



MAITLAND MUSINGS

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Where Does the Wildlife Go For Winter? by C. Godwin, MNR

Ever wonder where all the wildlife goes once the snow hits? Movies and media have made it obvious for some species, like the hibernating bear or birds that migrate south. But what about other wildlife who are forced to stay here?

Insects

Many insects have developed well timed lifecycles to deal with the cold. Some species, like grasshoppers and crickets, lay dormant in their egg phase over the winter and hatch in the warmer weather. Butterflies and moths have multiple life stages and may remain as caterpillars or in their cocoons as pupa over the winter, while some species like the Monarch butterfly may migrate great distances to their winter breeding grounds south of the border. Honey bees form a large cluster in their hives with the Queen bee at the centre. The temperature of the cluster can range from 27 °C at the centre to 9 °C at the outer layer. Many subterranean insects, like ants and termites, will dig below the frost line and remain there until spring.

Fish

Fish will slow their metabolism and decrease their body temperature during the winter months. In deep lakes the fish are usually unaffected by the winter however, in shallow lakes with ice, the fish have to compete with aquatic vegetation for oxygen and may suffocate before spring.

Amphibians

Stream salamanders, like the Northern Two-Lined Salamander, tend to live in groups near ground water discharge areas (eg. under rocks, logs and leaf litter). If conditions get too cold, they may go as far as 90 cm underground. Aquatic frogs, like the Leopard Frog and American Bullfrog, will hibernate either semi-submerged or on top of the river bottom. Terrestrial frogs, like the American Toad, will dig down below the frost line over winter. The Wood Frog, however, is not an adept digger and may resort to hiding under logs or in rock crevices which makes them susceptible to freezing. Fortunately freezing solid is not a problem for a Wood Frog. These frogs have increased glucose concentration in their vital organs which protects them from ice crystal formation and cellular damage. The frogs' vital functions will stop over the winter and resume once it has thawed.



Reptiles

Unlike mammals, reptiles are cold blooded meaning they depend on external sources to control their internal body temperature. Where a mammal requires a lot of energy to maintain a warm constant internal temperature, a snake does not. When a snake hibernates (correct term for reptile hibernation) it is alert, sluggish and has an extremely low metabolism. Snakes do not have the ability to freeze (see Wood Frog) so

they must find rock crevasses or holes which reach below the frost layer for their winter berrmation. Aquatic turtles, like the Painted Turtle, will bury themselves in the mud bottom of a water body and rely on oxygen diffusion through special skin membranes for air. Snapping Turtles have been known to use muskrat lodges or dig down about 1 ft under logs for the winter.

Mammals

Mammals have developed a number of ways to deal with winter:

1) Hibernation:

Mammals are warm blooded creatures meaning they require a consistent source of energy all year long. Larger mammals, like Black Bears, will bulk up during the summer and fall and hibernate throughout the winter, slowing down their metabolism and surviving off their internal fat deposits. Bats will drop their heart rate from 600 beats/min to 10 beats/min. Woodchucks will drop their breathing to once per 5 minutes.

2) Warm fur:

Coyotes, squirrels and many members of the weasel family have special fur to protect them from the winter elements. Many have a dual layer coat with longer thick wiry guard hairs, which collect the snow and wick it away from the body, and short soft under fur, which insulates them from the cold.

3) Diet:

White-Tailed Deer quickly become generalists in the winter months. They will choose a habitat with a closed canopy to protect them from harsh winds and deep snow. They will resort to eating bark off of trees to survive. Their stomachs are specially designed with specific bacteria which allow them to digest bark.

4) Subterranean:

Small mammals, like mice and voles, live under snow covered vegetation like long grasses and shrubs. They create tunnels through the vegetation and soil to scurry between food caches and plant stalks.



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Rummaging for Royalty: The search for a rare snake in the Maitland by Katie Duncan, Nature Conservancy of Canada (NCC)

Commonly thought of as cold-blooded and aggressive, this false stereotype forgets the elegance and good nature of most of Ontario's snakes. In the field with Huron Stewardship Council (HSC), Nature Conservancy of Canada (NCC), Conservation Authority staff, and Ministry of Natural Resources (MNR) staff, this inexperienced reporter was turned doe-eyed at the sight of a slithering jewel: the queen snake.

A rare sight for Ontario biologists, queen snake habitat is as rare as the creature that relies on it. These snakes need a rocky, watery area to hide, along with a healthy supply of crayfish – their primary food source. While finding queen snakes proved to be a real task, more than enough satisfaction was gained by a successful search on NCC lands in the Lower Maitland River Valley.

And we begin

Our day started relatively early. The convoy left Guelph at seven o'clock eagerly hoping for a sighting, yet realistically expecting very little. We had picked one of the hottest days of summer to begin our search, but the queen snake has a general dislike for heat, so promise was low. Scott Gillingwater, a Species at Risk Biologist for Upper Thames River Conservation Authority, was our queen snake expert for the trip. Before launching our search, his spiel included why we might not find anything at all.

"Queen snakes have declined across large portions of their historic range, leaving some areas either without queen snakes or in very low densities," Scott said. "They are quite cryptic, making surveys difficult in some areas. As the season progresses and temperatures warm, queen snakes are often more spread out and/or hidden by shoreline vegetation and rocks, or they seek cover in crayfish and mammal burrows."

Cutting through the brush and bramble, we were met with just one sound: a cool river cutting a path through high cliffs of rock on the opposite side of the river. Our teams split up with the goal of overturning as many rocks as possible, all the while being gentle and careful of where we stepped. This was not for fear of falling in (I am sure with the heat that would have been welcome) but for fear that we could crush the snake



we were searching for. **I think we're onto something!**

About 15 minutes into the search, and much to everyone's surprise, the team across the river claimed the first sighting. And then another... and another!

Handling these snakes with care was just as important as being careful where we stepped. Tanya Pulfer, a

conservation biologist with NCC cautions anyone who must handle them at all.

"It is actually illegal to handle an endangered or threatened species without a permit," Tanya said. "Even with a permit handling should only take place for research or identification, purposes in order to minimize stress to the animal."

The only exception to the rule if the species is in immediate danger, such as being in the middle of a busy road, and even then, special care should be taken in moving any animal.

Just after lunch on NCC's side of the river, we also had our own first sighting, but it was simply too quick to catch. No matter, because four hours later, dripping in sweat at the end of the day, our sighting grand total was 11! Nine caught and measured and two spotted on the run.

Scott was surprised at the outcome, as were we all. At the beginning of our trip, after all, he had cautioned our high expectations of finding the even a single queen snake because of its rarity and the day's humidity.

Victory is ours

"Based on many years of work with queen snakes, I've observed many sites with small populations and [had] limited success during surveys," Scott said.

"However, the site we visited appeared to have an abundance of good habitat, an abundance of crayfish, and appeared mostly free of

human influence."

He did caution though, that a smaller, more official survey of the area would need to be done over a longer period of time to observe the population.

All in all, a day well spent. And for this very un-scientific intern, even I left knowing the full weight of what we had discovered. However, I also took away with me a heavy question. If queen snake populations are at-risk because the habitat they need is fragmented or gone, how many other species out there face this same problem? Clearly, more needs to be done. But while the outlook appears daunting, my hope is restored by the work that NCC and many caring individuals are doing, to help.

If you come across the queen snake, or any other species at risk, I encourage you to take a photo, record coordinates if you can, and note the habitat around you. The staff at NCC and MNR would be happy to learn of your findings! All sightings can be reported directly to the province's Natural Heritage Information Centre at www.nhic.mnr.gov.on.ca.

For more information about what you can do to help, please visit



Jim on Stewardship by J. Ginn

Have you ever been asked a simple question that makes the world seem to stop, makes you stop and analyse your life and makes you ask yourself the question "how in the world did I become what I am"?

That moment of clarity happened to me last September. I had agreed to host a tour for the Lake Huron Youth Summit and thirty some high school students from communities along the shores of Lake Huron and Georgian Bay came to my farm to observe some of the stewardship projects I had competed. Now, I have hosted many tours before and many times explained the "whats?" and the "hows?" of the stewardship projects on my farm but this question stopped me in my tracks. The question, by an inquisitive young woman was "why". In her words, why had I become an agricultural super steward? I had never been asked that before!

I paused for a long time before answering. I considered what exactly defined me as a person and realized it was three things: agriculture and the love of farming; community involvement and environmental stewardship. The first two were easy to rationalize. My parents farmed and I too loved working with animals, being outdoors and the satisfaction of watching a good crop grow. My parents were heavily involved in the community sitting on what seemed every political, social and church committee. In my family, community involvement was simply something you did.

The stewardship side was different. I was raised on a conventional farm engaged in conventional farming practices. How did I become a national award winning steward?

I started slowly saying I thought it was because of several events that happened near the same time in my life. One day, twenty five years ago, I walked into an agricultural retail store stating some fencing needed to be replaced around the pasture near the creek. I was told I could get a 75% grant on fencing if I fenced the cattle out of the stream. With the lay of the land this would result in the "loss" of over twenty acres of rough pasture land. What would I do with that land I asked? Well, you could plant it in trees, was the response I received. I said that wasn't going to happen and left the store.



1988

Shortly after, I was in my uncle's woodlot which was being logged at the time. You would not have even missed the trees being taken out, if it was not for the tops which had yet to be cut into firewood. His payment was equal to ten per cent of what I had just paid for my entire farm. That seemed pretty good!

Sadly, at that time my father passed away and even at

the young age of thirty I began to think about legacies and what I wished to accomplish with my life. I decided to fence the stream and plant the trees, thinking if I was unsuccessful at farming at least I would have the trees to leave to my kids



What I saw in the following years is what changed my perspective. The stream was transformed. The banks heavily trampled by years of cattle crossing were rebuilt by sediment from upstream. The water, wide, still and cloudy became narrower, faster flowing and clear. Fish returned to the stream. The growing trees changed the ecosystem of the valley, cooling the water and providing habitat for wildlife. Song birds inhabited the valley and later hawks arrived thinking the song birds made for a good breakfast.

I was amazed by how nature could heal itself when given the chance and that by working with nature instead of always against it resulted in equal if not greater profits on the farm.

This is the "why" to becoming a good steward and with many projects over the years, hundreds of thousands of dollars invested, many grants applied for and received, tours for people from abroad, I have come to the conclusion that incentives+action+observation = conviction

For years I have helped, encouraged, pressured and prodded others to do that first project and see with their own eyes the results of their efforts. If everyone does a little, the results are great!



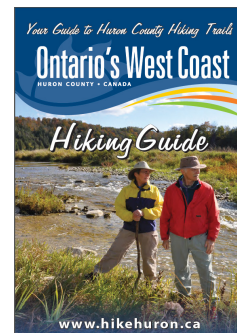
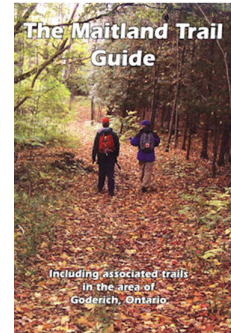
2003

Maitland Trail Association by S. Reid & C. Fisher

The Maitland Trail Association (MTA) was formed on July 2, 1975 with the proposal to build a trail which would follow the path of the Maitland River. The Maitland Trail Association encourages hiking, cross-country skiing, snow shoeing, all-terrain cycling and nature study as a form of recreation along this trail. The trail is built largely on private land through the courtesy of the landowners. Permission of the landowners is granted for the trail as a footpath and is not intended for the use of motorized vehicles of any type.

The Maitland Trail entrances are marked by distinctive identification plates and by white blazes two inches wide and six inches long, placed on trees or posts so they are within the hikers' line of vision. A single blaze indicates the trail continues in the same direction. Two blazes one above the other indicates a change in direction. Side trails, lookout points or paths leading to points of interest are marked with blue markers.

The guide offers full colour detailed maps and informative text describing conditions found on the trails, as well as pointing out places of geographic, historic and cultural interest. This information will enhance use of these trails for local residents and visitors, as they appreciate the natural beauty of the Maitland River Valley while they enjoy walking and hiking in the area. The 48 kilometer Maitland Trail, from Goderich to Auburn, is divided into five sections, with a map available for each section. These detailed maps show contour lines, landmarks and distances. MTA volunteers checked the trail distances using GPS (Global Positioning System) units.



INTERESTED IN BECOMING MORE INVOLVED IN THE LOWER MAITLAND STEWARDSHIP GROUP?

The Lower Maitland Stewardship Group holds meetings several times a year and invites interested landowners to come out and join the discussions, help plan outings, and stay informed about happenings in the Valley!

Quarterly meetings are held at the Tourism office in Goderich on the first Thursday of the month and begin at 7:00pm.

The upcoming meetings are scheduled as follows:

• March 1, 2012 • June 7, 2012 • Sept. 6, 2012 • December 6, 2012

Further, if you would like to be receive additional information about LMSG meetings and activities, please send your email to Denise at:

dvanamersfoort@huroncounty.ca

