

The Esquesing



Halton/North Peel
Naturalist Club

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Osprey (*Pandion haliaetus*)

Photo Credit: Anne Fraser

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President's Message

Fall is such a time of change. Migration, the trees turning to their glorious Fall colours, wildlife moving to their hibernation sites. All the typical seasonal signals have been on beautiful display in recent weeks. It's a great time to be out of doors and appreciating nature's glory.

Some of the changes that have lately garnered a lot of attention are not 'of nature', *per se*, but nevertheless have grave implications for our natural areas and ecosystems, especially wetlands. The province recently introduced Bill 23 to sharply reduce constraints on developers and limit environmental oversight of development planning. This will remove protections from wetlands, Species-at-Risk habitat and other natural areas, and potentially make them available for development. The ramifications of this may be devastating for the natural ecosystems that we so cherish and appreciate and depend on.

This is being done in the name of addressing the housing crisis in Ontario - which we can all appreciate needs to be addressed – but it is important to ask: Should one crisis be addressed while ignoring or exacerbating others? It is just as critical that we address the Global Warming Crisis (Climate Change) and the Biodiversity Crisis at the same time as the housing shortage. It is not a zero-sum game, and one does not have to take place at the expense of another: Solutions can be worked out with care for these different problems simultaneously. I would encourage all Ontarians (especially naturalists!) to be aware of these issues, and to contact your local political leaders and representatives to inform them of your concerns with the province's approach. Email them, write them, phone them, or go meet them in person – whichever method you prefer. The public voice is most crucial at this time.

This season has seen some changes for the club too: as many of you are already aware, we have relocated to a new meeting venue – the Hillsvue Active Living Centre in Georgetown (situated behind Sherwood Copy & Print shop – see the newsletter for location details). The space is airy, open and well-ventilated, and the past two meetings have gone very smoothly there. The season is off to a great start at this new location – it was so wonderful to see many of you in person again! Hope you will join us there for the upcoming meetings and the excellent presentations that are scheduled:

This month, Beth Anne Fischer and Mike Heyming from Conservation Halton will join us to talk about CH's collaborative projects with local landowners to protect Brook Trout, and conserve and improve its habitat. What positive ripple effects (if you will pardon the pun) do such conservation efforts have for other fish and the creek ecosystem as a whole? Join us on Nov. 8th to find out more!

In December, as was the pre-Covid tradition, we shall (circumstances permitting, of course!) once again hold the HNPNC Potluck and Members' Presentation Meeting. This will be a chance to not only enjoy some delicious food together, but also to share some of your favourite photos. Stay tuned for further details as the date approaches.

We are very pleased to announce a new outdoor club event: Saturday Adventure Walks! These are scheduled to take place on the Saturday following the monthly club meeting, so announcements about the walk will be fresh in your mind, as will any discussion we have to recap the previous Saturday Adventure Walk. Check out the details in the newsletter and plan to join us!

Speaking of which, the newsletter, as always, is packed with so much more than the schedule of speakers and walks. Be sure to have a look through it for the fascinating articles on a wide range of topics – from our bird monitoring programs, fungi, and local moraines, to careful notes on answering age-old philosophical puzzles. Savour the gorgeous photography throughout, and cap it off with the beautiful photo quiz at the back!

See you at the meeting!

Yves Scholten

Talks and Walks

Indoor Events - Talks

We are returning to in person meetings at a new venue

Time/Date: 7:30 pm on the second Tuesday of the month

Location: Hillsvie Active Living Centre, 318 Guelph Street - Unit #9, Georgetown
(entrance at back of the building) Map on last page of the newsletter.

Tuesday, November 8, 2022 at 7:30 pm

Beth Anne Fischer & Mike Heyming: Conservation Halton landowner stewardship conservation programs in Halton.

Tuesday's talk will focus on Brook Trout and existing conservation efforts undertaken by Conservation Halton to improve habitat for the species. This presentation will include Halton area case studies project examples, with before and after photos. We will also take a deeper look into how conservation for Brook Trout has a cascade of effects that positively impact other fish species and creek ecosystems on a larger scale.

About the presenters: Beth Anne Fischer is the acting Coordinator for Conservation Halton's Landowner Outreach & Restoration group. She has 10+ years experience managing creek restoration projects, with a focus on community engagement. She has lead the Brookies in Bronte Forever initiative since 2015. Like many she has fallen in love with the Brook Trout and is excited to share information about the species, work that is being done to protect them and how the Halton-North Peel Naturalist Club can get involved.

Mike Heyming is the acting Restoration Project Technician with the landowner outreach and restoration team at Conservation Halton. In his spare time he is an avid outdoorsman and fly fisherman, spurring his passion for Ontario's wild streams.

Tuesday, December 13, 2022 at 7:30 pm

Club members / potluck

More details to follow closer to the time.

Outdoor Events

Please Note: As indicated below, please confirm your participation for each outing so that we can be sure to adhere to the ever changing Covid safety protocols.

Saturday, November 12, 2022 at 1 pm

Late-Flowering Plants Survey Field Trip

This project was started back in 2001 as a way to collect reference information regarding climate change and its effects on the flowering season for various plant species. We want to keep that project going again in 2022. We document the presence of any plants that are still blooming late in the season at sites around Halton Hills.

Meet at the parking lot of the old public school, Mary Street, Norval at 1:00 pm where we will start our usual monitoring at the Lucy Maude Montgomery Garden and then check Willow Park. Afterwards, we will look at the new pollinator garden at McNab Park in Norval and wrap up with the usual visit to the Dominion Seedhouse Gardens.

For further information, please contact Bill McIlveen at wmcilveen@sympatico.ca

Date & Time TBD, email auldscot1@cogeco.ca for updates

Fall Lakewatching for Pelagic Seabirds

From September through to November there are occasions when rare pelagic seabirds are seen on the western end of Lake Ontario. Parasitic and other Jaeger species, Black-legged Kittiwake, Sabine's Gull and even Northern Gannet and Razorbills have all been reported. Some of these birds find their way up the St. Lawrence, and some are on their migratory route from James Bay. Strong easterly or north-easterly winds push these vagrants westwards to the end of the lake where doughty lake watchers gather at Van Wagner's Beach in Hamilton in the hopes of catching sight of these rarities. Regular winter ducks such as Scoters and Long-tailed Ducks also arrive, sometimes in their thousands to spend the winter on the lake.

Ian Jarvie will be leading an outing at some point in the fall. Mid to late afternoon is apparently best, but will necessarily be with only a day or two's notice when it looks like the winds will be favourable. But be warned, conditions will definitely be windy, possibly cold and wet too! Appropriate clothing and warm drinks are definitely needed.

Watch for an email blast at some point in the next while. If you are interested, drop Ian an email at auldscot1@cogeco.ca and he will keep you in the loop.

Tuesday, December 27, 2022

Annual Christmas Bird Count

Our annual count area will be divided into parcels, with each group being assigned a particular parcel. Each group is typically led by an experienced birder, with a wide variety of birding skills, and all are welcome, no previous experience is necessary. It's also an opportunity for new birders to join in, as it's a great learning experience regarding bird identification. Car-pooling will once again be encouraged if possible while abiding by the Covid safety protocols at that time. We will update you closer to the event. If you would like to participate, please email Ian Jarvie, at auldscot1@cogeco.ca

HNPNC SATURDAY ADVENTURE WALKS

As a Naturalist Club, we all love spending time in the great outdoors, and to that end we are excited to announce an initiative called “Saturday Adventure Walks”.

As you can see from the table below, we plan to hold scheduled walks, each with a specific theme covering an array of nature related topics. Most of these walks will take place on the Saturday after each monthly meeting. (There are a few others which don’t follow that, like the Christmas Bird Count, or are dependant on the weather or the cooperation of nature.)

We plan to announce the upcoming walk at each monthly meeting, and we hope that this will spark interest in the walks and that Club members will be able to attend.

HNPNC SATURDAY ADVENTURE WALKS

DATE	EVENT	LEADER
12 Nov 22	Late Flowering Plants - see description below	Bill McIlveen
TBA Nov 22	Fall Lakewatching for Pelagic Seabirds Weather dependent – see description below	Ian Jarvie
17 Dec 22	Owl Prowl (Saturday after Pot Luck)	Alexis Buset & Ian Jarvie
(Tues) 27 Dec 22	Christmas Bird Count (Note Tues. vs. Sat.) - see description below	Ian Jarvie
14 Jan 23	Animal Tracks In The Snow	Don Scallen
18 Feb 23	Snowy Owls and Other Winter Birds	Ian Jarvie
18 Mar 23	Early Migrant Birds	Yves Scholten
Early April 23	Salamander Walk	Don Scallen
15 Apr 23	Winter Ducks on Lake Ontario	TBA
TBA May 23	Snakes	Yves Scholten
13 May 23	Migrating Songbirds	Ian Jarvie
17 Jun 23	Bat Night	Fiona Reid
TBA Jun 23	Scotsdale Bird Boxes	Bill McIlveen

Bird Box Use at Forks-of-the-Credit Provincial Park, 2022

Article and Photo by W.D. McIlveen

In 2017, the Halton/North Peel Naturalist Club established a network of ten bird nesting boxes at the Forks-of-the-Credit Provincial Park in Caledon. One of these (Box FC-01) was dedicated to the memory of former club member Valerie Dobson. It is identified by a small plaque. In 2018, the network was extended to 22 boxes. The boxes were of a design suitable for Eastern Bluebirds or Tree Swallows. The boxes were placed in open sites to reduce predation by snakes or certain mammals. The boxes were fixed on metal T-bar fence post supports supplied with baffles.

The boxes were examined for evidence of breeding birds during 2022 by members of HNP. The first visit was made on June 10 within the main breeding season. The second visit to document the nest box contents and to clean the boxes was made on October 14. The results from the first five years of operation have been routinely reported in various issues of the Naturalist Club's newsletter [McIlveen 2018a, 2018b, 2019, 2020, 2021]. The present reports the results for 2022.



Contents of one nest box – original nest of Tree Swallow with two blue feathers then sticks placed on top by House Wren

Like in previous years, all 22 boxes were used during the 2022 breeding season. The usual three species – Eastern Bluebird, Tree Swallow, and House Wren - accounted for all the use observed (Table 1). Most of the breeding evidence at the first visit was young birds in the nest which contrasted with observations made in 2021 when

eggs dominated. This difference is easily explained because the nest box check in 2022 was June 10 (8 days later) allowing extra time for the eggs to hatch. Three of the Bluebird nests had neither eggs nor young. It is not certain if the young in these boxes had fledged before the check but this is certainly possible. Data for 2019 and 2020 had combined 89 and 87 offspring (eggs plus young) respectively in comparison to the corresponding 75 noted in 2021. The results for 2022 provided the same total (75) but, as noted, young Bluebirds may have fledged before the nest check. The later nesting of the House Wrens likely understates the number of young produced.

Table 1. Summary of bird box use at Forks-of-the-Credit Provincial Park, 2022

Species	Box Use		Box Contents June 2	
	June 10	Oct. 14	Eggs	Young
Eastern Bluebird	4	5	5	0
Tree Swallow	16	16	12	54
House Wren	2	9	9	2
Total	22	31*	65	10

* Total nests exceed total boxes due to reuse of boxes, primarily by Wrens

Overall, the results from the October evaluation matched the breeding season observations. The greatest difference was that during the intervening time, House Wrens had built nests in nine of the boxes making the total Wren tally nearly half of the boxes. One of the Bluebird eggs did not hatch.

The heavy use of the bird boxes over the project's lifetime indicates that the nest boxes have added substantially to the populations of certain bird species. Even with data gaps known from the first two years of operation, and despite the absence of records for the late-nesting House Wrens, the known number of eggs and young produced over the six years stands at 374. The species involved represent cavity-nesting species which have no real opportunity to nest in the open meadow habitat. They could certainly feed in the area but nesting would not be possible. Naturally, we would not expect all of the young to survive due to natural mortality forces. While we may not know the exact numbers of birds being added to the wild population, a reasonable assumption is that the nest boxes at least sustain a number equivalent to the number of pairs using the boxes. In 2022, this would be equivalent to the 31 pairs indicated in Table 1.

References

McIlveen, W.D. 2018a. Bird Box Use at Forks-of-the-Credit Provincial Park, 2017. The Esquering. Vol. 52 (4) pp. 18-19.

McIlveen, W.D. 2018b. Bird Box Use at Forks-of-the-Credit Provincial Park, 2018. The Esquering. Vol. 53 (2): 9-11.

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McIlveen, W.D. 2020. Bird Box Use at Forks-of-the-Credit Provincial Park, 2020. The Esquering. Vol. 55 (2): 10.

McIlveen, W.D. 2021. Bird Box Use at Forks-of-the-Credit Provincial Park, 2021. The Esquering. Vol. 56 (2): 7-8.

Results of the 2022 Monitoring of Bird Boxes Established at Scotsdale Farm, Halton

Article by W.D. McIlveen

Since 2014, the Halton/North Peel Naturalist Club has maintained a network of bird nest boxes at the Scotsdale Farm located just north of Silver Creek. In that first year, sixteen boxes were placed on the property. Another 27 boxes were added to the network in 2015. Some old boxes were already present on the property and these were incorporated into the network. Most of these have suffered from further deterioration over the years and are no longer functional. All boxes have been monitored annually since they were established. The present report is a summary of the results for 2022.

Starting in 2018, the boxes were gradually moved to new steel posts away from the trees and hedgerows which had become overgrown by woody vegetation and vines. Most boxes have now been day-lighted or slightly moved. As of 2022, there were 41 operational boxes. In October, the formerly bright-white baffles were painted with spray paint as a camouflage. (See photos below)

As previously reported, the majority of boxes were of a standard design suitable for Tree Swallows or Bluebirds; however, two boxes were designed for owls and one was for kestrels. The old boxes had also mostly been designed for Tree Swallows but at least one was intended for nesting ducks. Each box has a unique identification number to assist with the monitoring. Monitoring of the boxes in 2022 was carried out in the main part of the breeding season on June 14. All of the boxes were cleaned in October when the content of each box was noted.

The observations made during the respective box checks are summarized in Tables 1 and 2. It has become very apparent that the main species using the boxes (Eastern Bluebird, House Wren, and Tree Swallow) do not breed at the same time. The Bluebirds typically start nesting first while the Wrens construct their stick nests on top of the nests created by the other species. This means that a difference of only a few days in the monitoring visit date will produce quite different results. The visit date in 2022 was a few days later than in 2021 (June 14 vs June 10). This small difference allowed the young from three of the Bluebird boxes to fledge (leaving boxes without young) whereas the Tree Swallow nests contained young in 2022 instead of mainly eggs seen in 2021.

Another main observation made in 2022 was that the vast majority of boxes were used. Only 3 boxes were not being used at the time of the June visit. Two of these were seen to be used subsequent to the June check. The apparent increase in nest box use is almost certainly related to the repositioning of certain boxes into the open edge of the fields and away from trees and hedgerows. By comparison, the bird boxes established at The Forks-of-the-Credit were all initially placed in the open at the start of that project and thus they have seen virtually 100 percent occupancy every year. The results at Scotsdale are now catching up.

As noted above, the results obtained from the bird boxes at Scotsdale are summarized in Tables 1 and 2. As mentioned, the majority of the boxes were utilized during the breeding season. The Swallows were the dominant users with 24 boxes in use but Bluebirds made substantial contributions with 12 of the boxes having been used. Wrens occupied 12 boxes over the breeding season.

Reproductive success measured as eggs and unfledged young tallied a total of 133. This number does not include the unknown number of Bluebirds that had fledged before the boxes could be checked. On average, this could have contributed about 12 new Bluebirds to the population. The total has to be adjusted downward because, at clean-out time, the nests included 3 Tree Swallow eggs in one box while another Swallow box contained a pierced egg. The likely suspect for that is a House Wren. One box contained a single unhatched Bluebird egg. One Bluebird nest was found with 3 dead, near-fledging sized young Bluebirds. At the time of the June visit, that nest had a single Bluebird egg. It is uncertain whether the observed dead young were part of a slightly-delayed first nesting or a completely separate later nesting. After estimating the number of fledged Bluebirds and accounting for failed eggs and dead young, the bird boxes at Scotsdale could have contributed a total of 137 new birds to the population.



Unhatched Bluebird egg, October 21, 2022



Unhatched Tree Swallow eggs, October 21, 2022

Nest photo credits: W. McIlveen

Table 1. Bird reproduction in bird boxes Scotsdale Farm, June 14, 2022.			
Species	Eggs	Young	Total
Eastern Bluebird	8	*	8
House Wren	15	14	29
Tree Swallow	5	91	96
Total	28	105	133

*3 boxes with young already fledged

Table 2. Boxes used in 2022		
Species	Jun.	Oct.
Eastern Bluebird	9	12
House Wren	5	12
Tree Swallow	24	20
Empty	3	1
Total	41	43

A special mention of the efforts of Kim Dobson is warranted here. Not only did he build the boxes, he helped to install and to monitor the boxes in all years. He was largely responsible for repositioning the boxes that were moved. Now in 2022, he has been adding camouflage to the baffles. Thank You, Kim!



Kim Dobson with unpainted baffle on box.
Photo credit: Ramona Dobson

Kim Dobson with painted baffle.

Testimonial Regarding Trees Falling in the Woods

By W.D. McIlveen

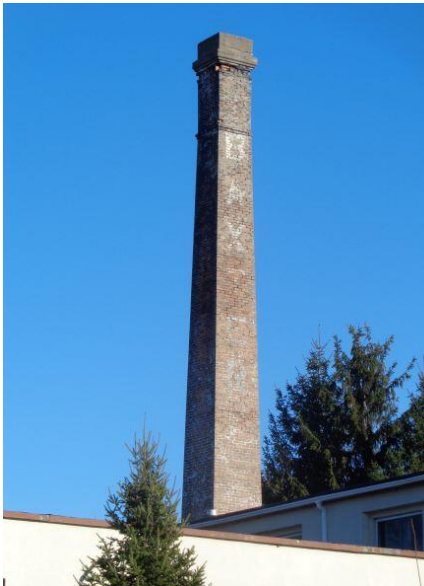
On October 11, I was walking in the woods known as the Esquesing Tract. I was enjoying the spectacular weather (as good as any that 2022 had offered up) and was taking in the amazing fall colours. As I was walking along the part of the trail nearest Dublin Line at about 3:10 pm, I heard the oft-discussed sound of a tree falling in the woods. It was actually only one part of the tree that fell and not the whole tree. There was not just one sound but three. Off to my right, I heard a sharp crack (first sound) that caught my attention. It was about 50 metres away so I didn't feel threatened. Had it been closer, I surely would have moved very, very fast. The second sound was more of a 'whoosh' kind as the large branch chunk crashed through underlaying branches. At this point, I could see it come down so my imagination was not required to know what was happening. The third sound was a definite 'thud' when it hit the ground. I expect that I was the only one to witness this as the older couple I had talked to on the trail earlier had departed. Now, had I not been there to see it for myself, perhaps, just perhaps, the golfers across the road could have given this testimonial. But I can now state that part of a falling tree can indeed make a sound – not just one sound but three!

Update on Chimney Swifts at Acton

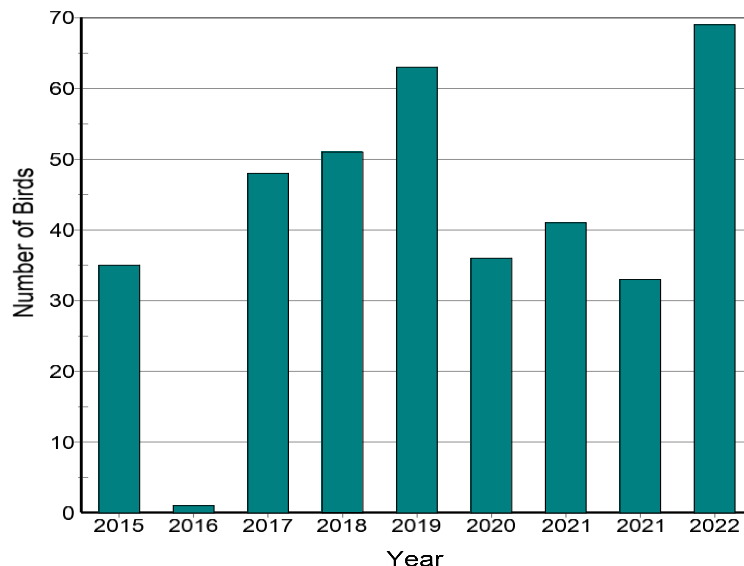
Article by W.D. McIlveen & Sue Sibley

Most birders are quite familiar with the Chimney Swift. The species is moderately common but because of its specialized behaviour and general declining population, it is listed as 'Threatened' under the federal 'Species at Risk Act' and in Ontario under the 'Endangered Species Act'. Those designations provide the species with some protection that makes it an offence to disturb, kill or collect adults, juveniles and eggs. Similar protection is offered in the United States. The Swift population in Ontario is estimated to be 7,500 pairs.

Information about the status of the species requires that its population be monitored. This is mostly done via counts which can be conveniently done at roosting and nesting chimneys. Once a chimney is known to be used during migration or for breeding, the counting process is relatively easy but learning which chimney (or comparable structure) is being used might be a challenge. Fortunately, the birds will return to the same structures year after year. This behaviour assists in assessing their number over a number of years.



Baxter chimney, Acton, 2015
Photo credit: Bill McIlveen



Counts of Chimney Swifts at Baxter chimney, 2015-2022

The main chimney in Acton that is presently being monitored for Swifts was that associated with the former Baxter Laboratories factory located west of Alice Street in downtown Acton. The building was formerly the home of the Mason Knitting Co. mill. Baxter took over the vacant building in 1940 and occupied that facility until 1957 at which time they moved to a new modern building at Alliston. We have no record of when the Chimney Swifts began to occupy the chimney but it is reasonable to presume that the date post-dates the tenure of the Baxter operation. Given the possibilities, Swifts could have made use of the chimney for anywhere up to 65 years.

Counts of Swifts utilizing the chimney during the Spring migration have been carried out at the Baxter chimney since 2015. Excluding 2016, counts have ranged between 33 and 69 birds. The count in 2016 was only a single bird. That particular count happened to fall on an evening when a rain storm was passing through the area. The fact that one bird was tallied is evidence that the species was at least present and using the chimney. Unfortunately, conditions did not lead to an alternate count in 2016 and the number of birds that year must be regarded as an anomaly.

Overall, there is no evidence of any population trends from the Baxter chimney. Results from two counts made in 2021 were slightly different from each other but they fall within the generally expected range. It is encouraging that the highest tally was made in 2022 indicating that there is no decline in the local population. The former Baxter property is now privately-owned. The owner was made aware of the significance of the chimney and is committed to ensuring it remains accessible for the Swifts.

Chimney Swifts can be observed flying over the downtown at almost anytime during the breeding season but the actual records are limited for much of the time. Local chimneys used by breeding pairs have not been located though there are surely some. During the period of the Breeding Bird Atlas II (2001-2005), birds were seen entering the chimney of a building on Mill Street currently occupied by the Salvation Army Thrift Store (Jennifer Minogue, pers. comm.).

In 2022, one of us (S.S.) undertook monitoring of three Acton chimneys as part of the formal Swift watch program (Table 1). One of these was the Baxter chimney while the other two were located at 19 Willow Street and at 27 Mill Street (Thrift Store). The building at 19 Willow Street is the Heritage Acton Town Hall. We have learned that the chimney there had been blocked during renovations in 2021. No birds were observed in the vicinity of that chimney during two visits in 2022 which would be consistent with a blocked chimney. Swifts entered the chimney on Mill Street during both observation visits in 2022. The number of birds was 2 and 11 birds on each occasion respectively.

Table 1. Results of Swift Monitoring at Three Chimneys in Acton in 2022

Visit	Baxter Chimney		19 Willow Street		27 Mill Street East	
	Date	Count	Date	Count*	Date	Count
A	May 22	69	-	-	-	-
1	May 21	35	May 25	0	May 25	2
2	June 6	41	June 2	0	June 2	11

* It was later determined that the chimney had been permanently blocked in 2021

Leucistic White-throated Sparrow

Article & Photo by Elizabeth Szekeres

Pierre Rivard and I were birding in Colonel Sam Smith Park in early October and found a flock of White-throated Sparrows along the cycling trail. These birds are usually seen in that area during migration and they are very sweet to see as they forage in berry bushes and grassy areas. We were focussing our cameras when Pierre remarked "What's that white one?" His very sharp eyes had noticed one sparrow that was very different from all of the others. It was nearly completely white, so had to be one with leucism, a genetic condition that prevents melanin from being properly deposited in the feathers or skin. Its pigmentation was therefore vastly reduced, resulting in this beautiful bird that is mostly white. Some very experienced birders we know said that they had never encountered a bird like this one in years of keen observation, so this one is truly a very rare creature. We were delighted to see it and get some great images as well. That's the wonderful thing about birding. You never know what you're going to see when you go out!



Above:
Leucistic White-throated
Sparrow

On right:
Normal White-throated
Sparrow for comparison



From the Web

A baffling tale of an apparent Scarlet Tanager – Rose Breasted Grosbeak tryst. <https://www.birdwatchingdaily.com/news/science/rare-hybrid-grosbeak-tanager-confirmed-study/>

Scientists continue to strive for ways to reduce the toll that our activities exact on birds. One way is to frighten them away and to that end, using “googly eyes” has shown some merit. <https://www.mcgill.ca/oss/article/did-you-know-general-science/birds-seem-be-scared-googly-eyes-and-thats-good-thing>

Great Lakes Untamed <https://www.tvo.org/programs/great-lakes-untamed> Tap into this series to see spectacular video of some of the animals and natural features that make the Great Lakes so special.

Podcasts

In Defence of Plants. <https://www.indefenseofplants.com/podcast> Deep dives into the fascinating flora that we share the planet with, supported by the latest research. If you are a plant enthusiast, this podcast is worth checking out. Some recent titles: The Street Lives of Trees, Trillium Diversity: A Story of Ants and Seed Dispersal, Of Orchids and Fungi, Fireflies and Plants, American Ginseng Revisited.

The Field Guides. <http://www.thefieldguidespodcast.com/new-blog> Irreverent explorations of the natural world presented by two young naturalists from Buffalo New York. One of the presenters is something of a goofball but there is much interesting content embedded in the conversations that take place between him and his associate as they hike in various habitats. Some recent titles: Can’t Touch This: A Deep Dive Into Touch-me-not, Bill and Steve Go to Hell(benders), Mockingbirds Gonna Mock, Insectapalooza, Bill and Steve Go Timberdoodlin’, The Alliterative Purple Pitcher Plant.

Fascinating Fungi

Article by Don Scallen & Photos by Ian Coburn

Fungi erupt out of ground and wood in glorious diversity in the fall. Ian Coburn, owner of I.C. Designs in Orangeville and a fungi aficionado, has graciously made available some of his beautiful fall fungi images for this story.

Below: Worm-like Coral



The fungi we see above ground are the fruiting bodies of complex organisms made up of “mycelium” (fungal filaments) that grow largely unseen, hidden in soil, leaves and rotting wood. This largely cryptic lifestyle, for most of the year, places fungi out of view and out of mind. We often overlook them, but if we seek to understand ecology, fungi warrant our focused gaze.

Fungi are stunningly diverse and massively influential in natural systems. Only in recent years have we begun to unveil the deep, labyrinthian complexity of that influence. Every cubic centimetre

of forest soil is laced with an estimated 100 metres of mycelium and these fungal threads live within almost every plant and interact with those plants in often mysterious ways.

Some entwine and enter tree roots and transmit minerals to the trees. In turn they get sugars from the trees – the product of photosynthesis. This mutually beneficial exchange has been characterized as “caring” and “sharing”.

But Merlin Sheldrake, author of *Entangled Life* cautions us not to project “starry eyed” human values on tree-fungal interactions. After all, some fungi like the ones that cause Chestnut Blight and Dutch Elm Disease kill trees.

If many plant-fungi relationships appear mutually beneficial you can be sure that, just as some human beings take more than they give or con others to get what they want, this happens in plant – fungal relationships too.

Orchids for example, cannot germinate and grow in their infancy without help from fungi. But research suggests that the orchids may give nothing in return.

Fungal-plant interactions is an area ripe for discovery and much of what we learn will, no doubt, astonish us.



Above: Bloody Tooth Fungi & Below: Amanita species



For more of Ian Coburn's great images go to
<https://www.inthehills.ca/2022/10/fascinating-fungi/>

Moraines in Halton

Article and Photos by W.D. McIlveen

There are several different geological structures that become evident after a glacier melts away. One of these structures is a moraine. These are formed by advancing glaciers. As the ice in a glacier moves owing to pressures at the center of the large pile of ice, it flows along very slowly. As it moves though, it picks up rocky material that is carried along and grinds more material from the original surface. The rocky material eventually gets deposited in one of three moraine positions – at the front edge, along the sides an ice lobe, or between two lobes that have come together. The characteristics and volume of the sediment present as well as the dynamics on the ice all influence the nature of the moraine formed. At different times, the edge of the ice sheet would advance or retreat according to short-term climate changes occurring within the life of the glaciation. The meltwater flowing from a retreating glacier can rework or cut through any fresh moraine.

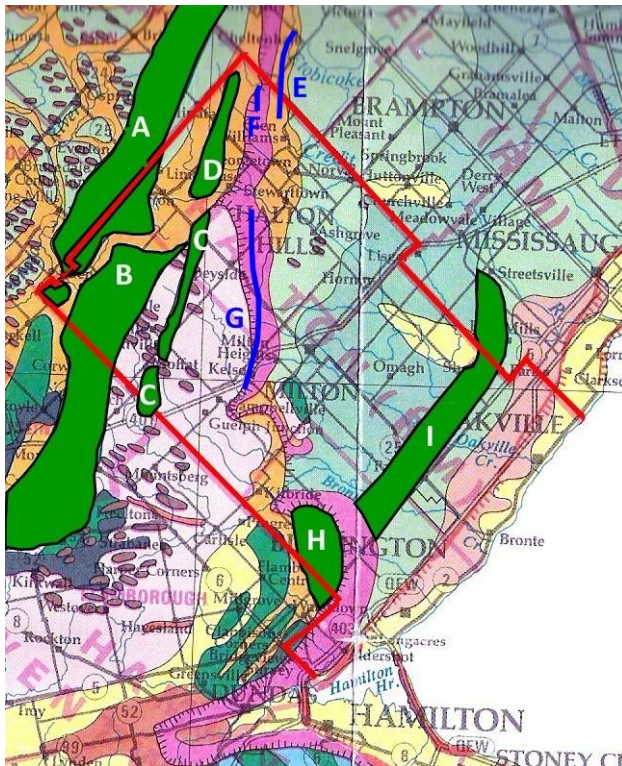


Fig. 1 Locations of Moraines in Halton

direction of movement of the glacial ice lobes. The Paris Moraine runs from near Caledon towards Lake Erie [Chapman and Putnam]. The Galt Moraine follows the Paris Moraine (Fig. 4) very closely on the east side. At times, the two come very close together and are almost indistinguishable in some places. Their route takes the two across the northwestern-most corner of Halton. They are shown as A and B in Fig 1.

Most people are likely unfamiliar with moraines although they will probably have heard references to the Oakridges Moraine. That moraine does not extend as far west as Halton. But, despite its small area, Halton can claim nine separate moraines. These are described briefly below and their locations are shown in the maps (Figs. 1 to 3).

The nine moraines present in Halton vary considerably in appearance. Those to the southeast are low and barely extend higher than the nearby glacial till. The moraines in the northwest are much more prominent as a series of dense hummocky hills. In most cases. The trend direction is northeast to southwest, presumably indicating the general

Key to List of Halton Moraines (Fig. 1)

A.	Paris Moraine
B.	Galt Moraine
C.	Moffat Moraine
D.	Acton Moraine
E.	Cheltenham Moraine
F.	Terra Cotta Outlier Moraine
G.	Kelso Moraine
H.	Waterdown Moraine
I.	Trafalgar Moraine

There are two other moraines that parallel the first two mentioned but they are fairly distinct and lie a little further to the east. These include the Moffat Moraine (Fig. 1) that lies a little north of the Village of Moffat. The other in the pair is the Acton Moraine (Fig. 6). It runs from south of Acton to just north of Silver Creek where it is quite evident near the entrance to Scotsdale Farm. Chapman [1984] does not specifically recognize it to be distinct from the Moffat Moraine; however, Karrow [2005] accepts that the textural makeup makes the two features distinct. He used Straw's [1968] analysis of the structure that made it distinct from the Galt Moraine where Chapman and Putnam (1984) had assigned it.

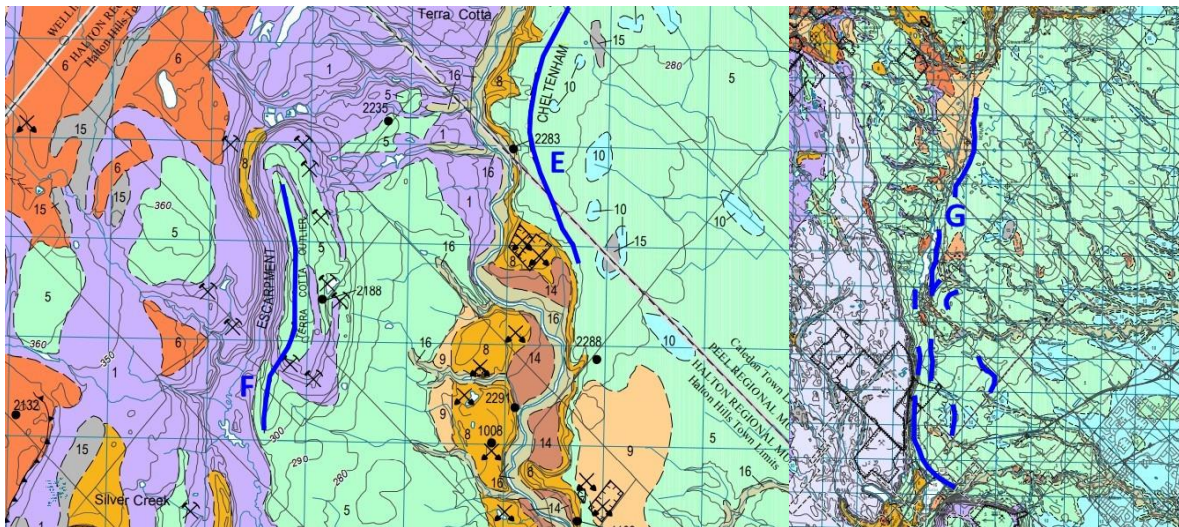


Fig. 2. Location of Cheltenham and Terra Cotta outlier moraines

Fig. 3. Location of Kelso Moraine

The Cheltenham Moraine (Fig. 2, Moraine E) has been regarded by some as part of the Palgrave Moraine. It extends only a short distance into Halton just south of Terra Cotta. It consists of hummocky till only slightly higher in elevation than the adjacent till plain. There is a short section of a separate moraine positioned on top of the nearby Terra Cotta outlier (Fig 2, Moraine F). Because the difference in elevation between the two is 70 m (the Cheltenham Moraine is lower), they were clearly created at different times. The younger Terra Cotta outlier moraine has not been given a distinctive name.

There is another moraine that starts near the Kelso Reservoir from which the name Kelso Moraine is derived. It follows north along the edge of the Escarpment to the east side of the Scotch Block Reservoir (Fig. 3). It continues further towards Stewarttown but does not quite reach that community or at least is very faint northeast of Georgetown. The southern end of the Kelso Moraine starts to the left of the Kelso Reservoir just visible at the base of the Escarpment (Fig. 8). The Kelso Moraine actually consists of several separate ridges that are broken into several segments indicating different shifts in the glacial ice lobe.

The Waterdown Moraines group (Area H in Fig. 1) refers to a group of seven morainic ridges that parallel the edge of the Escarpment from north of Dundas to Mount Nemo and even to the Escarpment at Rattlesnake Pont [Karrow, 1963]. Some are not continuous over this

distance. Their extent into Halton is fairly limited but they are present in the Region. The older and more westerly moraines appear to have been reworked by the waves of glacial lakes. All are fairly narrow ridges, and most are composed of silty till known as Halton Till.



Fig. 4 Paris Moraine. South of Eden Mills, 2003



Fig. 5. Moffat Moraine, 1st Line north of Moffat, 2003



Fig. 6. Acton Moraine, Scotsdale Farm, 2016



Fig. 7. Trafalgar Moraine east of Mount Nemo, 2015

The final moraine in this discussion is the Trafalgar Moraine. It extends as a low ridge from near Mount Nemo across Halton towards Streetsville in the Region of Peel (Fig. 7, Area I in Fig. 1). It lies just north of Dundas Street. It's composed of silty Halton Till and is not particularly prominent in elevation but it is truly a thickening of the till which qualifies it as a moraine. The glacial ice standing at the Trafalgar moraine created glacial Lake Peel until such time as the ice retreated enough to allow the lake to drain leaving the Peel plain dominated by clay soils.

Unlike the Oak Ridges Moraine, none of the moraines within Halton have any real level of environmental protection on the basis of being a moraine alone. Some effort has been expended in studies of the Trafalgar Moraine with a general notion that it serves a similar role (i.e., a water source for many rivers) as its Oak Ridges cousin though that comparison is somewhat limited. Portions of some moraine areas may be covered under other

classifications of the greenlands system where the two co-exist. The presence of moraines is slowly becoming less evident as land use change in different forms (i.e., gravel extraction, vegetation cover changes, urban sprawl).



Fig. 8. Kelso Moraine

References:

Chapman, L.J. and **D.F. Putnam.** 1984, The physiography of Southern Ontario. Special Volume 2 Ontario Geological Survey, Ontario Ministry of Natural Resources, Toronto. 270 pp.

Karrow, P.F. 1963. Pleistocene geology of the Hamilton-Gait Area. Report 16. Ontario Department of Mines, Toronto. 59 pp.

Karrow, P.F. 2005. Quaternary geology of the Brampton area. Report 257. Ontario Geological Survey, Toronto, 59 pp.

Straw, A. 1968. Late Pleistocene glacial erosion along the Niagara Escarpment of southern Ontario; Geological Society of America, Bulletin 79, 889--910 p.

Osprey Tower Update

Article by Don Scallen

I hope that by our December Potluck an osprey platform will be installed at Fairy Lake in Acton. This project, approved by your executive, has been in the works for several months. The Halton/North Peel Naturalist Club has partnered with the Town of Halton Hills and Credit Valley Conservation and Halton Hills Hydro to make it happen. The approximate \$3,500 cost will be borne by our club.

Osprey platforms in our area have successfully attracted breeding pairs at Guelph Lake. Further afield, ospreys nest at platforms at Belwood Lake in Wellington County. A long-established nest perches on a light standard at a soccer field in Badenoch, north of Mountsberg Reservoir. Our hope, obviously, is that a pair of ospreys will accept our platform. The conditions appear appropriate. Fairy Lake has plenty of fish, including pumpkinseed sunfish, black crappie, northern pike and largemouth bass. Motorboats are banned. The proximity of housing and parkland frequented by people should not prevent osprey colonization. In many areas successful osprey nesting occurs along busy roads. Still, we can't be certain that our platform will be accepted for nesting. Ospreys will make that decision.



Osprey tower at Belwood Lake. Photo credit: Don Scallen

The proposed platform will be situated at the far western end of Rotary Park along the north shore of Fairy Lake, removed from busy pedestrian traffic. It will be placed atop a standard utility pole installed by Halton Hills Hydro. The dimension of the platform itself, designed by our Vice President Ian Jarvie, will be 42 x 42 inches. Pliable branches will be interwoven on this platform to signal to passing osprey its suitability for nesting.

The proposal to place an osprey platform at Fairy Lake was not without controversy. This installation was originally to happen in concert with naturalization around the edges of Fairy Lake. A grab bag of concerns and complaints were registered about the proposed naturalization: it would encourage snakes, mosquitoes carrying West Nile, and ticks carrying Lyme disease. In response to these concerns the Town of Halton Hills has, for now, decided to forego the naturalization at Fairy Lake. An irony is that those opposed to the naturalization have also complained loudly about the abundant geese population at Fairy Lake. Naturalization – the growth of tall grasses and wildflowers – could actually *reduce* the population of the Canada Geese since these waterfowl prefer to graze on turfgrass.

Concerns about the ospreys themselves have also been voiced. Predictably the major concern surrounds their diet of fish. Fears have been expressed that they would decimate fish populations. It is doubtful that one family of osprey would have a significant effect on Fairy Lake's fish population. Fish in Fairy Lake appear abundant. I saw many individuals of several species as I kayaked the lake in the summer. Last winter I talked to an ice fisher who had over twenty Black Crappie in a bucket. As for turtles, osprey eat fish almost exclusively according to the Cornell Lab's "All About Birds". Cornell reports a diet of 99% fish augmented "on very rare occasions" by other animals.

Criticism of the project has been countered by positive feedback from community members including Rick Bonnette, until recently the mayor of Halton Hills and an Acton resident. Bonnette expressed his support for the initiative, stating that it aligns with the "Bird Friendly" status of Halton Hills. For its part the town continues to stand behind the project.



Osprey pair on a nest atop a platform.
Photo credit: Anne Fraser

If the osprey platform is in place this fall, my fingers will be crossed come spring as ospreys fly northward seeking breeding sites. I hope a pair will be distracted in their journey by a new structure on the shores of Fairy Lake – a structure they deem worthy of occupancy. Nesting osprey would be a coup for the Halton Hills community and would contribute to the resurgence of this majestic species.

Photo Quiz

Photos by Elizabeth Szekeres
Answers on page 25



Answers to the Photo Quiz on page 24

1. American Goldfinch (immature)
2. Belted Kingfisher
3. Dark-eyed Junco
4. Eastern Screech Owl (gray morph)
5. Hairy Woodpecker
6. Hermit Thrush
7. Prairie Warbler
8. Pectoral Sandpiper
9. Red-bellied Woodpecker

Halton/North Peel Naturalist Club Membership Form

Name: _____

Address: _____

City: _____ Province: _____ Postal Code: _____

Telephone: _____

Email: _____

Application Type: New _____ Renewal _____

Membership Type: Single (\$30) _____ Family (\$40) _____

If "Family Membership", please list additional names:

The membership year is September 1 to August 31. Renewals are due in September. For new members who join after April 1, the fees are applied to the following year's membership.

Participation in our outings involves walking or hiking on various trails. By voluntarily participating, you assume full responsibility for all risks of personal injury. Make sure that any outing you choose to participate in is within your fitness level. Please wear appropriate clothing and footwear.

Please fill out this form and bring it to our next indoor meeting, or mail it along with a cheque payable to Halton/North Peel Naturalist club to:

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

Halton/North Peel Naturalist Club

Box 115, Georgetown, Ontario L7G 4T1

Charity Registration number 869778761RR0001

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Crozier Property Steward: Pedro Pereyra

We are returning to in person meetings at a NEW venue

Time/Date: 7:30 pm on the second Tuesday of the month

at

Hillsview Active Living Centre

318 Guelph Street - Unit #9, Georgetown

Note: the entrance is at the back of the building

