Halton/North Peel Naturalist Club

The Esquesing

May – June 2021 Newsletter
Volume 55, Number 5

Table of Contents

President's Message 2
Talks 4
Naturalist Club Evening Walks – Summer 2021 4
Fun From the Web 6
Ontario Breeding Bird Atlas III 7
Masthead Photo 7
The Butterflyway Project in Halton Hills 8
Life Renewed 10
The Rose-breasted Grosbeak 12
Mourning Dove with Pied Feather Pattern 13
Some Squirrel Observations from Halton 14
Salamander Observations, Spring 2021 19
Spring Wildflower Photo Quiz 23
More Fun From the Web 24
Quiz Answers 24
Halton/North Peel Naturalist Club 25
Halton/North Peel Naturalist Club Membership Form 26

President's Message

Well, the warm weather has been decidedly on-and-off, but Spring is well underway! Salamander season is behind us, but the frogs are raising delightful choruses in the swamps and marshes by night, while by day the birds are singing away with migration in full swing and breeding season gaining steam.

Our club members have been as busy as ever, with coordinating events, writing articles, checking favoured hotspots and reaching out to speakers for the monthly meetings.

The Native Tree Workshop and Giveaway is just concluding, after an excellent presentation at the workshop by Don Scallen. One hundred and eighty trees have been delivered to sixty good homes thanks to the support of the Town of Halton Hills and the hard work of all the club members who organized and supported it. *Congrats* and *thank you* to all who made it possible and run so smoothly! This is an important achievement, since, like the Bees and Beyond Pollinator Garden workshop of 2019, it encourages and facilitates the planting of more native plants and trees throughout our community – and this is a major ecological benefit for our local ecosystem. Well done all, including those who received those trees and shrubs and planted them in your yard or garden!

We will try to resume our evening nature walks on a more regular basis, starting this month, as the Covid restrictions and guidelines allow, and planning to proceed through the summer. Bill McIlveen and Fiona Reid have assembled an extensive list of dates and great walks to explore throughout the summer. Check out the details in the newsletter.

Also in this newsletter, you will find the usual assortment of great articles by some of our excellent authors – spring wildlife, plants, salamanders, birds, mammals and more are all featured, so have a look and a good read. Maybe wrap it up by testing your recognition of some beautiful Spring ephemeral flowers with the photo quiz at the back!

Birders have been feverishly racking up sightings, with the wrap up of the Winter Birding Challenge in late March rolling straight into the Spring Birding Challenge. An impressive list of sightings has already been compiled with more new species being found each day – including some rare and difficult to find species! Kudos to all you binoc-toting, hawk-eyed spotters! Keep the sightings coming!

Our monthly meeting speaker talks continue to amaze: in May we will host a talk by Rich Hoyer, a naturalist of broad expertise and long experience. He will spotlight the Pribilof Islands in the Bering Sea, off Alaska. These rocky, windswept islands are renowned for their Seal and Seabird populations particularly, and they represent an incredible North Pacific island ecosystem. Rich became well acquainted with them while living there and will share his experiences at the May 11th meeting.

In June, we will be joined by Dan Stuart, a consulting botanist and ecologist, who will talk to us about tallgrass prairies and oak savannahs in Ontario as islands for rare and protected species. These rich and very special ecosystems have their own character and flora and fauna, as well as their own conservation challenges. Dan will share his expertise and insight on them with us on June 8th.

Be sure to join us for the meetings – hope to see you there!
Happy Spring - stay safe and healthy!

Yves Scholten

Pictured below are the native trees for the giveaway before and after bagging. The selection includes: shagbark hickory, bitternut hickory, burr oak, nannyberry, alternate-leaf dogwood and downy serviceberry.

Talks and Walks

Talks

As you know your executive will continue to hold Zoom meetings online for the time being. Meetings will still begin at 7:30 p.m. on the second Tuesday of the month and will start with a half hour business meeting, hosted by our new president, Yves Scholten, then we'll be treated to a captivating presentation as listed below. Zoom login details and information will be sent out closer to each event date. We hope you'll join us!

Note: If you wish some support from Alexis to ensure your Zoom connection is functioning smoothly, please log in to zoom at 7:20 pm, prior to the meeting, for helpful zoom tips.

Zoom meeting Tuesday, May 11, 2021 at 7:30 pm Zoom login details will be e-mailed out.
Rich Hoyer: The wildlife of the Pribilof Islands
Rich will give a talk about the wildlife of the Pribilof Islands. As these islands are located in the Bering Sea off Alaska, and mostly consist of rocky cliffs and tundra, they are noted for seabirds, which nest there in the millions.

Zoom meeting June 8, 2021 at 7:30 p.m. Zoom login details will be e-mailed out.
Dan Stuart: Ontario Prairies, Savannahs and Grasslands.
Dan Stuart is a consulting botanist and ecologist, and sits on Tallgrass Ontario's Board of Directors. He'll showcase the importance of tallgrass prairies and oak savannahs in Ontario as islands for rare and protected species, as well as their restoration and conservation.

Naturalist Club Evening Walks – Summer 2021

Halton/North Peel Naturalists and South Peel Naturalist Clubs

The two partner clubs are optimistic that at least some of our normal Monday Evening Walk program can be carried out during this coming summer of 2021. It hardly needs to be mentioned that the COVID pandemic has caused difficulties over the past year and that the problem is far from resolved. Despite that general concern, we have proactively prepared a list of destinations that we hope to visit during this coming summer.

Conditions may change at any time throughout the walk season so some events may not be possible. The changes could see a complete lockdown, a large relaxation in the restrictions, or things may remain more or less as they are at the time this list was originally prepared. We have prepared the present list on the general presumption that some restrictions will prevail for most of the season. We do not expect that the current 'stay-at-home' orders will persist throughout the season; however, the rapid spread of the virus at the time that this walk announcement was prepared shows how difficult it can be to plan for anything. At present, only groups of five can gather so we would certainly not hold walks under those conditions. Walks during the early part of the season may have to be cancelled but we will do our best to keep everyone appraised. Under both of the Gray Lockdown and Red Lockdown, groups of up to 10 people can gather outdoors provided that the appropriate

safety protocols are adhered to. We will try to operate limited walks during Gray or Red conditions. There are a couple of events where larger numbers can be accommodated.

The attached list of walk locations will give potential participants a general idea of what walks are to be expected. You will note that the schedule has roughly alternating weeks in the north and south areas of our geographic area of interest. This is to balance out the needs for the two clubs.

The current plan is to inform and remind club members of the next planned event via an e-mail message on a weekly basis (likely on Tuesdays). This will serve as an informal registration so that we can plan and reply to interested participants. The notice of member's intent to attend will be done on a first-come, first-served basis where possible but it may be necessary to deviate from that a little so that everyone has a fair and equal chance to participate. We ask anyone that is added to the 'expecting-to-attend' list but later finds they have to cancel to let us know so that someone on the waiting list has an opportunity to participate. Knowing who to expect will aid us in letting people know if weather has caused a weather-related cancellation. Please reply to Bill McIlveen via e-mail at wmcilveen@sympatico.ca after you have received the weekly notice.

Unless there is an alternative arrangement, all walks are on Mondays and start at the meeting location at 7:00 pm sharp. The meeting location details are listed here but there is always a chance of change that will be provided with the weekly notice.

Meeting Spot Details

Iroquois Shoreline Woods – Parking lot on west side of Joshua Creek Drive. Additional parking may be available across the road in the industrial park.

Acton – Meet at parking lot for Prospect Park near Fairy Lake, then check for Chimney Swifts in Town.

Colonel William Parkway – A few parking spaces are available on west side of Colonel William Parkway just north of Stockbridge Ave. Alternates are at St, Mary School on east side of road or on nearby residential streets. Meet across road from Colonel William Parkette at trail.

Scotsdale Farm - Parking lot at Scotsdale Farm, east off Trafalgar Rd north of Sideroad 27, Silver Creek.

Shell Park – Park at lot near washrooms at north end of Shell Park, west of Bronte.

Hall Road, Georgetown – There are 2 or 3 parking spots at the end of Hall Road. south of Hwy 7 on the east side of Georgetown. Local on-street parking should be available. Meet at trail entrance at end of Hall Road.

Kerncliff Park, Waterdown – Parking lot at former quarry near northern end of Kerns Road south of Waterdown. Due to one-way traffic restrictions, it is necessary to travel north on Kerns Road to lot.

Oakville High School – Old closed high school east side of Reynolds St. between Sheddon Ave and former Oakville Trafalgar Hospital.

Green Glade School – Green Glade east off Meadow Wood Road, Clarkson.

Hwy 401 at Hwy 25 – Commuter parking lot at SE intersection of Hwy 401 and Hwy 25, Milton.

TBD - To be determined, for southern area

Date	Location	Meeting Place	Leader
17-May	Iroquois Shoreline Woods	Iroquois Shoreline Woods	Bill McIlveen
24-May	Acton Swift Watch	Acton	Bill McIlveen
31-May	Colonel William Parkway	Colonel William Parkway	Bill McIlveen
7-Jun	Scotsdale Bird Box	Scotsdale Farm	Bill McIlveen
14-Jun	Creek Path Woods	Shell Park	Bill McIlveen
21-Jun	Morden Nelson Park	Hall Road, Georgetown	Bill McIlveen
28-Jun	Kerncliff Park	Kerncliff Park, Waterdown	Bill McIlveen
5-Jul	Crozier Tract	Highway 25 at Hwy 401	Bill McIlveen
12-Jul	Speyside	Highway 25 at Hwy 401	Fiona Reid
19-Jul	TBD	TBD	Dawn Renfrew
26-Jul	Oak Park	Oak Park, Oakville	Bill McIlveen
2-Aug	Hildebrandt Trail	Highway 25 at Hwy 401	Bill McIlveen
9-Aug	Swift Night Out	Oakville High School	Bill McIlveen
16-Aug	Speyside	Highway 25 at Hwy 401	Fiona Reid
23-Aug	Rattray	Green Glade School	Bill McIlveen

Fun from the Web

Man unexpectedly became host to a duck who laid eggs on his ninth-floor balcony during the first lockdown, only for the same to happen again this year. A touching story of their rescue dubbed Operation Mallard and Operation Mallard 2 at https://www.msn.com/en-gb/news/world/woman-shares-the-extreme-lengths-her-father-went-to-in-order-to-protect-ducklings-that-hatched-on-his-balcony/ar-BB1gbJKQ#image=1

Cute story of a seal found scooting through P.E.I. neighbourhood and gets a ride in a police cruiser then release back into the water where it belongs. https://globalnews.ca/news/7657586/seal-scooting-through-pei-neighbourhood-rescued/

Ontario Breeding Bird Atlas III

The Purpose of the Atlas

The goal of the Atlas is to map the distribution and relative abundance of Ontario's approximately 300 species of breeding birds – from as far south as Middle Island in Lake Erie, to Hudson Bay in the north.

The data collected over five years provides essential information for researchers, scientists, government officials and conservation professionals. It will guide environmental policies and conservation strategies for years to come.

Data collection for the two previous Ontario atlases ran from 1981-1985 and 2001-2005, followed by the publication of books summarizing the results. The two previous projects were enormous (and successful!). But we're hoping Atlas-3 will be the best one yet – providing an unprecedented understanding of the status, distribution and abundance of the province's birds and a huge database of information that can be used for bird conservation purposes well into the future.

For more information or to report what you find around their own home go to birdsontario.org

Masthead Photo…

Canadian Wild Ginger, *Asarum canadense*
Photo by Fiona A. Reid

Wild Ginger grows profusely in our deciduous forests, its tiny red flowers at ground level or hidden under leaf litter. This plant does have a gingery root, but it is not advisable to use it as it also contains carcinogenic compounds. The roots have been used as a poultice as they have antibiotic properties. The low-lying red flowers attract small flies looking for carrion. They enter the flowers and pick up pollen, which may then be transferred to another plant. Seeds develop in a small pouch that also contains a small oily packet, the elaiosome, that attracts ants. Ants carry off this pouch and so disperse the seeds.

The Butterflyway Project in Halton Hills

Article and Photos by Fiona A. Reid

Last year, club member Katherine Shaw signed up as a Butterflyway ranger with the David Suzuki Foundation's butterflyway project. I joined her, along with many other volunteers, and we worked on planting native perennials in community gardens (including McNab Park in Norval and at the Dominion Seedhouse in Georgetown). Katherine was instrumental in signing up 50 private gardens to the project! Halton Hills is now the 11th official Butterflyway in Canada. It's even been added to the Visit Halton Hills website as a reason to visit our area!

Skipper on swamp milkweed

This year we want to expand and add another 50 private gardens to the Butterflyway project. Where better to start this outreach than right here among our club members? I will outline what you need to do to get involved, and why. What you need to do is simple. Plant some native flowering plants that provide nectar for pollinators. Contact Katherine at butterflyway20@gmail.com to sign up. That's it. To make it even easier, our group has a number of native plants we can give away for free!

Mothfest on common milkweed

To tackle the WHY question is a bit more complex. Why do we need native plants? Don't bees come to a variety of garden flowers not just natives? This is true, but there are numerous reasons for selecting natives. We are losing insect biodiversity at a very rapid rate. Insects are adapted to feed on and use natives that they have co-evolved with. Some pollinators may take nectar from non-natives, but in some cases these flowers do not provide a good diet for insects, being more like candy than healthy food for them. Furthermore, if insects are drawn away from native plants to the candy factory, those may go unpollinated and not spread. More important, pollinators, butterflies in particular, are flagship species – that is, they are the ones we can

use to promote the creation of a healthy environment because of their appeal, but they are just the tip of the iceberg. Let's take a look at milkweed, for example. We know that monarchs use milkweed as a host plant for their caterpillars, and the adults also may visit milkweed for nectar. But when we plant milkweed, we provide food for so much more than mere monarchs. Throughout the range of milkweeds, this genus supports at least 36 species of caterpillar (I did a quick check on HOST, a great database for who eats what in the lepidopteran world). Milkweeds are also important for numerous other insects including milkweed bugs, swamp and red milkweed beetles, cobalt milkweed beetles, milkweed aphids, and many more. When I visit my garden at night in the middle of summer, I see clouds of moths lining up to feed on nectar of common milkweed. I've identified over 40 species of moths nectaring on milkweed just in my own back yard. When you plant a milkweed, you are helping create part of a balanced ecosystem. Focusing on pollinators is a useful way to introduce people to native plants and to see insect action up close, but it is just one part of the whole picture.

A cranefly lands on swamp milkweed covered in milkweed aphids, perhaps to dine on droplets exuded by the aphids.

More difficult still, we really need to move away from the lawn culture. Lawns provide very little to our native insects, and they cause us to use gas-powered mowers, fertilizers and herbicides. Lawns should, in my opinion, be restricted to sports fields, septic beds, and pathways through the garden. Although we are a long way from making a radical change in lawn use, do consider digging up a few square feet of lawn and putting in some native plants this year. Or, as Sam Jaffe suggested, just leave it alone. Take a spot and let it grow! Better yet, plant a native tree (we have a tree workshop coming up soon, with free trees for participants). Native trees are the ultimate providers of food for insects, food and homes for birds and other wildlife.

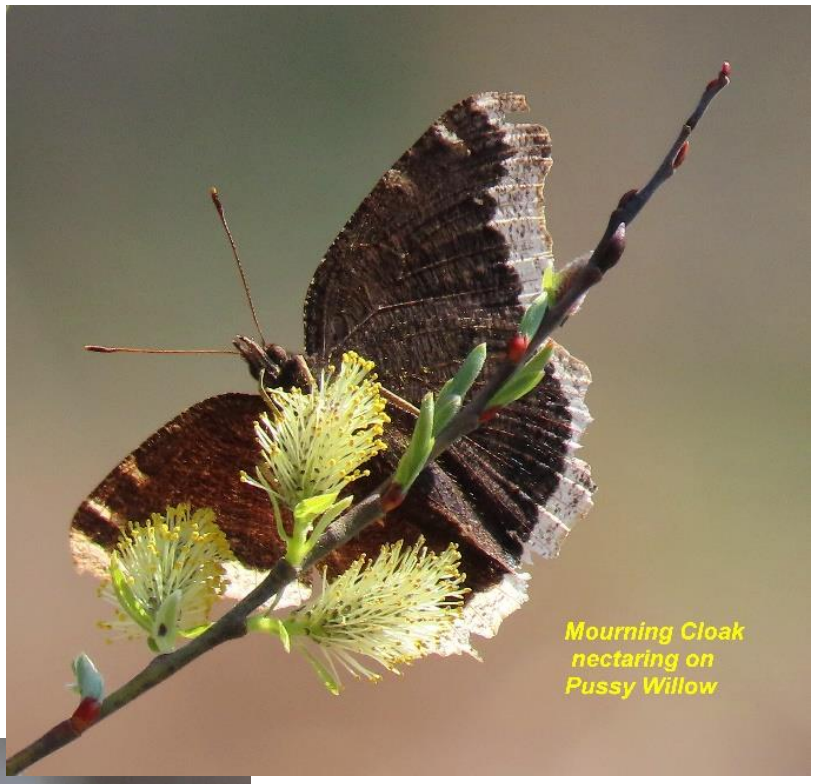
We are all stuck at home right now, so it is a good time to make the most of your garden, and make your garden into something the small majority all around us can also make the most of.

Life Renewed

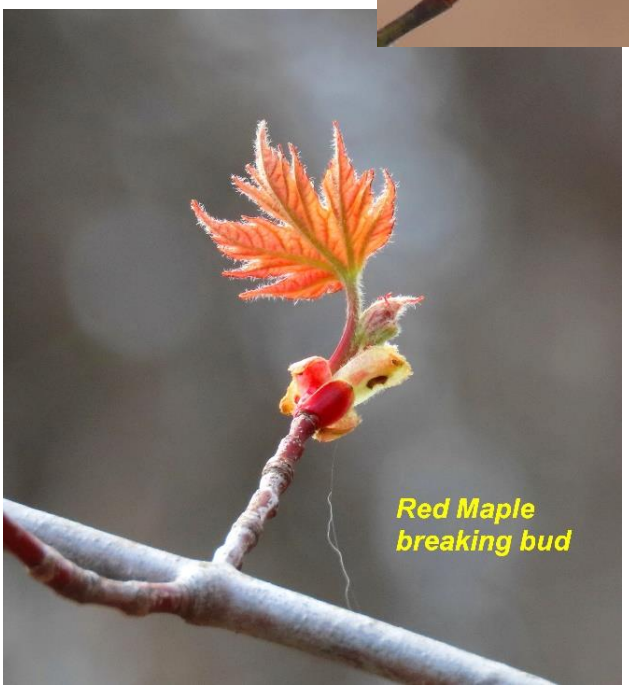
Article and Photos by Don Scallen

Frogs and salamanders awake in these long-anticipated days of early spring. Buds swell and the first wildflowers unfurl their petals to greet the warming sun. Rain and meltwater coaxes green from the moist earth.

Migrant birds reclaim territories in the still leafless woods. One is the winter wren, whose ethereal voice cascades from hidden perches among cedar and hemlock.



There is much to quicken the pulse at this time of year. So much to see, hear and appreciate. The earliest blossoms of our lovely woodland wildflowers for example, including spring beauty and hepaticas daubed white, pink, and purple.



Leatherwood, a glorious woodland shrub with the form of a muscular mature tree, is blooming. Its yellow flowers spangle escarpment woodlands. Tilt your nose to them to inhale a subtle but delightful scent.

Frog song reverberates in the spring woods: The ubiquitous piping of spring peepers, the guttural quacking of wood frogs and, in some locales, the creaky voices of chorus frogs.

And of course, there are the salamanders that engage in age-old mating rituals in woodland pools. The most common of these, the spotted salamander, is a creature of sublime beauty.

These salamanders enjoy a brief aquatic sojourn before they leave the ponds and retreat with their beauty underground for the remainder of the year. But they leave behind their precious eggs, seeds of another generation.

The ponds where frogs and salamanders breed are biotic soups filled with fascinating invertebrates. Water beetles and daphnia, backswimmers and fairy shrimp are all part of a great matrix of life animated by this turn of the seasons.

Underwater shot of wood frog eggs and wood frogs mating.

As the Covid pandemic holds us in its stubborn grip, a walk in the woods at this time of year can buoy spirits. Life renewed in all its glorious diversity.

Please go to this site for more spring pictures:

https://www.inthehills.ca/2021/04/life-renewed/

The Rose-breasted Grosbeak

Article and Photos by Fiona A. Reid

At this time of year, I make sure to set out a bird feeder with a convenient perch and a good stock of sunflower seeds so that I can enjoy close-up views of the spectacular male Rose-breasted Grosbeak and his more subtly-marked partner. They come to the feeder to restock after migrating north from Central and South America. Some may come from as far away as Peru. After a week or so, they take off in search of good breeding areas. In addition to seeds, they eat fruit, buds, and insects (beetles in particular).

These birds favor woodland edge and openings for their nests. I've even found nests in hedgerows between farm fields. Both male and female select the nest site and build the nest, which can be flimsy enough that eggs are visible from below. In our area they usually produce a single brood in May or June, but occasionally may have a second brood. The male does about 1/3 of the incubating, and the sexes sing quietly to each other when they exchange places on the eggs.

Rose-breasted Grosbeaks typically sing from the canopy where they can be hard to spot. Their song has been described as similar to a robin that has had opera training, is drunk, or is unusually happy! One giveaway is the metallic *chink* or *pink* note given by both males and females. To me the song has a liquid, bubbling quality, unlike the harsher robin song, or the more nasal call of a Scarlet Tanager.

In some areas, they are colloquially known as cut-throats, but the red breast is not used in aggression between males. A study using mounted specimens showed that males attacked the white flank and rump of the stuffed impostors, not the red breast.

If you are lucky enough to have these wonderful birds visiting your feeder, pay attention when the male flies off as the underside of the wing is lined with rose-pink. Stunning!

Mourning Dove with Pied Feather Pattern

Article and Photos by Laura Weihs

In early March a Mourning Dove with a Pied feather pattern arrived back at my feeder. Its unique colouration means it's leucistic with the genetic condition called leucism. Leucistic birds appear lighter than normal but aren't fully white because melanin and other color pigments are reduced but not eliminated as they are in albinism. They also have normal-colored eyes rather than pink or red eyes like albinos. Leucistic birds may be pale, with an overall lightening of their coloring or they may be pied or piebald, with white patches across their body. Their feathers rarely have a symmetrical pattern as is the case with the bird at my feeder. The two sides are quite different.

Above: pied or piebald Mourning Dove

On the right: view of other side with different patterning.

Although I read that discoloured birds may struggle during courtship since plumage color is a way to find and recognize potential mates, this particular bird has a mate and it's no problem. Judging by their enthusiastic advances, they are quite smitten with each other!

I read of two other sightings of Mourning Doves with genetic mutations affecting their colouring in the *Birds of Hamilton and Surrounding Areas* by Robert Curry. One an albino Mourning Dove in Sept. 1952 and the other a total melanistic dove in July 1992 both at the east end of Hamilton Harbour.

For more on albinism, leucism and melanism go to:
https://www.birdsandblooms.com/birding/birding-basics/albinism-in-birds/

Some Squirrel Observations from Halton

Article and Photos by W.D. McIlveen

In general, squirrels are probably the most-frequently-encountered mammal in our area. That does not mean that they are the most-abundant. That honor would likely fall to the 'mice' but they are small, secretive, and nocturnal. A general rule of thumb is that the larger the animal, the fewer there are on the landscape. The fewer the number of animals, the lower the chance of human encounters with them. Some of the larger animals can be nocturnal, secretive and utilize habitat where humans seldom trespass. Squirrels happily occupy human-dominated sites including urban parkland and back yards where they can be easily observed. Some squirrels are so common that they barely warrant attention from humans.

There are 86 mammal species in Ontario [Dobbyn]. Of this, 25 are rodents in which group, the squirrels are grouped. The squirrels in Ontario include Least and Eastern Chipmunk, Northern and Southern Flying Squirrel, Fox Squirrel (limited to Pelee Island), Red Squirrel, Franklin's Ground Squirrel (limited to the far northwest of the province), and the Eastern Gray Squirrel. The latter species is the subject of this article. In addition to the species listed here, the Groundhog is also a member of the squirrel family (Sciuridae) but it does not resemble the other members of the family. The Thirteen-lined Ground Squirrel appears in the Ontario mammal species list based on a record of one animal at Sibley (Sleeping Giant) Provincial Park. This individual was likely transported to that location by accident.

The Eastern Gray Squirrel occurs in several different forms. The two most-common forms are a Gray morph (Fig. 1) and a Black morph (Fig. 2). The Gray morph apparently also has a melanistic form. They also have a much-less-common white morph. These are not albinos. Some of these occur in Toronto (Fig. 3) but the Town of Exeter, Ontario promotes its white squirrels. In addition, the Black Squirrel also has some members that are piebald (Fig. 4) and other unusual colour patterns (Fig. 5).

Fig. 1. Typical Eastern Gray Squirrel Acton 2012

Fig. 2. Black morph of Eastern Gray Squirrel 6 of 8 animals observed at Acton 2016.

Fig. 3. White morph of Eastern Gray Squirrel Toronto 2015 Photo by Eli McIlveen.

Above: Fig. 4. Piebald form of Black Squirrel seen at ROM Toronto 2019.
Below: Fig. 5. Unusual form of Black Squirrel at Guelph Arboretum. Photo by Chris Early.

The Black and Gray forms do occur together but overall, the black form is somewhat more common in the northern parts of the species range [Dobbyn]. Innes and Lavigne [1979] reported that the melanistic forms had lower heat losses and lower metabolic rates than grey morphs during the winter. This would logically mean that black forms were better-suited to colder conditions in the northern parts of the species range.

Data Available

Beginning in 1986 and lasting through 2020, observations were made of the squirrel numbers seen at sites in Halton. Observations were also made elsewhere but the numbers involved were too sporadic to include here. The observations were made opportunistically throughout Halton but more systematically on my own property south of Acton. This is recognized as being Lot 27 (Conc. 7, Nassagaweya) in the data tables below. The data for Lot 27 is also included within the data for all of Halton.

Unfortunately, a uniform data-collection effort was not maintained throughout the 35-year period. The period between 2001 provided relatively few records (Table 1). To deal with this problem, the data was combined for the periods 1986-1990, 1991-2000, 2001-2010, and 2011-2020. Data concerning the number of animals was averaged per visit or observation period. Separate tallies were made of the numbers of each of the black and gray morphs. During the entire 35-year period, 2449 individual observations are represented covering a total of 4063 squirrels in the data presented.

Table 1. Total observations of Black and Gray Squirrels in Halton 1986 to 2020

Period	All Halton		Lot 27	
	Black	Gray	Black	Gray
1986-1990	166	109	141	97
1991-2000	232	77	108	33
2001-2010	66	30	2	0
2011-2020	546	309	313	220
Total	1010	525	564	350

Overall, 1535 squirrel observations were made throughout Halton during the 35 years of data collection. This total does include those records for Lot 27. In rough terms, the observations made at Lot 27 represent a more or less constant effort at one site for a bit more than half of the records while the rest of Halton is represented by more-random observations.

Table 2. Total Squirrels observed at Halton sites from 1986 to 2020

Period	All Halton		Lot 27	
	Black	Gray	Black	Gray
1986-1990	252	155	204	139
1991-2000	390	85	199	40
2001-2010	101	35	7	0
2011-2020	1014	464	650	328
Total	1757	739	1060	507

The total numbers of squirrels observed are summarized in Table 2. It should be noted that the numbers for Halton also include those seen at Lot 27. The total numbers of Black Squirrel for all of Halton is 1757 animals whereas the total for Gray Squirrels is 739. A similar pattern was seen at Lot 27.

Table 3. Average number of Black and Gray Squirrels in Halton population from 1986 to 2020

Period	All Halton		Lot 27	
	Black	Gray	Black	Gray
1986-1990	1.421	1.533	1.367	1.440
1991-2000	1.971	1.098	1.573	1.357
2001-2010	1.861	1.205	3.500	
2011-2020	1.961	1.461	2.211	1.493
Total	1.803	1.324	2.163	1.430

Excluding the limited numbers for Lot 27 in the period 2001-2001, the average number of squirrels noted per observation mostly ranged between one and two animals (Table 3). The low average number was 1.098 (Grays for all of Halton in the period 1991-2000) to a high of 2.211 (Black Squirrels at Lot 27 in 2011-2020). In one instance (2014), the total Squirrels tallied at McCraney Creek Park was 18 Black and 17 Gray Squirrels. Such numbers were unusual as the next highest numbers were 8 squirrels on a few miscellaneous occasions.

Table 4. Proportion of Black Squirrels in population in Halton from 1986 to 2020

Period	Total Squirrels		% Black	
	Halton	Lot 27	Halton	Lot 27
1986-1990	407	343	61.92%	59.48%
1991-2000	475	239	82.11%	83.26%
2001-2010	136	7	74.26%	100.00%
2011-2020	1478	978	68.61%	66.46%
Total	2496	1567	70.39%	67.65%

Black Squirrels were more abundant than Gray Squirrels. Table 4 indicates that the Black morph ranged roughly between 60% and 80% of the population. The 100% assessed for the Lot 27 populations from 2001-2010 is an artifact of the overall low number of squirrels counted (only 7) during that period. The numbers from the entire study indicate that Black Squirrels formed 70.4% of all the squirrels seen. Overall, the numbers of the two different colour morphs shows that the black form in Halton outnumbers the gray form by slightly more than two to one. Because the species is so common, the disparity in morph numbers is likely to go unnoticed without data such as that presented to support such a conclusion.

References.

Dobbyn, J. (S.). 1994. Atlas of the Mammals of Ontario. Federation of Ontario Naturalists, Don Mills, Ontario, 120 pp.

Innes, S., and **D.M. Lavigne**. 1979. Comparative energetics of coat colour polymorphs in the Eastern Grey Squirrel, *Sciurus carolinensis*. Can. J. Zool. 57: 585-592.

Salamander Observations, Spring 2021

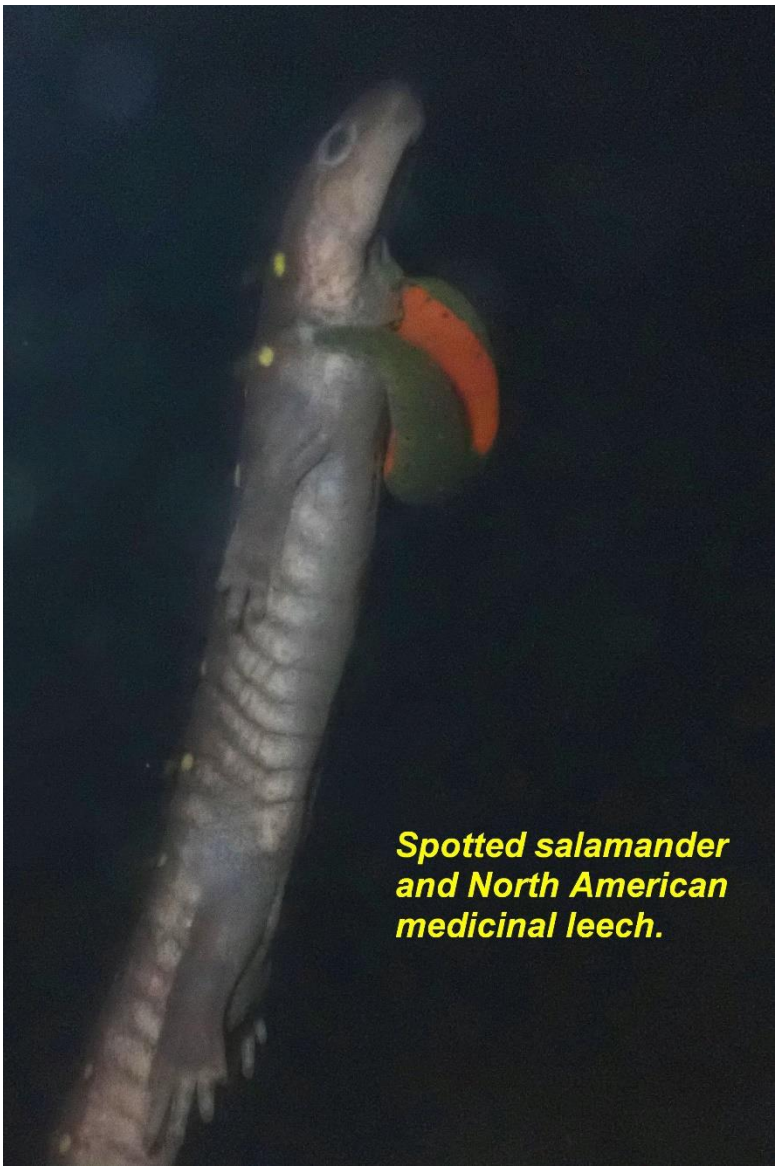
Article and Photos by Don Scallen

I spent many hours this spring watching salamander breeding at a variety of vernal pools and one permanent pond. My first salamander encounter of the year was on March 11 at a largely ice-covered vernal pool where ten Jefferson* salamanders were observed. (* I use "Jefferson" for convenience. There is, apparently, no way to visually distinguish pure Jefferson salamanders from the common female unisexual salamanders that have a mix of genes from Jefferson and blue-spotted salamanders.)

Breeding activity peaked in early April and by April 23 I could find no salamanders at the pond I visit most often. The wonderful pageant that is salamander breeding was over for another year.

Observations of interest and a few intriguing mysteries:

Leech parasitism: leeches, including the large, colourful North American medicinal leeches, frequently parasitize salamanders. These leeches almost always adhere to the salamanders where their upper legs join their abdomens. I ponder what they do when the salamanders leave the ponds.



Spotted salamander and North American medicinal leech.

Salamander longevity and predation: I photographed piebald (partially leucistic) salamander "C" again this year. This salamander was first photographed in 2010, then again in 2017, 2019 and 2020. Assuming at least a two-year juvenile period, "C" is at least 13 years old. An obvious question to ask is how such seemingly vulnerable animals could avoid a host of potential predators for such a long life. How, for instance, do they avoid being eaten by the abundant and voracious shrews that share their fossorial habitat? One answer is likely

the toxins that spotted salamanders and other salamanders secrete. My guess is that these toxins are especially potent in their tails. The only evidence of predation I've encountered in my years of watching these salamanders are severed tails, left uneaten by predators. I found another this year.

Other predation events that have come to my attention include a mink posted on Facebook with a large salamander in its mouth and a curious tale told to me by a research assistant of Professor (emeritus) Jim Bogart of Guelph University, the preeminent Jefferson salamander expert in Canada. The researcher was following a Jefferson salamander fitted with a PIT tag, allowing it to be tracked. But the salamander was moving far too fast. The puzzle was solved when the signal lead the researcher to a gartersnake. It had swallowed the salamander.

Returning for a moment to spotted salamander longevity: a recent post on Facebook claimed that a spotted salamander taken from the wild, lived 50 years in captivity. A dubious claim perhaps, but spotted salamanders do have the potential to live long lives.

Salamander navigation: A fascinating question to ponder is how salamanders navigate back to their natal ponds in the spring. What cues are they using to find their ponds from distances that can range, according to Jim Bogart's reaserch with Jefferson salamanders, up to 1km away? Salmon use the chemical signatures of their natal streams to return "home" to spawn. Salamanders though, generally travel overland back to their ponds. Do they use their olfactory sense to "smell" their pond from distances up to a kilometre? A gentleman who studied spotted salamanders in Algonquin Park connected with me on Facebook. He was baffled by the ability of salamanders to navigate over long distances and suggested we may never know how they do it. My guess is that we may eventually solve this riddle and it may be as astonishing as coral responding to the phases of the moon to coordinate the release of eggs and sperm. Or the cues monarch butterflies use to navigate south to their overwintering sites in Mexico.

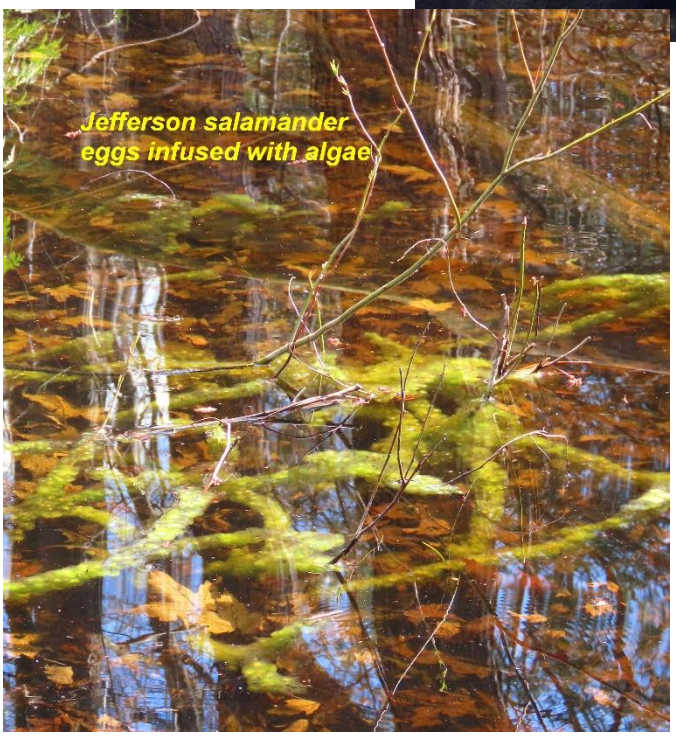
Another aspect of salamander navigation merits attention and this brings us back to salamander "C". A fascinating feature of salamander "C"'s spring reproductive journey over the years is its appearance in almost precisely the same place when it reaches its pond. Considering the size of the pond and the near limitless possibilities to access the pond at other locations, this is astounding. It bears some similarity perhaps to songbirds that return to the same small territory after spending the winter thousands of kilometres to the south. Salamander "C" not only finds its natal pond but also returns to precisely the same point in the landscape where it was in previous years. This suggests, that while olfactory cues may be employed to find natal ponds, other cues may be used to locate precise breeding sites at those natal ponds.

Reproductive miscues: At one vernal pool I came across a bizarre scene involving a spotted salamander. An aggregation of primarily male wood frogs were – presumably – attempting to mate with a female in their midst. Male frogs of most species will compete vigorously to mate with the sometimes scarce females. Surprising though, was the spotted salamander trapped in the frenetic mating ball. It couldn't move as it was being held fast by one or more frogs. I suspect that it made the mistake of surfacing for air, close to the testosterone-crazed frogs. One grabbed it and it became incorporated into the mating ball.

Wood frog aggregation with spotted salamander trapped within

At another pond I found a spotted salamander in the firm mating grasp of a pickerel frog. This is the second time I've witnessed a pickerel frog clasping a hapless spotted salamander.

Algae and salamander eggs. It has long been known that algae have a mutualistic relationship with spotted salamander eggs. The algae in spotted salamander egg masses produce oxygen through photosynthesis, benefitting the salamander embryos in the low oxygen environment of pond water. In turn the salamander embryos excrete ammonia waste creating a nitrogen-rich environment for the algae to grow. In 2010 a remarkable discovery revealed that algae wasn't only residing in the jelly of the eggs, but within the cells of the embryos themselves. This was the first example found of algae inhabiting the cells of a vertebrate! Then algae was also found in the oviducts of female spotted salamanders raising the possibility that female spotted salamanders house algae in their bodies and use it to inoculate their eggs with it when they lay them.



In my pond explorations this spring I've noticed that algae commonly grows in Jefferson salamander egg masses. In some ponds the Jefferson egg masses are easy to find because they are bright green. After a brief look at the literature on the internet I could find no mention of a relationship between algae and Jefferson salamander eggs. Could the mutualistic mechanism that exists between algae and spotted salamander eggs also prevail with Jefferson salamanders?

In closing, I look forward to March 2022. If the uncertainties of existence allow, I'll be back in our local ponds to learn more about the fascinating lives of salamanders.

Spring Wildflower Photo Quiz

Photos by: Fiona Reid

Answers on page 24

More Fun from the Web

Gorgeous nature photos from the CAPA Canadian Association For Photographic Art Competition Winners – 2020 Nature-Wildlife – Individual
https://capacanada.ca/competition-winners-2020-nature-wildiife-individual/

Sure to give you a smile with images of cute baby animals!
https://www.homeoanimal.com/blogs/blog-pet-health/worlds-cutest-baby-animals

Answers to the Spring Wildflower Photo Quiz on page 23

1. Bloodroot
2. Carolina Spring Beauty
3. Foamflower
4. Large-flowered Bellwort
5. Long-spurred Violet
6. Purple Cohosh
7. Red Trillium
8. Sharp-lobed Hepatica
9. Trout Lily

Halton/North Peel Naturalist Club

Box 115, Georgetown, Ontario L7G 4T1
Charity Registration number 869778761RR0001
www.hnpnc.com

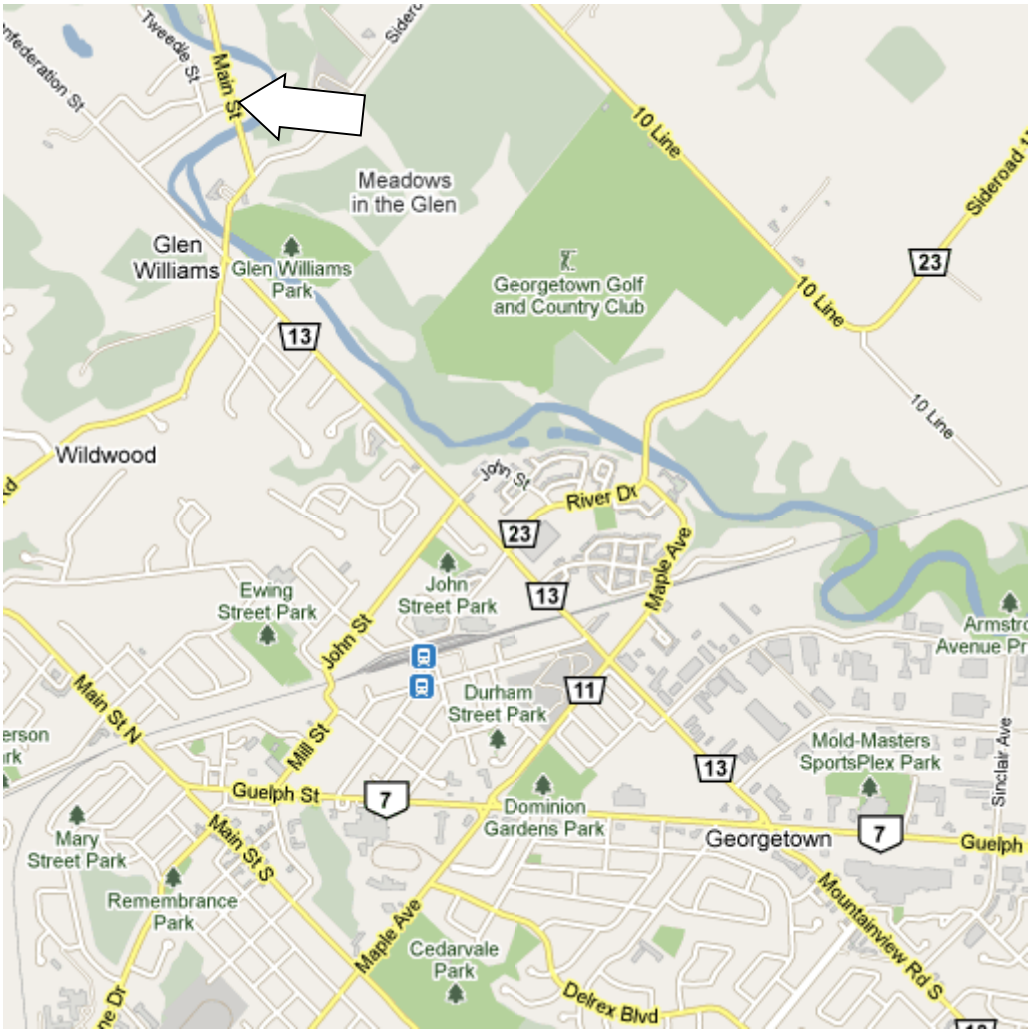
Executive

President: Yves Scholten yvesjs9@gmail.com
Past President: Don Scallen (905) 876-6180
Interim Vice President: Ian Jarvie (905) 877-1441
Secretary: Helen Pinchen (519) 766-8876
Treasurer: David Williams (905) 877-1539

Appointments

Membership: Lorysa Cornish
Newsletter: Laura Weihs
Webmaster Communications Director: John Beaudette
Member at Large: Fiona Reid
Member at Large: Andy Kovacs
Ontario Nature Rep: Don Scallen
Roving: William McIlveen
Hardy Property Steward: Helen Pinchen
Crozier Property Steward: John & Margaret Beaudette

Membership for one year: $30 Single; $40 Family
Halton/North Peel Naturalist Club is an affiliated member of Ontario Nature.
Meetings are at St Alban's Church in Glen Williams starting at 7:30 p.m.



Halton/North Peel Naturalist Club Membership Form

_____ Renewal or _____ New Member(s) Date_____

Name(s): _____

Address: _____ City: _____

Postal Code: _____ Telephone: _____

E-mail: _____

Membership Renewal:	_____ Single ($30.00) _____ Family ($40.00)
New members only for the period:	
from December through to August	_____ Single ($22.50) _____ Family ($30.00)
from March through to August	_____ Single ($15.00) _____ Family ($20.00)
from June through to August	_____ Single ($ 7.50) _____ Family ($10.00)

Would you like to make a donation to help send a youth to the **Ontario Nature Youth Summit for Biodiversity and Environmental Leadership**? If yes, amount of donation: $_____

Do you have any suggestions for programs or field trips?

_____

_____

_____

****

WAIVER OF LIABILITY

(must be signed by anyone planning to attend field trips or other outdoor activities)

In making this application, I affirm that I am in good health, capable of performing the exercise required to participate, and that I accept as my personal risk the hazards of such participation and will not hold the Halton/North Peel Naturalist Club or its representatives responsible.

In consideration of the Halton/North Peel Naturalist Club accepting my application, I hereby and forever release and discharge the Halton/North Peel Naturalist Club and its officers, directors, servants and agents from any liability whatsoever arising as a result of my participation in these trips and declare that this is binding upon me, my heirs, executors, administrators and assigned.

Signature(s): _____ Date: _____

_____ Date: _____

****

Please fill out this form and bring it in to next indoor meeting or mail with payment to:
Halton/North Peel Naturalist Club
P.O. Box 115, Georgetown, Ontario L7G 4T1