as the Garter, Brown and Redbelly basking, on a rock or log as they try to warm up.

That said, when not hunting or basking those same snakes - as well as the more secretive Northern Ringneck and Eastern Milk snakes - can also be found on forest trails under rocks and logs. That's also a great place to find Ontario's only completely terrestrial salamander, the common Eastern Redback salamander.

"We have an incredible abundance of reptiles and amphibians but you'll only see them if you look under things where they're hiding," says Crowley.

As for wetlands and shorelines, they can be a particularly productive

place for seeing Ribbon and Water snakes, Snapping and Painted turtles (to find them, look for bumps on a log) and of course frogs and toads, the most common being American toads, Green frogs and Leopard frogs. "You'll see most of those things just by walking around the edges of wetlands and shorelines," says Crowley. "Snakes will go shooting out into the water and frogs will hop out of the way as you walk past."

While you'll find the greatest variation and number of species in the southern half of the trail, if you're up near the Bruce Peninsula, look for rocky outcrops with some vegetative cover - a favoured habitat for the hard-to-find Eastern Massasauga Rattlesnake, which despite having

Five-Lined Skink



Photo: D. Twitchell

Blue Spotted Salamander



Photo: Calvin Knaggs

Eastern Fox Snake



Photo: Calvin Knaggs

Eastern Hoghose Snake



Photo: Calvin Knaggs

Midland Painted Turtle



Photo: Don Scallan

Red-Eared Slider Turtle (non-native)



Photo: Don Scallan

Four Toed Salamander



Photo: Calvin Knaggs



Photo: Calvin Knaggs

the notoriety of being Ontario's only venomous snake, has only killed two people in Canada ever.

"[Amphibians and reptiles] are by far the easiest group of species to actually go and look for," adds Crowley. "Compared to birds, there aren't as many of them, they're easy to tell apart and they're easy to find. If you flip a rock and there's a snake, it's sitting right there... two feet from you. You don't need to squint through binoculars to see it."

Under threat

Numerous as they are, these creatures aren't without threat. Despite the UNESCO World Biosphere designation and the Niagara Escarpment

Find information on, and images of, the many different types of reptiles and amphibians found on the Niagara Escarpment and beyond, visit:

- Adopt-A-Pond Species Guides: <http://www.torontozoo.com/AdoptAPond/>
- NRCAN: Amphibians & Reptiles of Ontario: <http://cfs.nrcan.gc.ca/subsite/glfc-amphibians/>
- ROM: Common Amphibians of Ontario: <http://www.rom.on.ca/ontario/fieldguides.php>

Get involved:

By submitting observations of your Bruce Trail sightings, you can help improve knowledge of the distribution and abundance of reptiles and amphibians in Ontario.

- Frog Watch Ontario: <http://www.torontozoo.com/AdoptAPond/FrogwatchOntario.asp>
- Ontario Turtle Tally: <http://www.torontozoo.com/AdoptAPond/TurtleTally.asp>
- Ontario Herpetofaunal Atlas Program: http://www.ontarionature.org/herpetofaunal_atlas.html
- Nature Watch FrogWatch: <http://www.naturewatch.ca/english/frogwatch/on/intro.html>

Plan, a disturbing number of species are in decline. The cause? Habitat loss and fragmentation, road construction and cars, pollution and human collection and persecution.

Beyond their fascinating biology and behaviour, their intrinsic right to survival and their role as part of our natural heritage, their continued existence is important to us on



a more personal level: these animals live in a habitat that is important for human health and happiness, explains Julia Phillips, Adopt-A-Pond Coordinator, Toronto Zoo. For example, wetlands function as filters for the water we drink and act as storage basins, keeping floodwaters out of our basements.

What's more, amphibians are considered the first indicator of environmental destruction and pollution, she says. "They absorb everything immediately into their bloodstream and breathe through their skin as well, so they can tell you about air and water quality." When the frogs disappear, that's bad news for us.

"All of these species are interconnected and if we lose too many species, the ecosystem isn't going to perform the way it should, if it doesn't

collapse all together," adds Crowley.

The good news is continued preservation and celebration of the Bruce Trail and its Conservation Corridor goes a long way towards species survival: "It's the habitat you need to save, not the individual species or the animal," says Phillips. "If you save the habitat, they'll be there."

Tips for amphibian and reptile watching:

- Stay on the trail and don't trample the vegetation
- If you flip a rock or log, put it back exactly the way you found it. Salamanders are extremely sensitive to micro-climates and if the conditions aren't perfect, they'll abandon the site.
- Take only photographs – don't handle or remove any creatures

- Remember your binoculars, camera, field guide and flashlight. Wear solid hiking boots and pants for the trail and rubber boots for wading.
- Take notes of where you see creatures and what they were doing. A GPS is a great tool and helps inform citizen monitoring programs
- If you're up in the northern Bruce and you see a Massasauga Rattlesnake, don't panic. Their fangs are tiny and they have a short strike distance. Stop, listen for the rattle and go back the other way. And remember: like most snakes, it's more scared of you, says Crowley.
- Take your time, be quiet and be patient. "These animals are so diverse and have such extraordinary behaviour," says Johnson. "But it takes a little longer for them to demonstrate that to us." •



Red Backed Salamander

Photo: Calvin Knaggs



Northern Map Turtle

Photo: Calvin Knaggs



Queen Snake

Photo: Calvin Knaggs



Northern Water Snake

Photo: Calvin Knaggs



Red Eft (Eastern Newt)

Photo: Calvin Knaggs



Massasauga Rattlesnake

Photo: Adopt-A-Pond



Stinkpot Turtle

Photo: Dan Herbert



Eastern Smooth Green Snake

Photo: Calvin Knaggs



Snapping Turtle

Photo: Andrea Kitzner

