Halton/North Peel Naturalist Club

The Esquesing

May - June 2019 Newsletter
Volume 53, Number 5

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President's Message

A butterfly theme runs through this newsletter, inspired by the upcoming Belfountain butterfly count sponsored by Credit Valley Conservation. Our own Bill McIlveen is one of the organizers.

Great Spangled Fritillary - Photo Credit Don Scallen

Butterflies are often used as a metaphor for positive transformation. You know the narrative: ugly caterpillar transforms into a beautiful adult butterfly. Not necessarily a theme naturalists would embrace though. We know that caterpillars can be every bit as beautiful as the butterflies they turn into. So perhaps an apt metaphor for us would simply be the inevitability of change and oftentimes, dramatic change. The change from the simplified beauty of winter to the lavish world of spring for example. Such dramatic transformation! Buds breaking, wildflowers blooming, frogs chorusing, birds singing.

As a butterfly's wings give it the freedom to fly, spring invites us to spread our own metaphorical wings and explore a fresh new world.

Join us on the butterfly count in June if you can. Please don't decline because of a lack of knowledge. At least one person in your group will possess modest ID skills. Look upon the event as an opportunity to learn and expand your knowledge of these glorious winged creatures.

We have other excellent events planned for May and June including "Bees and Beyond", the pollinator garden workshop hosted by our club at the Halton Hills Cultural Centre on May 25. We'll also be conducting surveys of our nest boxes at Scotsdale Farm in Ballinafad and Forks of the Credit Provincial Park. Join us to tally the wrens, tree swallows and bluebirds availing themselves of the accommodation we've provided.

And don't forget our Monday night walks during the summer. Bill McIlveen has been organizing these informal nature strolls for years, in concert with the South Peel Naturalist Club.

I wish you a spring and summer replete with the delights of discovery and hope our flight paths cross soon.

Don Scallen

Talks and Walks

Indoor Events: Meetings begin at 7:30 p.m. on the second Tuesday of the month, September to June at St. Alban the Martyr Anglican Church, 537 Main Street, Glen Williams, unless stated otherwise.

Tuesday May 14, 2019
Don Scallen: Wetland Wildlife. Frisky Frogs, Salacious Salamanders and more.
Don has waded into the bailiwicks of various wetland amphibians, reptiles and invertebrates, photographing and videotaping their private lives, including their reproductive behaviour. In 2016 Don spoke to the club about vernal pool life. This presentation will include new images from vernal pools but will also touch on the fascinating diversity of life that inhabits permanent wetlands. Check out Don's vernal pool article in *In The Hills*: https://www.inthehills.ca/2017/03/vernal-pools/

Tuesday June 11, 2019
Nest boxes at Scotsdale Farm
Our annual outdoor meeting prior to summer break. Meet at 7 p.m. in the parking lot at Scotsdale Farm, entrance east off Trafalgar Road, north of 27 Sideroad, Silver Creek. We'll spend about 2 hours investigating nest boxes the club has put up at Scotsdale in recent years. This project, made possible by the construction efforts of club member Kim Dobson, has seen approximately 50 nest boxes installed at Scotsdale to attract nesting birds. We'll open them briefly to determine tenancy. Expect tree swallows, house wrens and, with luck, bluebirds.

Outdoor Events

Reminder: As per new club policy we will pick up litter that we encounter on our walks. Gloves could come in handy. The leader will supply a litter bag.

Sunday May 19, 2019
Spring Birding at Thickson Wood, Lynde Shores Conservation Area and Cranberry Marsh
If I had only one day in the spring to go birding, this is where I would go. These locations provide a wide variety of habitats including mature forest, meadows, swamps, marshes, old fields and Lake Ontario and its shoreline. The result is a diverse collection of bird species, especially during spring migration. Scheduling on the Sunday of the Victoria Day holiday weekend has resulted, so far, in trouble-free driving to and from these Whitby birding hot spots. Bring a lunch, water, hat, sunscreen, binoculars, etc. Call Ray Blower (519) 853-0171 for starting location and times.

Make "Earth Day" Every Day!

Other Club Associated Events

Saturday May 4, 2019
Community Nature Walk and Clean Up
This walk, led by club president Don Scallen, is part of the Town of Halton Hills Earth Week Celebrations. Participants will have the opportunity to enjoy the spring wildflowers and contribute to a cleaner environment by picking up litter. This outing is open to all community members, but naturalist club members are welcome. We'll meet at 1 pm on Miller Ave (between Lookout Court and View Point Circle) where parking is available along the side of the road. Then we'll descend into Hungry Hollow Ravine. The duration of the walk will be about 2 hours but participants can leave any time. This event will go rain or shine, unless thunderstorms are forecast. Participation limited to 25, registration necessary. To register and get information on where to meet go to sustainability@haltonhills.ca or call 905 873 2601 ext. 2290

Saturday May 25
Bees and Beyond
Our Pollinator and Biodiversity Workshop is set for next month. Our aim is to have 40 participants total so please share this information with anyone who would be interested in attending. 12 spots are open to Halton/North Peel Naturalist Club members. Please register at: beesandbeyond2019@gmail.com.

Saturday June 29 - rain date Sunday June 30
Butterfly Count at Belfountain
We will meet at the Belfountain Conservation Area parking lot at 9:00 am and teams and sample areas will be assigned at that time. Please contact me at wmcilveen@sympatico.ca if you have any intention of participating. That will aid us greatly with the planning and allow us to let you know if we have to resort to the rain day. NABA requests a participation fee of $3 to cover the costs of operating the Count. For more details see the 'Seeking Data – Old and New' article on page 9.

Naturalist Club Evening Walks – Summer 2019

Halton/North Peel Naturalists and South Peel Naturalist Clubs

All walks are on Mondays and start at the meeting location at 7:00 pm sharp.

Date	Location	Meeting Place	Leader
13-May	Santa Land Site	Langtry Park, Oakville	Bill McIlveen
20-May	Crozier Tract	Hwy 401 at Hwy 25	Ray Blower
27-May	Scotch Block	Hwy 401 at Hwy 25	Fiona Reid
3-Jun	Acton Swift Watch	Acton	Bill McIlveen
10-Jun	Scotsdale Bird Box	Scotsdale Farm	Bill McIlveen
17-Jun	Fisher's Pond	Springer Crescent	Bill McIlveen
24-Jun	Hidden Valley Park	Aldershot	Bill McIlveen
1-Jul	Sassafras Woods	Sassafras Woods	Dawn Renfrew
8-Jul	Limehouse	Limehouse	Bill McIlveen
15-Jul	Erindale Park	Erindale Park	Bill McIlveen
22-Jul	Acton - Tanners Drive	Acton Arena	Bill McIlveen
29-Jul	Maurice Breen Park	Marie Curtis Park	Bill McIlveen
5-Aug	Swift Night Out	Oakville High School	Bill McIlveen
12-Aug	Speyside Area	Hwy 401 at Hwy 25	Fiona Reid
19-Aug	Rattray	Green Glade School	Kirsten Burling
26-Aug	Kiwanis Memorial Park	Brampton	Bill McIlveen

Langtry Park, Oakville – Parking lot for Langtry Park off Brays Lane, Oakville
Hwy 401 at Hwy 25 – Commuter parking lot at SE intersection of Hwy 401 and Hwy 25, Milton
Acton – Meet at parking lot for Prospect Park near Fairy Lake, then check for Chimney Swifts in Town.
Scotsdale Farm - Parking lot at Scotsdale Farm, east off Trafalgar Rd north of Sideroad 27, Silver Creek
Springer Crescent – Take Cedar Springs about 0.6 km north of Dundas to Highview Drive then east to Springer Crescent, Burlington
Aldershot – Larger parking lot on south side of Lemonville Road in Hidden Valley Park
Sassafras Woods – North side of North Service Rd about 300 m east of Waterdown Rd. Park on roadside. Easiest if driving east from King Rd on North Service Road
Limehouse – Parking lot for Conservation Area off 5th Line just south of Limehouse village
Erindale Park – First parking lot north off Dundas St and east of Credit River
Acton Arena – on Hwy 7 just east of Acton (N.B. construction from Acton to Trafalgar Road in 2019)
Marie Curtis Park – Parking lot on east side of Etobicoke Creek (off Forty Second Street)
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
Brampton – Shoppers World parking lot at northwest corner of Main Street and Bartley Bull Parkway

For more information, contact Bill McIlveen e-mail wmcilveen@sympatico.ca

FIELD REPORTS

Salamander Outing #1 Sunday, April 7, 2019

Article by Peter Bailey

Members of the Halton/North Peel Naturalist Club met up at Silver Creek Conservation Area at the field centre parking lot at Fallbrook Trail and 27th Sideroad on Sunday, April 7th at 8 pm. There were 25 club members in all. Fiona was the leader.

Before we headed to the pond, Fiona used a playback to try and call in an Eastern Screech Owl. She was successful. One landed midway up a tree branch about 30 feet from the group. We shone a light on it for everyone to see it better. It hung around just long enough for all of us to catch a glimpse of it. We then headed off towards the pond and heard either dogs or coyotes yelping or howling in the distance.

Conditions were less than ideal. It is a mature heavily wooded area and forms part of the Bruce Trail with a good trail marked to the pond. There was still ice covering about 30% of the pond. The water level of the pond was down from other years. There is an excellent boardwalk that permits one to get close to the water and the small stream or creek that flows out from it. The small creek was ice free and had a good flow of water. On the opposite side of the pond and creek there is a high elevated formation of large boulders and cliffs with lots of crevasses and large to mid-size mature trees. There is lots of forest debris and moss-covered boulders all around.

On our first check of the boardwalk and stream we could only hear a few Spring Peepers calling. It started to rain and about half the people left for home but those remaining kept searching. Fiona went to look for eggs in the pond and asked Lorysa to keep searching the stream for salamanders. This worked well, as Lorysa soon located a Spotted Salamander that we all got good look at, before watching it swim off with a sinuous movement. We were glad we hadn't left!

Above: Spring Peeper
Photo Credit Peter Bailey

Below: Jefferson's Salamander
Photo Credit Fiona Reid

Shortly after, Mark Mastantuono found a Jefferson's Salamander. Fiona pointed out this salamander had small leeches attached to its abdomen. Several people got photos before it hid under leaves. The rain was getting heavier and so we called it a night. We saw an

Eastern Cottontail in the field, and when we crossed the roadway back to our vehicles, Mark Mastantuono spotted a Spring Peeper on the road, and we had a chance to take photos of it before it was moved to safety. It was a successful outing.

Salamander Outing #2 Friday, April 12, 2019

By W.D. McIlveen

Spotted Salamander female
Photo Credit Don Scallen

The salamander outing at Silver Creek on April 12 was a great success. The weather had been ideal so the last ice on the pond had melted. Viewing of salamander activity at a similar earlier event on April 7 had been stymied by ice around the boardwalk. There were about 25 club members out at that earlier event in contrast to 7 club members on this second event. While the first group did see a couple of salamanders, CVC staff independently visited later that evening and found 50 Spotted and 20 Jefferson's.

At least two mating congregations of Spotted Salamanders were seen in the small stream draining from the pond and many individuals were observed coming from the woods towards the water. My salamander tally included well over 100 Yellow Spotted, about 25 Jefferson's, and a couple of Red-spotted newts. There were also at least 5 species of frogs including one large toad. One tadpole has us baffled. It has to be one from last year because any frogs eggs from breeding this year would not likely even be hatched yet. It was far too small to be an over-wintering Green or Bullfrog tadpole. Until we can catch it again to make a more-detailed examination, our present best guess is that it was a young Pickerel Frog.

Jefferson salamander laying eggs
Photo Credit Don Scallen

Ray Blower's Long Point Outing - Saturday March 16, 2019

Article by Mark Mastantuono and photos by Don Scallen.

On Saturday March 16, 2019 Ray Blower lead a field trip to the Long Point area. Ray was joined by Peter and Rose Baily and myself. The day was thoroughly enjoyed by all. Some highlights of the day included a stop at a historic site beside a church where soldiers from the war of 1812 were buried. We also saw a large number of Bald Eagles, several nests and confirmed two nests that we believed to be active as adults were seen sitting on the nest, we believe incubating eggs. Pictured is a juvenile Bald Eagle. We came across a beautiful stand of Sycamore Trees, saw a very large group of Sandhill Cranes and at one point were beside a field that had hundreds of Tundra Swans foraging and resting, their distinct calls drowning out all the noise in the area. The day alternated between bright sunshine and overcast snow showers but there were many large flocks of the early migrants, Robins, Red-winged Blackbirds and Grackles indicating that Spring is on the way!

Birds:

Horned Grebe
Tundra Swans – 100's
Mute Swan
Canada Goose
Black Duck
Mallard
Northern Shoveler
Green Winged Teal
Canvasback
Redhead
Ring-Necked Duck
Lesser Scaup
Common Goldeneye
Bufflehead
Common Merganser
Red-Breasted Merganser
Hooded Merganser
Ring Billed Gull
Herring Gull
Sandhill Crane – 15-20
Wild Turkey – 60-70

Mammals:

Muskrat
Deer 5-10

Red Tailed Hawk
Bald Eagle mature and immature 20-25
Turkey Vulture
American Kestrel
Downey Woodpecker
Horned Lark
Crow
Raven
Blue Jay
Chickadee
Red-Breasted Nuthatch
Robins
Red-Winged Blackbirds
Grackle
Starling
House Sparrow
Cardinal
White-Throated Sparrow
Chipping Sparrow
Song Sparrow

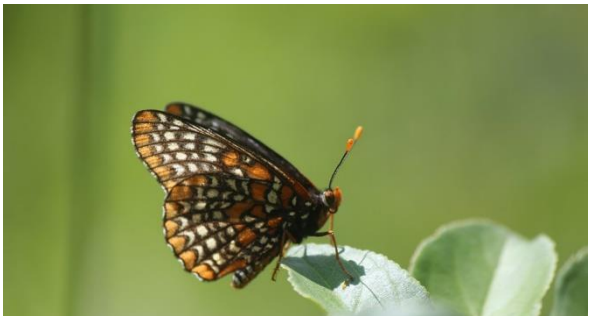
Redhead

Seeking Data - Old and New

Article and Photos by W.D. McIlveen

We are hoping to obtain information on several topics relevant to the local area in the coming field season. We hope that members of the organization can contribute to these worthwhile studies among other projects. The following gives a short description of each project. Please contact me, Bill McIlveen, for more information at wmcilveen@sympatico.ca or to submit any data that contributes to the final report or database. All contributions will be duly acknowledged in any final reports that are prepared. It is anticipated that most of the information that will be provided by volunteers will be for 2019 but any data that you can contribute from past years will be equally welcome.

Butterfly Count at Belfountain



Butterfly - Baltimore Checkerspot
SR 27 at 8th Line - 2014

CVC is hoping to strengthen its database relating to butterflies within the Credit River catchment area in 2019. To that end, they are encouraging people to submit their observations of butterflies via iNaturalist or e-butterfly. Alternately, you can submit your observations directly to CVC or to me as I am interested in eventually compiling all available records of butterflies and moths for Halton and Peel. In addition, the Hamilton Naturalists publish an annual summary of all butterflies for their count circle that includes most of Halton and a little bit of western Mississauga. A notable addition to the general observations of butterflies in 2019 will be the initiation of a brand-new Butterfly Count. It will be centred at Belfountain. The Count is operated in very much the same way that a Christmas Bird Count is done. The data will be submitted to the North American Butterfly Association (NABA). The Count will happen on Saturday June 29 but there is a rain date of Sunday June 30. We will meet at the Belfountain Conservation Area parking lot at 9:00 am where teams and sample areas will be assigned at that time. Please contact me at wmcilveen@sympatico.ca if you have any intention of participating. That will aid us greatly with the planning and allow us to let you know if we have to resort to the rain day. NABA requests a participation fee of $3 to cover the costs of operating the Count.

Swallows

Cliff Swallow nests - Dufferin Quarry, Milton

Swallows are among the aerial insectivores that are suffering severe declines in numbers. The precise cause is not certain. In order to determine what might be occurring locally, we would like to obtain information on the nesting results of the whole group of insectivores. In order to make the project more manageable, we would like to focus on just two of the species,

namely Barn Swallows and Cliff Swallows anywhere in Halton and Peel. The former tends to nest in sheds and barns though the barns appear to be disappearing from our area. The Cliff Swallows will nest under bridges, under eaves of a variety of buildings and on cliffs. We would like to obtain basic information regarding site location, habitat and numbers of nests that you find. It would be great to have nest content and fledging success information if possible but it is understandable if access is too difficult to obtain that data, especially for the Cliff Swallows which build enclosed nests. Even knowing that Barn Swallows were foraging in the vicinity of a barn located at the corner of X and Y Roads is important so we can map the place.

Muskrats

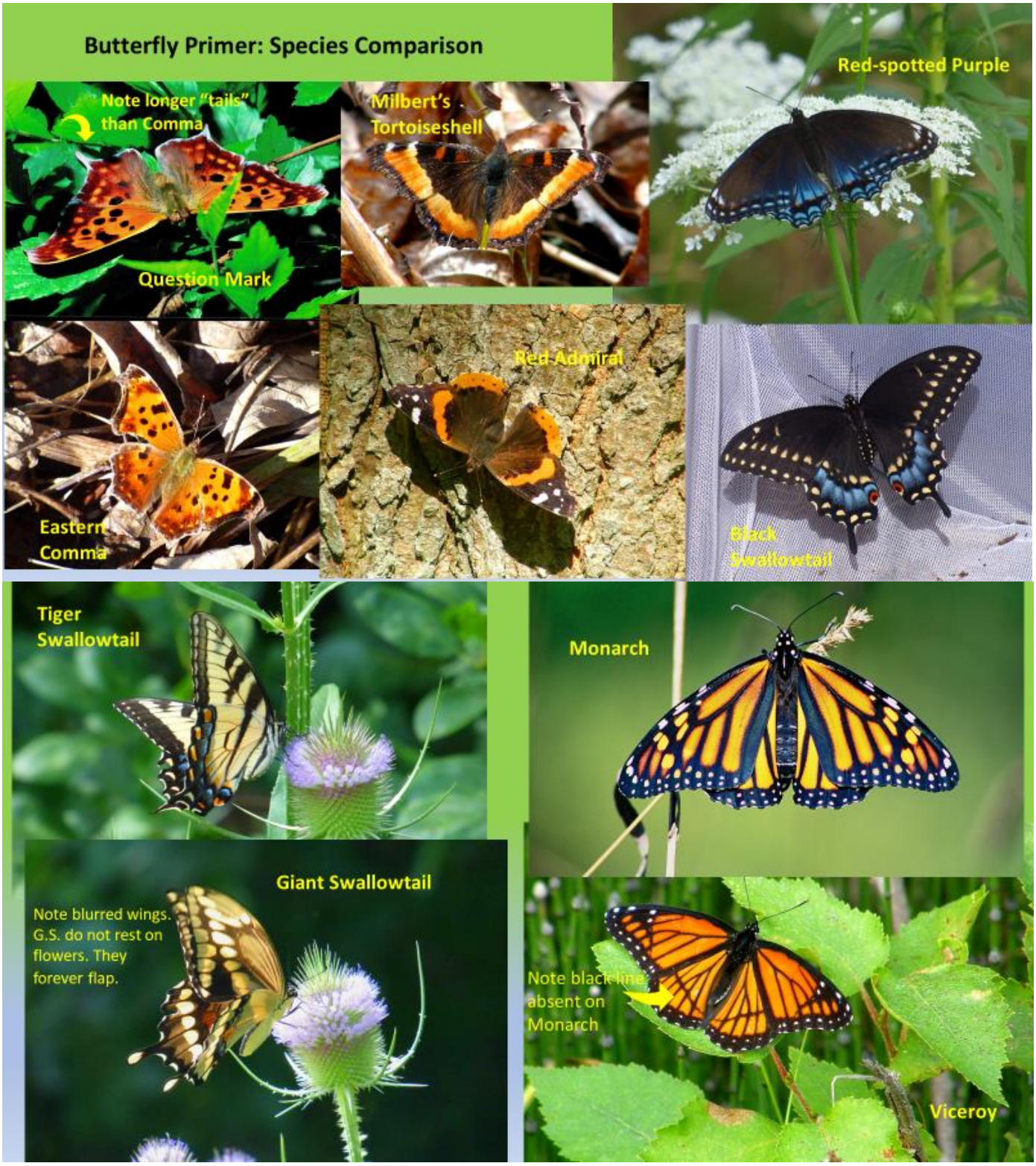
We wanted to include at least one mammal species in our monitoring of local fauna. Somewhat arbitrarily, we selected Muskrats to document as inhabitant of wetlands. They are not in any apparent threatened situation and are moderately common. They can be observed along waterways as adult animals or as lodges in marshes, especially in the winter. We would like to receive reports of animals or lodges with hopes of developing a useful database for the species over time.

Chimney Swifts

Chimney Swifts represent one of the threatened aerial insectivore species. While we would like to know about the local monitoring results for this species, participation in the monitoring of individual chimneys under the program run by Bird Studies Canada is strongly encouraged. Katherine Culbert who represents the City of Mississauga is keenly interested in the monitoring results for chimneys in that municipality. She can be reached at katherine.culbert@mississauga.ca.

For the past few years, Emily Cassidy has acted as the local coordinator for the Swift monitoring in Halton and Peel. Starting this year, that responsibility has been taken over by Jamie Marchant jamie.marchant@sympatico.ca It would be great if you could keep him informed about any monitoring that you do on individual chimneys. The key information required would naturally include chimney location, date and time, and the tally of birds using the chimney.

We will include the same Swift Monitoring events at Acton and at Oakville on the evening walk schedule as in previous years. If you have been monitoring Chimney Swifts at your own monitoring sites in Mississauga or elsewhere, we encourage you to continue with that. If you would like to start to do that (at a new location or to take over a chimney from someone else), we want to encourage that. The data is very important for the management of an endangered species. Data that you collect during monitoring of chimneys, whether these are sites you have monitored in earlier years or are brand new in 2019, should be submitted to OntarioSwiftWatch@birdscanada.org. Alternatively, volunteers can register as participants on the BSC website and enter observations directly at https://www.birdscanada.org/birdmon/ai/register.jsp.



From the Web… Amazing close-ups of insects.

This contribution comes from club member Peter Bailey. (a rare individual whose claim to fame is surviving a Peregrine attack… in Brampton no less!)
https://www.msn.com/en-ca/news/world/bugshots-insects-as-youve-never-seen-them-before/ss-BBUS3Qm?ocid=se

Flight of the Butterfly

Article and photo by Don Scallen

To the casual observer the flight of a butterfly appears haphazard and inefficient, something like the bobbing of a cork on turbulent waters.

John Clark was a kick-off return specialist for the Queen's University football team in the 1970s. He was also one of my best friends.

John and I shared a similar body type. Both of us were rather small for football at about 5' 10" and 165lbs. Both of us were good receivers. But that's where the similarities ended. John had university level talent and I didn't. One reason for his success was his running style. He moved like a butterfly in flight.

To the casual observer the flight of a butterfly appears haphazard and inefficient, something like the bobbing of a cork on turbulent waters. Butterflies seem unable to go from one point to another in a straight line. Instead they appear directionally challenged, as if they've been tippling on fermented nectar.

Delaware skipper nectaring on purple vetch.

Like a butterfly, my friend seldom moved in a straight line when running with a football. He'd zig left, zag right, take two steps in one direction and then abruptly change course to run in the opposite direction. He'd even back pedal if he had no other option. This erratic movement worked. He was very difficult to take down.

In common with butterflies, my friend's success depended on unpredictable movement – a strategy honed by butterflies over evolutionary time to avoid capture by birds, and by my friend during five years of high school football, to avoid being tackled by opposing players.

I doubt if John consciously realized he moved like a butterfly. Nevertheless, I find it fascinating that he arrived at a similar solution to the shared problem of avoiding pursuers. And me? Pity I didn't learn from the flight of butterflies. I may have scored more touchdowns.

This article first appeared at
https://www.inthehills.ca/2018/08/flight-of-the-butterfly/

Bug Repellent Issues

By D.J.W.

An October 2018 report published in Biology Letters[1] has introduced another wrinkle into issues around the use of bug repellents.

Since it was released to the general public in the late 1950's, DEET[2] became the world's most widely used insect repellent. The current Government of Canada website says "*insect repellents containing DEET can be used safely when applied as directed and in the right concentration, depending on age*". The USA Environmental Protection Agency reports its 2014 findings that "*the normal use of DEET does not present a health concern to the general population, including children*". Nevertheless, the instructions and precautions that accompany DEET sales can trigger concerns about its use. For example one highly rated DEET repellent warns "*do not apply to or near acetate, rayon, spandex or other synthetics; keep away from furniture, plastic, watch crystals, leather and painted or varnished surfaces*."[3] So, it's no surprise that people would like an effective bug juice that won't damage the furniture or dissolve our underwear.

In the 1980's the Bayer chemical company seemed to come to the rescue with Picaridin (AKA Icaridin) a synthetic compound developed from the same plant genus that produces table pepper. Picaridin is praised for being at least as good as DEET for mosquitoes and better against flies; plus it's odorless and non-greasy. And, your furniture and underwear are safe.

Along with the allure of being a knock-off of a "real plant", it's become a bestseller in Europe and Australia without generating the kind of negative reviews of DEET.

However, as so often happens, Picaridin comes with unintended and unexpected consequences: it's lethal to larval salamanders, and salamanders are a major predator of mosquito larva. The research shows that Picaridin in surface water may increase the abundance of adult mosquitoes due to reduced predation pressure.

Ironically, while the Picaridin keeps mosquitoes from biting me, it's increasing the number of mosquitoes who want to try me for lunch. In our local neck of the woods we're fortunate that protection against biting insects is more to do with comfort than with controlling insect-borne diseases. But in regions that deal with problems such as malaria and dengue fever, the stakes are much higher.

We see once again that there are no simple solutions, that decisions are complicated, and the web of cause-and-effect is often opaque to our best intentions.

*1. **High mortality in aquatic predators of mosquito larvae caused by exposure to insect repellent***
Rafael M. Almeida, Barbara A. Han, Alexander J. Reisinger, Catherine Kagemann and Emma J. Rosi
Published: 31 October 2018 https://doi.org/10.1098/rsbl.2018.0526

2. Chemical name, N,N-diethyl-meta-toluamide

3. Sawyer Jungle Juice 100 Insect Repellent - 98 Percent DEET - 2.5 fl. oz.

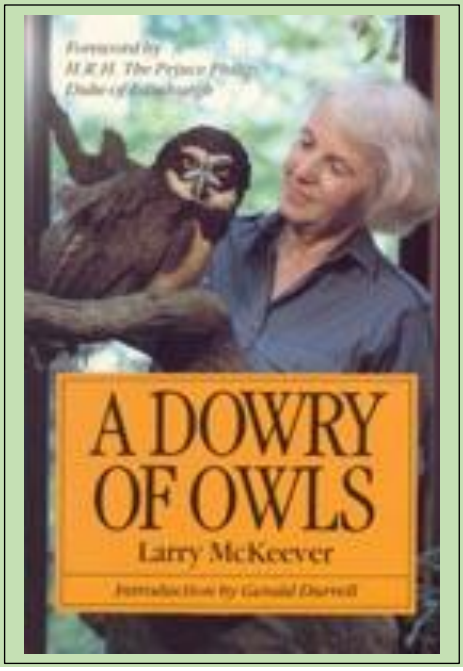
The passing of a legend: Kay McKeever

By Don Scallen

Club member Sandy Heimbecker recently informed me of the passing of Kay McKeever on April 4, 2019. Kay was a champion of the natural world. For decades she rehabilitated hundreds of owls at her Owl Foundation in Vineland Ontario. Most were released back into the wild. Those that had sustained injuries precluding that option, would often become foster parents to orphaned baby owls. Injured owls from all over the province and beyond would be sent to her for expert care. When sufficiently recovered, they would be returned to the locations where they were found – a costly, but humane and ecologically sound, undertaking.

I met Kay twice. Once when she came to Georgetown to speak to our club and had dinner with my mother and me. I also visited her at her owl foundation to interview her for an article and she gave me a tour of the impressive facility. She was a keen thinker and possessed a delightful wit. One story stood out. A male screech owl that had imprinted on humans was dropped off at the foundation. Kay decided to give it the run of her spacious house. (Kay was little worried about such minor inconveniences as owl whitewash and regurgitated pellets on the floors and furniture.) Problems arose though when the owl fell in love with Kay. She became its mate, and this didn't sit well with Larry McKeever, Kay's long-time partner. Larry became the owl's rival and at entirely unpredictable times the owl would launch kamikaze strikes at his head. Larry tried to take this in stride. For Kay's sake he began wearing a helmet around the house. In time though, Larry had had enough, and the jealous owl was banished to an enclosure attached to the house. The owl could still see the object of his passion, but no longer could he terrorize Larry.

You can read more about Kay's remarkable life in her obituary:
https://tallmanfuneralhomes.ca/tribute/details/8393/Katherine-McKeever/obituary.html



A Big *Thank You* to both Emily Cassidy and Jamie Marchant!

Many thanks to Emily Cassidy for being the local coordinator for the Swift monitoring in Halton and Peel for the past few years!

Starting this year, that responsibility has been taken over by Jamie Marchant! You can e-mail him at jamie.marchant@sympatico.ca It would be great if you could keep him informed about any monitoring that you do on individual chimneys. The key information required would naturally include chimney location, date and time, and the tally of birds using the chimney. See the *Seeking Data – Old and New* article for more information on Swift monitoring.

Happiness is a butterfly, which when pursued, is always just beyond your grasp, but which, if you will sit down quietly, may alight upon you.
Nathaniel Hawthorne

As I work on the layout of this newsletter in Florida it seems like Mother Nature has had a huge burst of energy the last few days.

There are suddenly so many butterflies, dragonflies, huge grasshoppers as well as berries to feed the birds that are now resting before heading north.

It's as if a choreographed performance is being put on by the entire natural world and it's coming your way soon - *Laura!*

Complex Nature

Article and photos by Don Scallen
Opinion

"…reality tends always to be vastly more complicated than initial impressions or assumptions would suggest." David Quammen

To Tree or not to Tree

Years ago, I read a book called the "Simple Act of Planting a Tree", about the undeniable benefits of planting trees. Over the years though, I've learned that though the physical act of planting a tree is simple, the decision to do so shouldn't be.

Now don't get me wrong. I love trees and I value forests. I grow trees from seed, and I've been known to hug trees – especially big, old trees. I believe that planting native trees almost always makes good ecological sense in urban landscapes dominated by lawns, concrete and asphalt. But beyond the city, we need to think carefully about planting trees. Especially when planting lots of them. This doesn't mean abandoning the act of reforestation, but it does mean thinking critically about that act. And, after such critical thought, we need to be open to changing our approach and, in some cases, putting our spades back in the shed and leaving well enough alone.

A current poster from Forests Ontario features this caption: *"Idle Land? Plant Trees"*. What a curious statement! I challenge anyone to identify "idle" land. Meadows? Abandoned farmland? Fields? Truth be told, there is no such thing as "idle land". Land devoid of trees isn't "idle". On the contrary it is land vibrantly alive with plant and animal life that thrives in sun-saturated environments: grasses, goldenrods, asters, milkweeds, butterflies, bumblebees, wasps, praying mantids, grasshopper sparrows, bobolinks, meadowlarks, ground hogs, milksnakes, chorus frogs. I could go on.

There can be excellent reasons to plant trees in places where they currently do not grow. But let's not make believe it's because those places are "idle". They are anything but.

Here are a few of the questions we should ask before undertaking reforestation:

As far as can be determined, what type of habitat prevailed in the area historically?

Answering this question may provide some guidance. If historically the landscape was predominantly treed, as it was in most of southern Ontario, it could be argued that as much land as possible should be returned to that "primeval" state. Whereas in southern Saskatchewan, or Iowa, restoration to prairie might be most appropriate.

However, complexity intrudes here, as it often does in ecological matters. One of the ways First Nations' peoples managed the land, including the land in southwestern Ontario, was with fire. This permitted small scale agriculture and perhaps boosted hunting opportunities by providing fodder – sun-loving herbaceous plants – for elk and deer. The legacy of forest

gaps, created by First Nations' people, should perhaps be considered in our landscape management decisions.

A more modern legacy needs to be considered as well. Large amounts of marginal farmland have been abandoned in recent decades. Former farmland is the source of most of the meadows in this area. These open areas have, quite unintentionally, become important habitat for numerous meadow/prairie animals and plants. Though anthropogenic in origin they have become wonderful ecosystems. It can also be argued that they are compensating somewhat for the loss of prairie ecosystems in the Midwest and western Canada by providing habitat for birds and insects displaced by agriculture in those areas.

What is the character of the greater landscape? Is it largely urban? forested? Agricultural?
The land use of a region should inform decisions about tree planting.

In Essex County with only 8% forest cover remaining, the decision to plant more trees will likely take on somewhat greater urgency than it would in Halton Region with about 22% forest cover or 40+ % in Peterborough County. (Though Essex, as the former home to substantial prairies, should obviously consider their restoration as important as well.)

What is the proximity of natural woodland to the site in consideration for planting?
Seeds are made to travel… by squirrel, by wind, by birds in their droppings and so on. A meadow environment adjacent to existing woodland will invariably grow up in trees. It may happen over a longer time period than we are comfortable with, but it will happen. And it will happen in a more natural manner than human assisted reforestation. And the land will naturally proceed through ecological stages... meadow, shrubby field, young woodland, mature woodland, providing habitat for a succession of biological communities. We sometimes demonstrate hubris in our decisions to reforest, moving ahead with the assurance that we know best. Moreover, in our haste to reforest we sometimes spend time and treasure planting trees that will, given time, naturally appear of their own accord in the area being planted.

Sometimes this natural regeneration is so vigorous that the trees we've carefully planted are soon overwhelmed. They become displaced by trees planted by nature.

Sometimes our tree planting is redundant. I recently found white cedars planted in a Caledon meadow, carefully protected from voles and rabbits by plastic sleeves. The adjacent woodland is full of white cedars and a casual look around the abandoned quarry site reveals scores of white cedar seedlings sprouting vigorously. Planting white cedars at this site was unnecessary. Funding and people power to do it could have been directed to other causes.

What is the current ecological value of the land to be planted in trees? How many species at risk are supported by the existing landscape? What plants and animals will benefit if reforestation takes place?
Undertaking an ecological assessment of an area to be planted in trees should be standard procedure. The question to be posed: What will be lost?

Consider a hypothetical reforestation at Forks of the Credit Provincial Park. An observer with little understanding of ecology might well see the meadowland as "idle" and as an excellent candidate site for tree planting. If undertaken, the at-risk bobolinks, meadowlarks and monarch butterflies that live in the meadows would gradually decline and disappear. So too would locally uncommon plants like penstemon digitalis and hoary vervain.

Lost as well in reforesting an area like the meadows at Forks of the Credit Provincial Park would be an abundance of wildflowers like asters, goldenrods and milkweeds that provide rich food resources for pollinating insects and for butterflies.

Of course, there is virtue in reforesting a meadow as well… ***if*** that reforestation provides for a diverse mix of native trees. Eventually as those trees matured, habitat would be created for salamanders, wood frogs, wood pewees, wood thrush, trilliums and hundreds of other woodland dependent species.

This is a conundrum with no easy answers. We need to weigh the options carefully and that demands an assessment of the existing ecology prior to tree planting.

Is the site suitable for the planting of trees?
Most upland sites are suitable for planting trees. Floodplains aren't. And yet we do it. Floodplains are very dynamic systems, scoured by ice and high water in late winter and spring and home to beavers, superlative ecosystem engineers.

Years ago, I witnessed the planting of aspen trees along Etobicoke Creek in Brampton. The response from the local beavers was predictable. They began harvesting the trees which prompted a costly response from the municipality: the erection of frost fencing around the aspens to keep the beavers out. This winter I discovered that the practice of planting on floodplains continues. I hiked the Humber Valley Trail in Bolton and found newly planted trees pictured on the left, carefully protected by plastic sheathing from voles and rabbits. Of course, that didn't deter the beavers. They just cut the trees above the plastic.

If after considering these questions, the decision is made to proceed with reforestation, we should proceed humbly and clear-eyed with the knowledge that our actions will create biological winners… and losers. And then other important considerations arise surrounding the planting of the trees. Foremost is tree selection. Questions to guide what we plant should include the following:

Will a variety of native trees be planted?
Once Scots pine was an abundant component of reforestation projects. Now, thankfully, most… not all… of the trees planted are native. We realize native trees as crucial components of healthy ecosystems. One reason to plant native trees is that they are best at feeding the invertebrates (caterpillars et.al) which in turn feed birds and other vertebrates. So with the necessity of planting native generally accepted, it behooves us to plant a diversity of those natives. Too often, in the past, and even now, too few species have

been planted. Usually these have been conifers including white spruce, red pine and white pine. There is nothing wrong, of course, with these trees but they should be part of a greater mix. This for some very important reasons: Different tree species support different insects, birds and mammals. A forest composed of ten tree species will support greater diversity than a forest comprised of only one or two species.

As important is the hard-earned lesson we learned from planting only a few different species along our urban streets. American elms and later, ash, died en masse – victims of Dutch Elm Disease and Emerald Ash Borer respectively. Diverse forests are resilient. If one species of tree falls victim to a pathogen, there will be many other species to fill the gaps.

Will the selection of trees be constrained by cost? Enlightened reforestation means planting a diversity of native trees. A constraint though is cost. Some trees are more expensive than others to plant. Oaks and hickories cost more than mass produced conifers like white spruce. But we shouldn't default to the cheapest trees. This will reduce diversity. The more expensive trees are often less common on the wider landscape and are often very important for wildlife, producing abundant mast for birds and mammals. Their leaves, as indicated above, feed lots of invertebrates that feed birds in turn.

Would it be prudent to include tree species that are rare or uncommon in the local landscape?

At Terra Cotta Conservation Area in 2000, a meadow was planted with trees. Those trees included the usual white pine and white spruce, two excellent native trees. Terra Cotta Conservation Area is notable though, for habitat that includes some fine examples of oak/hickory woodlands. With climax forest in our part of Ontario is usually dominated by sugar maple woodland, these oak/hickory outliers are biologically valuable. Most of the oaks at Terra Cotta CA are red oaks but a few white oaks occur here, a very rare tree in north Halton. Shagbark hickories at Terra Cotta Conservation Area are near the northern limit of their range in this part of Ontario.

Low diversity tree planting, mainly one species, white pine, adjacent to diverse natural woodland habitat.

Planting in lines, easy for maintenance, but entirely unnatural.

If left alone the planted meadow would have eventually succeeded into forest. Sun-loving oaks and hickories would have likely been part of the mix of trees to become established, their nuts planted by the resident squirrels and blue jays. That is less likely to happen now because the space where they would grow is now occupied by the conifers planted in the reforestation project.

An inventory of the existing trees at Terra Cotta Conservation Area prior to reforestation would have been prudent. Such an inventory could then have informed decisions about the mix of trees to plant, honoring the natural heritage of TRCA and enhancing populations of regionally rare trees.

Would it be prudent to include species that are not locally native?
This is a controversial proposition but merits consideration. We are losing trees to disease and introduced insects: beech to beech bark disease, butternut to butternut canker, ash to emerald ash borer and elm to Dutch elm disease. The loss of these trees means a loss of tree diversity. All four, through their seeds and nuts, feed birds and mammals. It could be argued that through our reforestation efforts we could introduce other species to increase diversity and offer food to wildlife. Species currently largely confined to the Carolinian region of Ontario could be considered including swamp white oak, chinquapin oak, hackberry and tulip tree. Second, climate change suggests that we may need to consider the assisted migration of plants and animals from slightly further south.

In summary:
Planting a diversity of native trees can be an excellent option for managing an open landscape but crucially it should not be the only option. Before any large-scale tree planting is done, we are obligated to learn something about the plants, animals, birds, insects that currently occupy the site.

In many cases nature will handle the job of reforestation better than we can. In this part of North America, an open landscape will usually revert to trees and as it moves towards that inevitable outcome, will go through a series of successional stages; each one supporting a different cast of plants and animals.

If we do decide to plant trees let's be creative and imaginative and include regionally rare trees in the mix, to bolster their populations and contribute to biodiversity.

With tree planting, as in other interactions with nature and the environment, complexity and ambiguity are givens. Large scale tree planting needs to be guided by caution and critical thinking.

Just for Fun!

At first glance I thought this was a macro shot of a caterpillar!

Credit for this fabulous photograph goes to photographer José Luis Rodríguez.

It was found on boredpanda.com

Halton/North Peel Naturalist Club, Box 115, Georgetown, Ontario L7G 4T1
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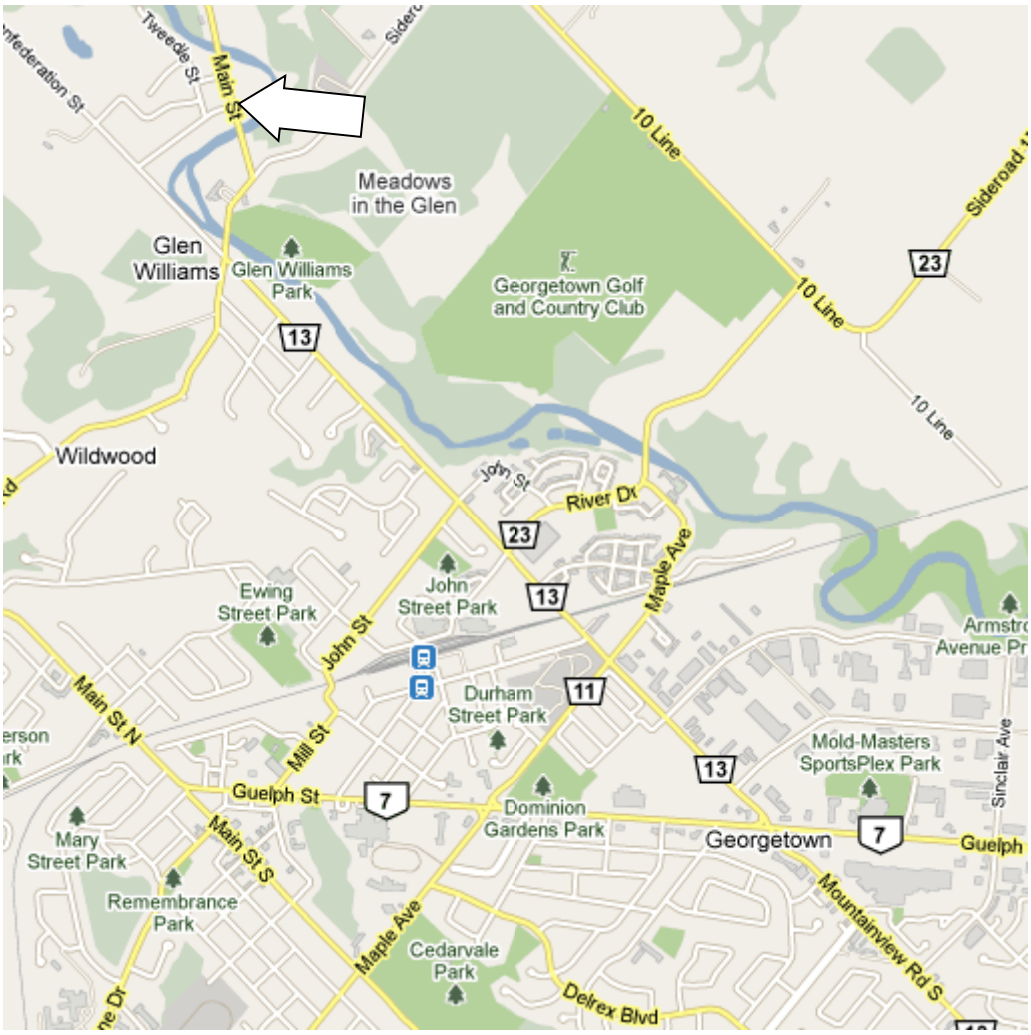
Halton/North Peel Naturalist Club

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_____

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New membership fee for the period:

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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?

_____

_____

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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: _____

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