



The Esquensing

Mar-Apr 2017 Newsletter
Volume 51, Number 4



Talks and Walks

Indoor Events:

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

Tuesday, March 14, 2017

Richard Tofflemire: What makes an Owl an Owl

Richard grew up along the Don Valley in Toronto and like many of us, had a fascination with wildlife from an early age. The birds that first captured his passion were the various hawks that hunted in the valley. That passion soon blossomed into a lifelong appreciation of anything avian. In this presentation Richard will explore the adaptations that allow owls to hunt at night.

Tuesday, April 11, 2017

John Ratcliffe: Bats, Bats, Bats

John Ratcliffe is a Biology Professor at the University of Toronto at Mississauga. Here is how he describes his talk: Bats number more than 1300 known species, making them the most species-rich mammalian group after the rodents. Bats are found (almost) everywhere, and most possess two rare abilities: echolocation and sustained powered flight. I'll give a broad overview about bats, talk a bit about animal echolocation, and zoom in on some of the less known oddities about these remarkable animals.

Tuesday, May 9, 2017

Kevin McAuslan: Fungi

Kevin is the President of the Mycological Society of Toronto. He will talk about the roles fungi play in the natural world, including the fascinating science surrounding the mycorrhizal relationships fungi have with trees and other plants. Kevin will also tell us about how fungi can be used in the garden, to benefit vegetables with these mycorrhizal relationships. If he has time he'll also touch on exciting research into the possible use of fungi to control pests and help rehabilitate polluted or damaged environments.

Outdoor Events:

Saturday, March 18, 2017

Tundra Swans at Long Point

Flocks of Tundra Swans stop at Long Point during their spring migration to their northern breeding grounds. Many other species of waterfowl, early-returning songbirds, Bald Eagle, and Short-eared Owl may also be seen on this long day trip. Be advised that lunch at the restaurant is usually after 1:00 and we usually do not head for home until around sunset. Bring snacks, water, a lunch or money for the restaurant, and layers of warm clothing, etc. Call Ray Blower, 519-853-0171, by Thursday, March 16 for more details.

Saturday, April 15, 2017

Beamer Conservation Area Hawkwatch, Grimsby

Stops on the way to Grimsby include Scotch Block reservoir and La Salle Park to see waterfowl and early songbirds. Beamer C.A., at the top of the escarpment in Grimsby, provides a large clearing and two cliff-edge platforms to search the sky for migrating hawks. Walking trails in the surrounding woods show early wildflowers and more songbirds. Bring a lunch, hat, sunscreen, binoculars, etc. Call Ray Blower, 519-853-0171, for starting location and time.

Sunday, May 21, 2017

Spring Birding at Thickson's Woods, 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.

South Peel Naturalist Club's annual Bruce Peninsula weekend: May 26 to 28, 2017

Explore the Bruce Peninsula in the company of fellow naturalists and under the guidance of expert leaders at Evergreen Resort at Mar on the Bruce Peninsula. The cost for the weekend, per person, is \$20 for the leadership and administration fee and \$236 (+13% tax) for accomodation. This price includes all meals and snacks.

This annual weekend event is hosted by South Peel Naturalists Club and we invite you to share the experience.

For further information: mail@spnc.ca or contact Donna at 905-815-0933 or Audrey at 905-820-2571.

President's Message

On February 24th, I slogged to my favourite vernal pool and found Jefferson salamanders. Four females, fat with eggs, swam in the icy water. There were undoubtedly more, but I only had a brief time to look. I reported this sighting to Jim Bogart, professor emeritus at the University of Guelph and Canada's premier Jefferson salamander guru. He told me it was probably the earliest sighting ever of this species in Ontario.

Eastern newts were also active in the pond, with two pairs in amplexus (nuptial embrace).



Jefferson Salamander



Eastern Newt female

On February 26th, Bill McIlveen saw six Tundra Swans just south of Georgetown, along Trafalgar Road, another notable early sighting. Bill also told me of a contact in Wellington County who heard Spring Peepers calling on March 1!



Spring Peeper male

I hesitate to say that spring is upon us, but this is the time of year that quickens the pulse of northern naturalists. Every day holds the promise of welcome firsts - the first vulture, the first basking turtle, the first tentative calls of frogs.

Our club will take advantage of this vernal awakening with trips to see birds, amphibians and wildflowers. Ray Blower, a venerable and respected club member, has led three outings to celebrate returning migrants for many years and stands ready to reprise them this spring. See Ray's trip outlines in this newsletter.

The often wildly shifting weather of early spring doesn't allow us to pin down a salamander outing in advance, so watch your inbox for notices of this and other club activities.

Our spring meeting schedule continues to reflect the diverse interests of our club: Owls in March, Bats in April and Fungi in May.

As I mentioned at the February meeting, club members are encouraged to contribute to this newsletter. Book reviews, trip accounts, member profiles, significant sightings can be sent in. Photos can be posted to the website through our webmaster John Beaudette.

Our club will continue to thrive with your support and involvement. Happy Spring!

Don Scallen

Photos by Don Scallen

A Retrospective Look at Dutch Elm Disease

By W.D. McIlveen

Almost everyone these days is aware of the impact of the spread of the Emerald Ash Borer (*Agrilus planipennis*) and what it has done to Ash trees everywhere in our area. They might even be aware of a number of other highly destructive insects and diseases among trees. Many of the younger members of the human population were not around to witness the arrival of the Dutch Elm Disease which has been a major menace to Elm trees in around 1967. Even fewer people are still around that saw the arrival of the Chestnut Blight (*Cryphonectria parasitica*) that devastated the American Chestnut (*Castanea dentata*) or the earlier epidemics of the Wheat Rust disease (*Puccinia graminis*). The present account of Dutch Elm Disease was prepared in recognition of the 50th Anniversary of the major spread of the disease in Ontario.



Fig. 1. A large American Elm near Brampton 2005 that has escaped the Dutch Elm Disease

Prior to the arrival of the Dutch Elm Disease, it was commonplace to have Elm trees in forests and hedge rows throughout southern Ontario. Quite often, a few trees were left within farm fields as they could offer shade to cattle that were left to graze in those fields. Scenes with Elms having large spreading crowns such the tree shown in Fig. 1 were common. Although Elms are still quite common, the large and very impressive forms are mostly gone.

Although there is some evidence in the fossil record that Dutch Elm Disease may have been present and influenced the evolution of Elms in Europe, it had evidently disappeared from that continent for a very long time. It appears that the present form of the disease originated from

some place in eastern Asia. From there, it made its way into Europe where it began to infect trees in Belgium and France in 1918. That was the year in which the disease was first evident but likely it had been present for a year or two prior to this. So at this present date in time, it is almost 100 years since the disease made a major advance in its geographic distribution. The cause of the disease was first identified by researchers in the Netherlands. This is a little unfortunate for the Dutch since the disease was only identified by them and their country was not the point of origin.

The cause of the disease is a fungus. Actually, more than one species is involved. Due to taxonomic revisions and other nomenclatural factors related to fungal naming, the species may be called *Graphium ulmi*, *Ceratostomella ulmi*, *Pesotum ulmi*, and the frequently used *Ceratocystis ulmi*. The principal agent is now usually properly referred to as *Ophiostoma ulmi*. After much time, it was recognized that there was a relatively passive strain and a more aggressive strain. The latter was later classified as *Ophiostoma novo-ulmi* and this is likely the species that has caused most of the damage in North America. *Ophiostoma novo-ulmi* has been recognized as two subspecies with the subsp. *americana* being prevalent in North America. And to add a little more confusion into the situation, there is a third species, *Ophiostoma himal-ulmi* that is also called Dutch Elm Disease but it mostly confined to Asian locations.

Dutch Elm Disease in North America was first identified in Ohio in 1930. From there, it spread widely through the native range of American Elm. There are several different dates cited as the arrival of the disease in Canada. The earliest of these is 1944 but 1947 and 1950 are also mentioned. These were localized areas of infection but the number of affected trees increased over time. By around 1967, the greatest part of the Elm tree population was being decimated by the disease.

Dutch Elm Disease would likely be able to spread very slowly on its own, aided only by root grafts and incidental cases. But the fungus spread is greatly facilitated by various species of Elm Bark Beetle. Most of these beetles are in the genus *Scolytus*. There are 14 species of *Scolytus* world-wide that can spread the fungus. Unfortunately, *Scolytus multistriatus* was also



Fig. 2. Galleries of the Introduced Elm Bark Beetle *Scolytus multistriatus*, 2016

introduced to North America where it appears to be the major vector of the disease. There are two species of *Pteleobius* that can spread the fungus. The North American native *Hylurgopinus rufipes* can also carry the disease. Nurse galleries of *Scolytus multistriatus* (Fig. 2) can be seen frequently when the bark of dead trees is sloughed off.

In Ontario, the three native Elms – American Elm (*Ulmus americana*), Slippery Elm (*Ulmus rubra*), and Rock Elm (*Ulmus thomasii*) – are all susceptible to the disease. The European species English Elm (*Ulmus procera*) and Wych Elm (*Ulmus glabra*) that are sometimes planted here are likewise susceptible to the disease. Siberian Elm (*Ulmus pumila*) and Chinese Elm (*Ulmus parvifolia*) are moderately resistant to the disease but unfortunately the Siberian Elm has shown itself to be invasive.

Dutch Elm Disease is classed as a wilt disease. When the fungus grows into part of the vascular system, the tree reacts by trying to wall off or isolate the fungus within a section of that vascular system. This shuts off a small part of the vascular system, the loss of which is a minor cost to pay by the plant. An aggressive pathogen like the disease fungus is able to get past the walled-off section. By doing this over and over, the flow of water is gradually reduced to the foliage in the tree crown. When the water supply is inadequate, the foliage wilts. There might also be a toxin that is released by the fungus which causes damage to the cells in the leaf and which also accelerates the usual rate of water loss relative to a healthy leaf. The overall effect is that there is inadequate water flow to the foliage resulting in wilt and death of the foliage (Fig. 3). As more and more of the crown succumbs, branches die and eventually sections or the whole of the tree crown dies (Fig. 4).



Fig. 3. A young Elm with advance wilt caused by the Dutch Elm Disease at Scotch Block, 2012



Fig. 4. A large Elm with advanced Dutch Elm Disease, Brampton, 2005

In the normal course of events, when the tree dies, it eventually falls. This starts with the loss of the finer twigs and progresses to large branches and finally the main trunk. The simple power of gravity in this situation means that there is a new and highly significant safety hazard to deal with. Even though the possibility of being struck by an individual falling tree is rather low, the problems associated with a large tree laying across the road can be rather significant. The only solution was to cut the dead trees (Fig. 5). The Province of Ontario offered farmers five dollars (to a maximum of 500 dollars) per tree to cut infected elms on their properties. The Townships were also cutting trees under their jurisdiction using funds available under winter works programs.



Fig. 5. Large dead Elms being removed on 5th Line north of King Street, Terra Cotta, April 1971

Control of Dutch Elm Disease by chemical means other than for a few specimen trees is quite impractical. The only realistic method must be biological. Hybridization with disease-resistant species has been deployed in some instances but deploying genes from non-native species is undesirable since it reduces the natural gene pool. In Ontario, the development of lines of disease-resistant Elms is underway at the University of Guelph. These are trees selected from the native population then propagated. Such trees must be tested to ensure that they are truly resistant and not lucky individuals that have by good fortune escaped the infection.

If we are fortunate, we may one day again see good numbers of large umbrella-shaped Elms on the landscape. Until then, the Elm population will remain as a large scrubby type of tree. Unless the trees are resistant to the disease, they will only grow to a modest size before they are subjected to new rounds of infection. We remain hopeful that the disease will one day be a thing of the past.

Trees for Birds

By Don Scallen

Suburbia has a low diversity of nesting birds. More species visit during migration but that diversity too, pales in comparison to the number of migrants moving through wilder areas. The most significant reason for the dearth of species in our towns and cities is surely the narrow range and quality of habitat available. Our roads, lawns and penchant for neat, sterile landscapes is antithetical to the needs of birds. Habitat complexity, with the shelter, water, and food it offers, translates into more species of birds.

A wholesale societal change in how we landscape our yards and public spaces would be wonderful, but in the meantime, there is a simple act that anyone with a yard can do right now to help birds. Plant a tree. But crucially, if we care about birds and enhancing our local ecology, that tree needs to offer leaves that caterpillars like to eat.

Almost all birds (the House Finch is a notable exception) feed insects to their young and, like Pablum for human babies, young birds prefer soft, easily digested fare. Spiders and worms are choice baby foods, but manna for most nestlings is caterpillars.



Fingered Dagger caterpillar on willow



Furcula caterpillar on willow

So, in choosing a tree to plant we should consider its appeal to moths, butterflies and their caterpillars. Native trees fit the bill. Entomology professor Douglas Tallamy in his acclaimed book *Bringing Nature Home*, presented the results of exhaustive research revealing the stunning differences in caterpillar production between native trees and European or Asian imports. One jaw dropping comparison is between Asian ginkgo and a native oak. Three species of caterpillars in North America have been found feeding on Ginkgo, while over 500 have been found on oak.

Anecdotally I've seen this contrast in my own yard over a number of decades. For a long time my biggest tree was a Norway maple. Its foliage remained largely untouched through the growing season. Most caterpillars and other insects obviously weren't able to eat the leaves. My Norway maple was about as bug-friendly as a plastic house plant.

Even more immune to insect attack, and consequently even further removed from any meaningful ecological connections, were two magnolia trees. Their foliage was perfectly pristine – always. The leaves on my native red oak, white birch and white elm in contrast, were blemished and perforated by insects. This, understand, is not a sign of impending doom for a tree, but testimony that the tree is making a contribution to ecological health.



Oak leaves, caterpillar food

My Norway maple is now reduced to a snag with a grape vine growing up it and I've uprooted one of my magnolias. (The other remains... for now.)

Marina Ritchie in the April 2017 issue of *BirdWatching* magazine, authored an article called "The Ultimate Bird Feeders". Reflecting on Tallamy's research she writes: "Chickadee chicks eat caterpillars almost exclusively. For chickadee parents hunting caterpillars, the black cherry and native oak trees are overflowing, self-replenishing bird feeders, but the ginkgo and Zelkova (another Asian import) are empty, with no refills in sight."

So if you love birds, and you plant a tree this spring, why not choose a self-replenishing bird feeder? Let's help fill the larders of our precious songbirds.

Photos by Don Scallen

Superb caterpillar generating trees include oaks, black cherry, native willows, birch and poplar. See www.bringingnaturehome.net/what-to-plant.html for a complete list.

Panama Orchids

Are you into orchids? If so, you will know that two big epicentres in the Americas are western Panama and the Pacific slope of the Ecuadorian Andes. Last November Lynn and I visited the Volcan Baru area of western Panama with our friend Eugenio Garcia and saw many fabulous orchids, both wild in the mid- and high-elevation rainforests and in the gardens of the Dracula Orchid Gardens in Serra Punto. You will find my photos of some of the interesting species at: <http://www.pbase.com/hamishduthie/panama2016>



Pahiopedilum sp.



Dracula vampira

Hamish Duthie & Lynn Allen

Halton/North Peel Naturalist Club, Box 115, Georgetown, Ontario, L7G 4T1
Charity Registration number: 869778761RR0001

Executive			Appointments	
President:	Don Scallen	(905) 876-6180	Membership:	Lorysa Cornish
Past President:	Fiona Reid		Newsletter:	Tanya Piko
Vice President:	Ian Jarvie	(905) 877-1441	Ontario Nature Representative:	Don Scallen
Secretary:	Emily Dobson		Public Relations:	Rose Barcarse
Treasurer:	Anne Fraser		Webmaster:	John Beaudette
			Member at Large:	Janice Sukhiani
			Member at Large:	William McIlveen
			Crozier Property Steward:	vacant
			Hardy Property Steward:	Ray Blower

Membership for one year: \$30 Single; \$40 Family
The Halton/North Peel Naturalist Club is an affiliated member of Ontario Nature.

www.hnpnc.com

Halton/North Peel Naturalist Club Membership Form

_____ Renewal or _____ New Member(s) Date _____

Name(s): _____

Address: _____

Postal Code: _____ Telephone: _____

E-mail: _____

Membership renewal fee

from September through to August _____ Single (\$30.00) _____ Family (\$40.00)

New members' fees from sign-up date:

December through to August _____ Single (\$22.50) _____ Family (\$30.00) March

through to August _____ Single (\$15.00) _____ Family (\$20.00)

June through to August _____ Single (\$ 7.50) _____ Family (\$10.00)

Do you have any suggestions for programs or field trips?

How did you hear about our club (newspaper/website/friend/other)?

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: _____

Meetings are at St Alban's Church in Glen Williams (see next page) starting at 7:30 p.m.

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

Halton/North Peel Naturalist Club

Meeting Location

St. Alban the Martyr Anglican Church, 537 Main Street, Glen Williams

