The Esquesing

Halton/North Peel Naturalist Club

www.hnpnc.com

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Snowy Owl *(Bubo scandiacus)*
Photo Credit: Ian Jarvie

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President's Message

With each January, we often tend to hunker down inside with the deepening of winter. As naturalists, though, we can fully appreciate the beauty of the world outside even in the doldrums of the cold season. On a recent hike in the woods, though the landscape was still and the weather grey and cold, my fellow hikers and I had the opportunity to really appreciate the vibrant green of mosses on rock and log, the rich ochre and amber shades of the winter Beech leaves and other dried leaves, and even a few mushrooms that were taking advantage of the mild weather spell. Though many animals and plants are sleeping through these months, the beauty of life all around us enriches every encounter as long as we take the time to look and listen and take in its richness.

The outings of the club have been a hit, with the Saturday Adventure Walks off to a great start in the last couple of months. On December 17th, we had a great turn-out for a successful Owl Prowl as we went on the hunt for those charismatic but ever-elusive birds. Sharp-eyed club members Jon Clayton, Dave Welfare and Alexis Buset were able to find no fewer than four Saw-whet Owls, despite their penchant for roosting in the densest parts of conifer trees! The Saturday Adventure Walk for this month will be guided by past-president Don Scallen as we try our luck to track some winter wildlife. This is a walk that has been conducted annually in recent years, with considerable success. Why not come out and see what we can see on January 21st? (As a warm-up, take a look at the photo quiz at the back of the newsletter, maybe you will be able to find some real-life examples of those on the hike…)

The December monthly meeting was also a great success, with spectacular presentations by several club members. Their beautiful photography was a real feast for the eyes! Many thanks to all who presented and all who attended to enjoy the smorgasbord of images of nature's variety and bounty!

At this month's meeting, Don Scallen will present a talk on the Hidden Life of salamanders, tree crickets and other wildlife that are subtly filling their less-obvious niches of the ecosystems all around us. Come out and learn more about these wonderful critters. His talks are always a cornucopia of information and beautiful photography.

Next month our presentation will be given by yours truly, as I share some of the images and tales of my recent adventure to Africa, looking for wildlife on a different kind of safari in Uganda.

Check out the Newsletter for more information on these and other club events. You will also, of course, find great articles and photographs by club members on Brook Trout streams, the annual Christmas Bird Count, the HNPNC Osprey Platform project in Acton, podcast reviews and more! So have a good read. Thanks again to Laura Weihs for her

always excellent work producing the newsletter, and all the authors and other contributors. It is always a high-quality publication, and you should all be justly proud of it.

Wishing you all a Happy, Healthy and Successful year for 2023!

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

Tuesday, January 10, 2023 at 7:30 pm
Don Scallen: *Hidden Life* - Amorous salamanders, piscine stonemasons, and crooning tree crickets
All around us creatures are conducting their lives largely unseen. We are aware of birds and the larger mammals but there is a host of animals active underwater or after dark that are seldom observed. Others use camouflage to conceal their presence. Don Scallen will share images and stories about fish, caterpillars and other animals that slip under the radar.

Don is a writer, naturalist, and past president of our club. He is a regular contributor to In The Hills magazine and has recently published the book 'Nature Where We Live'.

Tuesday, February 14, 2023 at 7:30 pm
Yves Scholten: Birds and other wildlife of Uganda
The equatorial regions of East Africa are some of the most biodiverse areas of Earth, boasting complex geological and ecological landscapes around the African Rift Valley, the eastern edge of the Congo basin, and the adjacent savannahs and mountains. Yves Scholten will share photos of his recent adventures to Uganda, looking for birds, snakes and other African fauna in the "Pearl of Africa".

Tuesday, March 14, 2023 at 7:30 pm
TBA

Tuesday, April 11, 2023 at 7:30 pm
Bats – Fiona Reid and friends
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 January 21, 2023 at 10 am
Tracking, Adventure Walk at Terra Cotta Conservation Area
Join Don Scallen to seek tracks and the stories they tell. Terra Cotta with its mix of wetland, woodland and escarpment rock is a good place to do this. If the weather cooperates – that is if there is snow – we should find a variety of tracks. Be prepared to venture off trail to follow some of these to glean some information about what the animals were up to.

The duration of this adventure walk will likely run two or three hours, unless we find ourselves trailing Yeti or Bigfoot – think of the accolades that would come our way if we can finally prove their existence! A snack that you can share with me might be a good idea.

In actuality of course, you will be able to make good your getaway at any time, if you can remember where you parked your car.

If no snow, we'll still meet, though I suspect it will be a smaller crowd. The focus then will shift to a general nature walk – trees, birds and so on.

If you plan to attend please let Don know at dscallen@cogeco.ca

HNPNC SATURDAY ADVENTURE WALKS

DATE	EVENT	LEADER
21 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

Osprey Tower Update

Article by Don Scallen and Photos by Anne Fraser unless otherwise noted.

In early December stalwart members of our club participated in the installation of an osprey platform at Fairy Lake. It is perched atop a standard telephone pole at the western end of Rotary Park on the north side of the lake.

Kudos to our resident osprey engineer, Ian Jarvie, for creating the nesting platform. It is a rugged design approximately the size of a wooden pallet. Twigs have been woven into the structure to give it that "lived-in" look. A crew from Halton Hills Hydro worked efficiently to erect the pole.

Osprey nesting platform being erected at Fairy Lake. Photo credit: Halton Hills Hydro

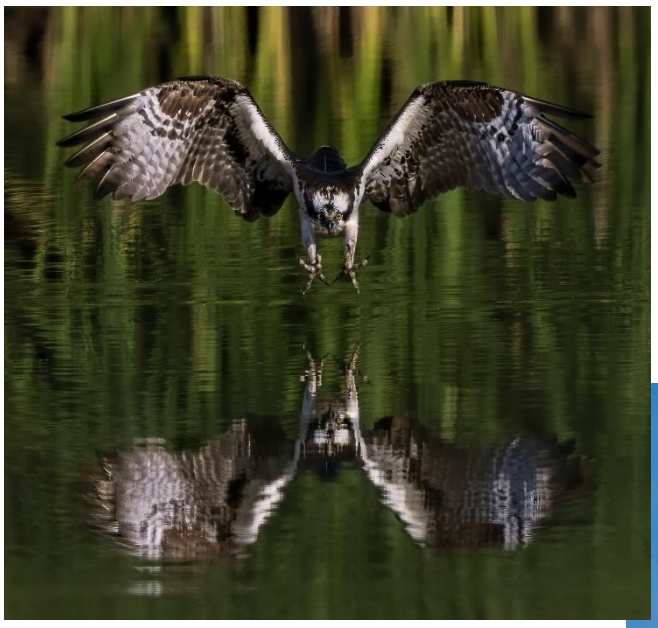
Now we wait. Ospreys return to Ontario in early spring from their winter habitats in Central America and northern South America. Let's hope that after that arduous transit, a pair find our platform to their liking.

The Cornell Lab of Ornithology in Ithaca New York reports that ospreys forage up to 12 miles (19 km) from their nest sites so resident ospreys at Fairy Lake could conceivably include Guelph Lake, the Credit River and Terra Cotta, Rockwood, and Kelso conservation areas in their foraging circuits.

Why is this platform important? Ospreys are magnificent birds that were greatly reduced in numbers – along with other raptor species – by DDT in the 1960's and 1970's. Since the banning of DDT, their numbers have rebounded significantly – a good news story that runs counter to the trending declines of other species of birds.

With the threat of DDT removed, increasing osprey populations have been further assisted by the widespread installation of nesting platforms throughout their breeding range in North America. Ospreys have accepted these platforms with gusto and are now commonly seen throughout suitable habitat here in southern Ontario and beyond. Our platform is part of this laudable effort.

Bluebirds, of course, are another species of bird that have benefitted from similar efforts. They have been greatly assisted by the installation of nest boxes. The Halton/North Peel Naturalist Club has been part of this initiative. Led by builder Kim Dobson and the data collection expertise of Bill McIlveen, we've placed 45 nest boxes for bluebirds, tree swallows and other species at Scotsdale Farm and Forks of the Credit Provincial Park. These bird houses have been remarkably successful in attracting tenants, demonstrating the need for supplemental housing for cavity nesting birds. The osprey platform is a logical extension of these ongoing efforts to provide breeding accommodation for birds.



As I've written previously, we cannot guarantee that a pair of ospreys will accept our platform. We aren't privy to the internal decision-making process of these wonderful fish-hunting raptors. Regardless, upscale osprey nesting habitat is now available in north Halton, courtesy of our club. Now it's up to the birds.

Report on Christmas Bird Count 2022

Article by Ian Jarvie

Despite some fears that the dreaded Covid would strike once again, as it had in 2020, and prevent the count from going ahead, this year's Christmas Bird Count did in fact take place on the usual day, 27th December, with all 8 areas being covered by the usual suspects, with a few new pairs of eyes joining in.

The weather on the day was relatively kind with temperatures from -3C to -6C with most areas being snow covered to a greater or lesser extent. The visibility was good, a vast improvement on last year's count where it was severely hampered by falling snow and poor lighting.

Unlike last year, we were once again able to access the Maple Lodge property on count day, which accounts for the high numbers of Canada Geese and Mallards this year. It also accounts for the sighting of a single Snow Goose, which, although not exactly rare at this time of year, is unusual and always a nice bird to see. Green-winged Teal were also seen there, another good bird at this time of year. Cackling Geese, also seen at Maple Lodge, were once considered the smallest sub-species of Canada Goose, until recently being reclassified as their own species.

Wild Turkeys seem to continue their increasing numbers in Southern Ontario if the trend over the last three years is representative, with an amazing 112 being reported. Bald eagles, on the other hand have definitely made a comeback, with 12 being reported in our count circle. Once rare, it is not uncommon to see these huge, magnificent birds wheeling overhead.

Similarly Common Ravens are again represented in decent numbers, where in the recent past, these wonderful birds could only be found much further north in places such as Alqonquin Park, but nowadays, they are a fairly common sight around our area.

Unfortunately, feral pigeons and the ubiquitous European Starling always show up in large numbers in the count, but fewer starlings this year than in the past, so let's hope that the trend continues! (Am I being unkind in my bias here?)

A few rarities of note include an appearance at my peanut feeder of a Yellow-bellied Sapsucker, an uncommon woodpecker. She showed up a few days before count day, and obligingly continued several times a day right up until the 27th, after which she disappeared again.

Other birds of note were Eastern Screech Owl and Great Horned Owl, with 6 of one and 5 of the other, quite a large number for these elusive birds. Due in part no doubt to the skill and dedication of the volunteers who went out early and late to track them down.

Surprisingly Ruffed Grouse and Cedar Waxwing were entirely missing, and only one Eastern Bluebird and one Purple Finch reported. I'm sure they must be around though!

In summary then, 56 species were counted and a total count of 10,419 birds reported this year, compared with 51 species and 10,873 total in 2021, and 51 species and 9,222 total count in 2019. See the table below for comparison of species and numbers reported for the last 3 counts. Note that CW stands for Count Week, where a species has been seen on one of the 3 days either side of the actual count day.

Once again, I would like to extend a huge *thank you* to the leaders and participants for their part in contributing to this longest running Citizen Science project.

SPECIES	2019	N/A	2021	2022	SPECIES	2019	N/A	2021	2022
Snow Goose				1	Hairy Woodpecker	22		23	22
Canada Goose	3880		4492	4967	Northern Flicker				
Cackling Goose				4	Pileated Woodpecker	2		1	6
Mute Swan				3	Northern Shrike	1		CW	
Trumpeter Swan			2		Blue Jay	117		87	86
Tundra Swan					American Crow	628		193	161
Wood Duck					Common Raven	19		17	21
Gadwall					Horned Lark				
American Wigeon					Black-capped Chickadee	267		291	328
American Black Duck	13		9	20	Red-breasted Nuthatch	6		38	9
Mallard	255		517	996	White-breasted Nuthatch	30		38	53
Northern Shoveler					Brown Creeper			1	
Northern Pintail					Carolina Wren				
Green-winged Teal				4	Winter Wren				1
Ring-necked Duck					Golden-crowned Kinglet	3			4
Greater Scaup					Ruby-crowned Kinglet				
Scaup.					Eastern Bluebird	10		27	1
Lesser Scaup					American Robin	67		17	103
Bufflehead	3				Varied Thrush				
Common Goldeneye	10		6	4	Hermit Thrush			1	
Hooded Merganser	5		4		Gray Catbird				
Common Merganser	12		5	7	Northern Mockingbird	1		CW	
Red-breasted Merganser					European Starling	1804		2689	1112
Ring-necked Pheasant					Bohemian Waxwing				

Ruffed Grouse			3		Cedar Waxwing	592		89	
Wild Turkey	15		59	115	Pine Warbler				
Great Blue Heron	2		2		Eastern Towhee			CW	
Turkey Vulture					American Tree Sparrow	15		152	311
Bald Eagle	3		3	12	Chipping Sparrow				
Northern Harrier	1		3	1	Field Sparrow				
Sharp-shinned Hawk	2		2		Fox Sparrow				
Cooper's Hawk	5		6	7	Song Sparrow	3		5	14
Northern Goshawk	2				Swamp Sparrow	CW		CW	
Red-shouldered Hawk			1	1	White-throated Sparrow			3	2
Red-tailed Hawk	35		12	26	White-crowned Sparrow			2	7
Rough-legged Hawk	1		1	1	Dark-eyed Junco	113		413	384
American Kestrel	1		CW	1	Oregon Junco				
Merlin	CW			3	Lapland Longspur				
Peregrine Falcon	1			1	Snow Bunting				62
American Coot				1	Northern Cardinal	34		74	85
Ring-billed Gull	36		82	84	Red-winged Blackbird			CW	3
Herring Gull	1		3	19	Common Grackle				
Great Black-backed Gull					Brown-headed Cowbird				
Rock Pigeon (Feral)	599		394	722	Pine Grosbeak				
Mourning Dove	174		325	210	Purple Finch			21	1
Eastern Screech Owl	1		1	6	House Finch	61		64	33
Great Horned Owl	1		CW	5	Red Crossbill				
Snowy Owl					White-winged Crossbill				
Barred Owl			CW		Common Redpoll			51	
Great Gray Owl					Hoary Redpoll				
Long-eared Owl					Pine Siskin				
Short-eared Owl					American Goldfinch	87		437	139
Belted Kingfisher	1		1	3	European Goldfinch				
Red-headed Woodpecker				4	Evening Grosbeak			3	
Red-bellied Woodpecker	10		17	11	House Sparrow	233		143	176
Yellow-bellied Sapsucker				1	Eastern Phoebe			1	
Downy Woodpecker	38		42	55					

Forest Bird Monitoring

Article and Photos by W.D. McIlveen

Back in 1987, concern was being raised that certain groups of birds were in jeopardy. General surveys were indicating that overall populations of those groups were showing notable reductions over time. In more recent times, grassland birds and aerial insectivores have been shown to be declining greatly. Back in 1987, shortly after the first Breeding Bird Atlas was completed, it was forest birds that were a top concern. That prompted the Canadian Wildlife Service to launch a new survey using volunteers to do a standard form of bird monitoring in forested sites. As they were getting that project underway, Dan Welsh of CWS asked if I would be willing to participate. I set up the required monitoring in time for the start of the fieldwork and have done so every year since. After completing 36 years of monitoring, I am very likely the longest-serving volunteer for the project. For quite a long time, I have been wanting to summarize the data that I have gathered at that local site near Speyside. The following is a summary of the data that I have gathered over the 36-year period.

Results from 36 Years of Forest Bird Monitoring at Speyside.

W.D. McIlveen

The survey includes a set of 5 monitoring stations in a forest setting. The stations require counts of all birds present as determined by sound and sight observations during a double 5-minute period. Each station is visited twice during the nesting season lasting from May 24 to July 10. Most counts are done in June. Data is recorded on data cards then summarized. All forms are submitted to CWS. Examples of the forest cover at two stations are shown below.

Fig. 1. Speyside Forest Bird Station D, 2013

Fig. 2. Speyside Forest Bird Station E, 2013

Results

Over the 36 years of observation, 3,854 bird data points were generated and 72 different bird species were identified. Such a large dataset is difficult to discuss in any great detail so,

for purposes of the present report, the numbers were combined. The data recorded were combined for all stations and both visits for each year. No analysis of numbers for first and second 5-minute intervals or from different distances was attempted. The data reported represent combined 5 stations on 2 visits or a total of 10 potential data points for every year of operation. The total numbers of birds encountered over 36 years are summarized in Table 1.

Table 1. Summary of Observations for Forest Bird Survey at Speyside 1987 to 2022

Species	Total	Species	Total	Species	Total
Canada Goose	7	Yellow-bellied Flycatcher	1	Song Sparrow	118
Wood Duck	3	Eastern Phoebe	1	Swamp Sparrow	4
Mallard	6	Great Crested Flycatcher	254	Eastern Towhee	4
Ruffed Grouse	16	Blue-headed Vireo	4	Baltimore Oriole	4
Wild Turkey	3	Warbling Vireo	1	Red-winged Blackbird	54
Mourning Dove	16	Red-eyed Vireo	406	Brown-headed Cowbird	45
Black-billed Cuckoo	6	Blue Jay	181	Common Grackle	48
Yellow-billed Cuckoo	3	American Crow	212	Ovenbird	354
Ruby-throated Hummingbird	3	Black-capped Chickadee	137	Northern Waterthrush	238
Sandhill Crane	1	Tree Swallow	1	Black-and-White Warbler	3
Killdeer	3	Red-breasted Nuthatch	1	Nashville Warbler	1
American Woodcock	3	White-breasted Nuthatch	76	Mourning Warbler	18
Great Blue Heron	1	Brown Creeper	1	Common Yellowthroat	27
Red-shouldered Hawk	2	House Wren	13	American Redstart	45
Broad-winged Hawk	1	Winter Wren	51	Yellow Warbler	4
Red-tailed Hawk	4	Gray Catbird	3	Chestnut-sided Warbler	2
Red-bellied Woodpecker	31	Veery	186	Black-thr't Blue Warbler	3
Yellow-bellied Sapsucker	68	Hermit Thrush	16	Pine Warbler	1
Red-headed Woodpecker	1	Wood Thrush	122	Black-thr'd Green Warbler	5
Downy Woodpecker	57	American Robin	119	Scarlet Tanager	7
Hairy Woodpecker	21	Cedar Waxwing	28	Northern Cardinal	18
Pileated Woodpecker	22	Evening Grosbeak	1	Rose-breasted Grosbeak	254
Northern Flicker	67	American Goldfinch	93	Indigo Bunting	24
Eastern Wood-Pewee	306	Chipping Sparrow	13	**Total**	3,854

The numbers of birds varied considerably by visit date. Not surprisingly, some species were encountered frequently, some were observed only a few times, and some were recorded in intermediate numbers. In general, though, the species met with most-frequently were those that normally breed in forest habitats. The results of note are reported below.

At the beginning of the survey, the forest was considered to be fairly-well dominated by hardwoods with Sugar Maple as the main species. Those maples appeared to be somewhat stressed. At the time, consideration was given to the possibility that the trees might have been subjected to acidic precipitation but the proximity of limestone bedrock to the tree roots should have ensured that the trees were not lacking in base nutrients. An inadequate supply of water over several growing seasons could have stressed the plant community. Whatever the cause, it was noted that the health of some trees deteriorated enough that some of the trees died. The Emerald Ash Borer first appeared in the far southwest of

Ontario. Later it spread eastward. The exact date of the beetle's arrival in the Speyside area is not known but 2010 is a reasonable assumption for the first attacks on ash trees around Speyside. When that did happen, the activities of the insect contributed additional dead trees to attract woodpeckers and related birds.

Woodpeckers

In total, seven species of woodpecker were recorded. These birds were mostly seen in moderate numbers. Overall, the number of woodpeckers seen was somewhat variable from year to year (Fig. 3). There was no obvious trend that could be related to the waves in tree health (earlier dieback of Sugar Maple then attack by Emerald Ash Borer). Four species including Hairy Woodpecker (34*), Northern Flicker (29), Yellow-bellied Sapsucker (27), and Downy Woodpecker (23) were noted quite regularly. {*= number of years shown in brackets}. Pileated Woodpeckers were encountered somewhat less frequently (12 years). Red-bellied Woodpecker numbers reflected the general spread of this species across Southern Ontario. It first appeared in the Speyside plots in 2001 then became frequent after 2009 (Fig. 4). The rare Red-headed Woodpecker made its only appearance in 2022.

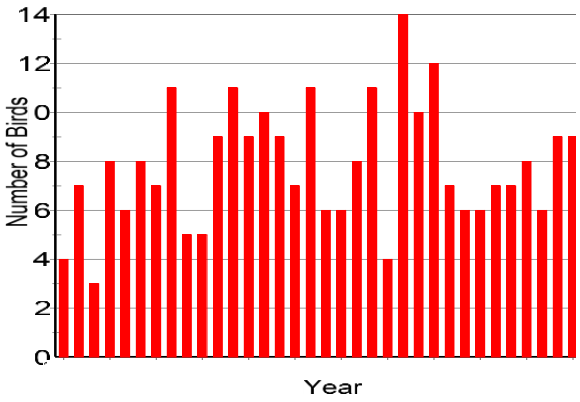


Fig. 3. Number of all woodpeckers noted at Speyside, 1987-2022.

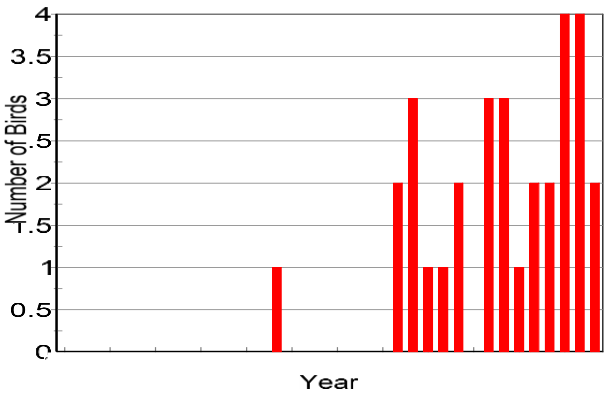


Fig. 4. Number of Red-bellied Woodpeckers noted at Speyside, 1987-2022.

Warblers

Overall, there were 701 encounters consisting of 12 different warbler species. The counts were highly-skewed towards two species. These included the Ovenbird which accounted for 50.5% of all warbler records and the Northern Waterthrush with 34% of the records. In third place was the American Redstart which was encountered 45 times for 6.4% of the warbler records. The remaining 9 species were noted on an almost-incidental basis

Forest Birds

All of the birds encountered during the 36 years of the survey are included as woodland species in the greater view because the monitoring stations were all within a woodland setting. Some species realistically should not be included as forest species because they were simply utilizing small portions of a different habitat type (e.g., marsh or swamp) within the woodland.

Seven species made up nearly half of all birds encountered (Table 2). They are considered to be common forest inhabitants. The Red-eyed Vireo accounted for 10.5% of all sightings. Perhaps their constant calling made them more noticeable than any species.

Table 2. Forest Bird Abundance	
Species	**% Total**
Eastern Wood-pewee	7.94%
Great Crested Flycatcher	6.59%
Red-eyed Vireo	10.53%
Veery	4.83%
Wood Thrush	3.17%
Ovenbird	9.19%
Rose-breasted Grosbeak	6.59%
All Other Species	51.56%

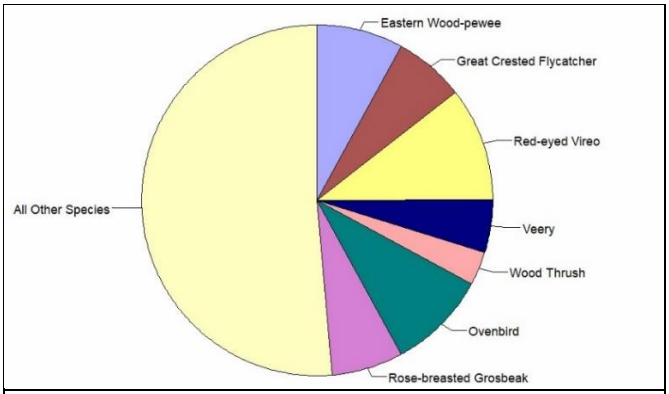


Fig. 5. Relative abundance of forest birds

Wetland Birds

Wetlands normally would have their own suite of birds. The small creek system did create some wetlands in the eastern portion of forest. These wetlands explain the regular presence or common encounters with the Northern Waterthrush (238 birds). Red-winged Blackbirds were seen or heard on 54 occasions, almost always at sites close to the wetlands. The occurrence of more-typical wetland species including Canada Goose, Wood Duck, Mallard, and Swamp Sparrow with total of 7, 3, 6 and 4 records respectively, were likewise noted in proximity to the wetland sites including at forest pools at the north edge of the study area.

Warblers

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Miscellaneous Species

One of the strangest observations was the sound of an Indian Peafowl on one occasion (2015). Technically it qualifies as a species of record. It was calling from a farm located about one kilometre to the west. Thanks to its loud call, it was heard at the monitoring sites. Realistically, it was not part of the fauna of the study area and is not counted in the finally tallies.

Hawks (3 species) appeared only sporadically and were not likely breeding at Speyside. The Broad-wing Hawk was likely a late migrant. Crows were encountered nearly every year (35). The majority of their encounters were of birds heard calling over 100 metres from the respective stations. There was no direct evidence (i.e., nests, or young) that the Crows were

actually breeding at Speyside. The majority of other species were encountered closer to the monitoring stations.

A number of species such as Canada Goose, Sandhill Crane, Killdeer, American Woodcock, and Great Blue Heron must surely be regarded as incidental or fly-thru records. Although Goldfinches were heard most years, they were almost always flying through the area and not stopping. This behaviour is consistent with the fact that the normal nesting period for this species occurs after the nesting date limits set for this Forest Bird Survey. For other species such as most warblers, and some other less-common types, the singing was consistent with that of territorial males. The presence of the less-commonly-encountered species was interpreted as chance breeding in any particular year.

Ruffed Grouse was seen or heard 16 times. This is probably a reasonable reflection of its presence as a resident species. By comparison, Wild Turkey was noted 3 times. Interestingly, Wild Turkeys were released only about a half kilometre from the Speyside Tract in around 1987. That release no doubt contributed to the Turkey population in Halton though the contributions to observations made during the years of the current project seems rather minimal.

Evening Grosbeak

At one time, Evening Grosbeaks were tolerably common in Southern Ontario. About 25 years ago, they made a range retreat back into Northern Ontario. The Forest Bird Monitoring at Speyside extends back far enough that one southern resident bird was recorded on July 1, 1988.

Footnote:

Certificate of Appreciation

Presented by the Canadian Wildlife Service of Environment Canada to

Certificat d'appréciation

présenté par le Service canadien de la faune d'Environnement Canada à

W.D. McIlveen

in appreciation for the time, talent and enthusiasm contributed to wildlife conservation.

pour le temps, les efforts et l'enthousiasme consacrés à promouvoir la conservation de la faune.

Minister of Environment/Ministre de l'Environnement

Canada

Environment Canada / Environnement Canada

Canadian Wildlife Service / Service canadien de la faune

Certificate given after 10 years of participation

A certificate was given to those who had participated in the project for 10 years at that point in time. I participated in the program for an additional 26 years including a year when the project was not officially operated due to COVID. I fully expect that the program was not carried out anywhere else for the full 36 years, at least by the same person. The Canadian Wildlife Service turned the program over to Birds Canada in about 2020.

Return to the Trout Stream

Article and pictures by Don Scallen

Rivers in a few areas of Peel and Halton that have escaped agriculture and urbanization still flow clean, clear, and cool. This natural heritage is a gift to area residents and well worth protecting.

Two years ago, I wrote about brook trout in a Caledon stream. I returned to the limpid waters of this stream this fall to commune, once again, with these awe-inspiring fish.

Beautiful fish born of beautiful habitat, these trout are nurtured by cool, crystalline water. Sully that water with silt, warm it with stormwater run-off or poison it with effluent and the trout disappear.

Brook Trout male above and females below.

In the videos below, most of the trout are brilliantly coloured males. But the largest fish in the gathering is a female, a little less colourful, who, from time to time turns on her side and shudders – shaking her powerful tail to clear sediment from the stones on the bottom of the stream. She's cleaning house prior to releasing her eggs.

With the streambed cleared of debris, her eggs will slip into cracks between the stones where they will be protected from predation and from being swept away. Males release their milt (sperm) to fertilize them.

The cool riffling water moving through the stones will provide the vital oxygen that the eggs need, but there is another habitat component that further highlights the connection between brook trout and clean water.

The brook trout redds (nests) are usually located in areas of upwelling spring water. Filtered and clean, this water bubbles through the streambed stones, enveloping the eggs in a womb-like environment that is warmer than the river water.

This ensures optimum conditions for the development of the eggs over winter.

If we tamper with the surface or groundwater needed by brook trout to maintain their health and reproduce, we will lose them. Gone will be these glorious manifestations of pristine nature. Let's not allow that to happen.

To see the brook trout videos go to https://www.inthehills.ca/2022/12/return-to-the-trout-stream/

The Pipits

The Pipits is a local birding group run by Colleen Reilly, that has outings most weeks, either within the Hamilton/Burlington area, or further afield, including Algonquin, Long Point, Point Pelee, Carden Alvar, and other locations.

The goal of the Pipits is to increase awareness of the natural world, in particular, birds, but also all other wild organisms, in a safe and inclusive social setting where we connect with each other through our mutual appreciation of the wild.

If you are interested in more information, please visit the website at:
https://thepipits.wildapricot.org/

Podcast highlights

Article and Photos by Don Scallen unless otherwise noted

As mentioned in the last newsletter I'm a fan of the In Defense of Plants podcast by Matt Candeias. This podcast dives deeply into the latest research into trees, wildflowers, habitat restoration and a wealth of other topics related to plants. An aspect of the podcast that appeals to me is its scientific veracity. Episodes are well researched and usually highlight research done by reputable scientists. Here's the scoop on two of the recent shows I've enjoyed.

1) *Seeing the Forest for the Bats*
https://www.indefenseofplants.com/podcast/2022/12/25/ep-401-seeing-the-forest-for-its-bats

Hoary Bat, Photo Credit: Brock Fenton

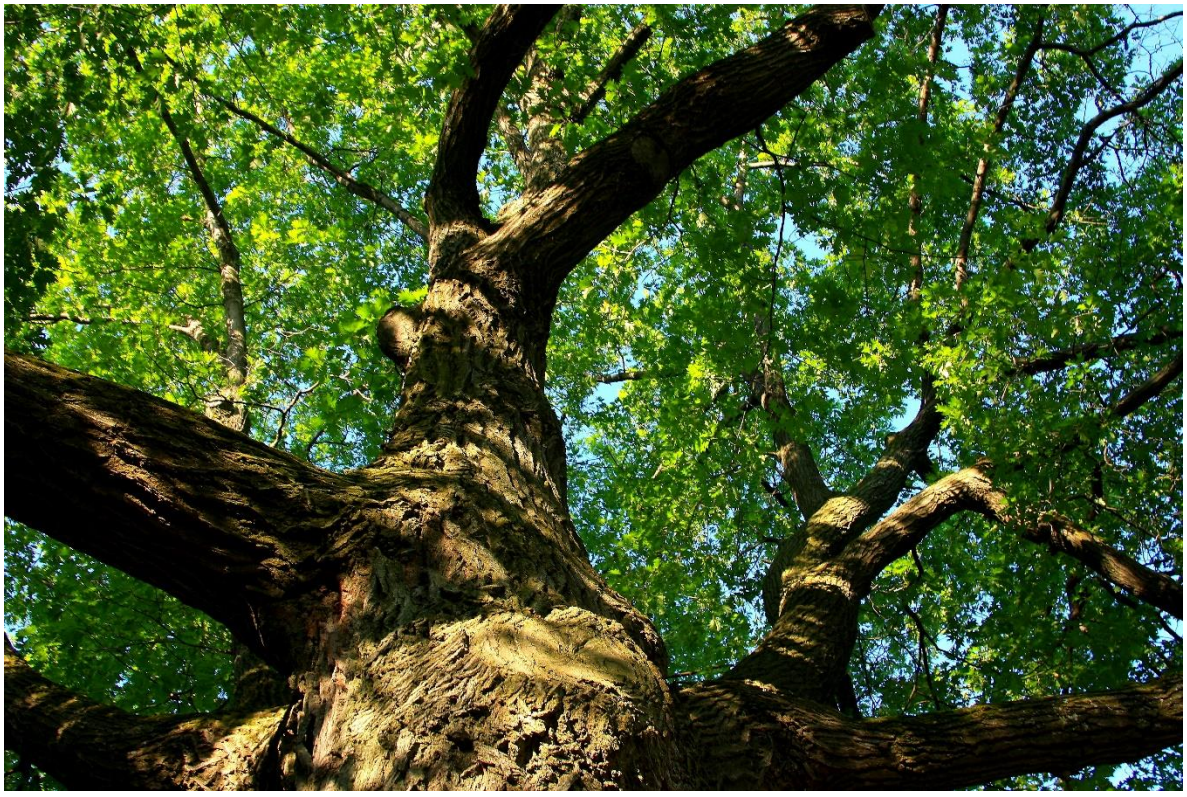
In this episode Matt interviews Dr. Lizz Beilke a post-doctoral researcher at the University of Illinois, Urbana-Champaign. Dr. Beilke supervised a remarkable experiment that excluded a portion of forest from bat predation with netting. The mesh continued to allow the entry of most insects. And then, incredibly, this netting was removed every morning to allow diurnal birds to gain access to the woods. This methodology allowed bird – insect predation to continue while preventing bat-insect predation.

The researchers, noting that previous studies indicated that many bats chose oaks and hickories as roosting trees, decided to use those trees in the study. They would measure the degree of insect herbivory (feeding) inside the bat exclusion area in comparison to herbivory in a control plot without the netting.

The results were startling. Overall, the insect density within the exclusion plot was three times higher than the control plot and defoliation of the oaks and hickories was five times greater! There was also a defoliation difference between the oaks and hickories. Oaks sustained 9x more defoliation in the bat-excluded plots compared to 3x greater defoliation for the hickories.

An obvious conclusion of this experiment is that bats play a prominent role in controlling the populations of defoliating insects in our forests. The finding that the defoliation of the bat-excluded oaks was so great bolsters existing arguments supporting the value of oaks in our forests. Any of you familiar with Douglas Tallamy's work will know that oaks support hundreds of species of lepidoptera larvae (moth and butterfly caterpillars). A preliminary hypothesis stemming from Dr. Beilke's research is that the composition of trees in a forest plays a direct role in supporting bat abundance. In short, not all forests are created equal in terms of their ability to support bats. Granted, more work needs to be done to determine the defoliation of other species of trees in the absence of bats. But the preliminary results suggest that the oak-bat connection is important for both players. Oaks produce the insects that nourish bats, while bats suppress the insects that feed on oaks. A fascinating interaction!

What might be an implication for urban dwellers? Oaks appear to be an excellent choice for planting for birds and for bats. There are implications as well for wide-scale tree planting that we are seeing in communities across the province including here in Halton and north Peel. Mass tree planting, which I've critiqued before, must be conducted with foresight and must be ecologically sound. Such an approach should include an assessment of the ecological value of the trees to be planted. Oaks and hickories should be part of any mix along with a plan to ensure their survival over the first few years post-planting. We should also consider the mass planting of acorns and hickory nuts instead of trees – an inexpensive and natural way to get these important trees into the landscape.



Orangeville red oak trunk

2) *Rethinking Black Walnut Allelopathy*
https://www.indefenseofplants.com/podcast/tag/black+walnut

I valued this podcast as a reminder that fallacies can persist simply because we repeat them over and over again. The podcast is also a reminder that a healthy dose of skepticism needs to be part of our mental repertoire when considering our response to any important issue. We need to ask, "where's the evidence"?

Until listening to this podcast I always believed the dominant "truth" that black walnut trees affected the growth of other plants in their vicinity through the well-known phenomenon of allelopathy – the chemical inhibition of other plants through the release of those chemicals into the environment. With black walnuts, this chemical is juglone.

Matt interviews Bill Michalek of the Field Guides – another nature podcast I support. (For another take on the black walnut issue listen to:
http://www.thefieldguidespodcast.com/new-blog/2022/5/20/ep-56-lets-get-nuts)

Michalek did a deep dive into the history of the belief of alleged walnut toxicity. In fact, he goes all the way back to the first century to a reference found in Pliny the Elder's work about the toxicity of walnut trees (obviously not our native North American black walnuts.) Shockingly some modern references to walnut toxicity site Pliny's support of this idea! This even though Pliny, according to Bill Michalek, also believed that mother bears licked their babies into bear shapes from "amorphous blobs". Black walnut toxicity next appears in the scientific literature in the 1920's when the idea is first floated that juglone is the active ingredient in suppressing the growth of other plants around black walnuts. At this time as well, the oft-repeated deleterious relationship between black walnuts and tomatoes first appears. But field testing of supposed black walnut allelopathy was conducted in the 1950's without "any consistent effect". Lab experiments that took juglone and measured its effects on other plants, did show that juglone – *in some studies* – did negatively affect the growth of those plants but Michalek and Candeias stress that laboratory conditions cannot replicate the real, complex processes that occur in the field.

Michalek asks, responding to widespread lists of plants purported to be negatively affected by juglone "Why are you growing tomatoes and apples under a black walnut tree?" Why plant under the dense shaded canopy of a black walnut in soil laced with black walnut roots? Would tomatoes thrive in the deep shade of any other tree?

The conclusion that Michalek makes is that while black walnuts in the natural world may inhibit the growth of some other plants, evidence to support this idea is not conclusive. And that much of our concern about the toxic effects of black walnuts comes from old sources that beg to be critiqued.

In the meantime, I will continue to celebrate the medium-sized black walnut that grows in my yard, courtesy of a squirrel that planted a nut two decades ago. Walnuts are abundant in Georgetown and grow exceedingly well here – which I find fascinating because we're just

about at the northern limit of its range in Ontario. And I'll continue to admire the fringe tree, witch hazel and starry Solomon's seal that thrive under its canopy.

Black walnut and Bill McIlveen, 5th line Halton Hills

Animal Tracks Photo Quiz

Photos by Don Scallen

Answers on page 23

Answers to the Photo Quiz on page 22

1. Black or Gray Squirrel tracks
2. Coyote tracks
3. Duck tracks
4. House Cat tracks
5. Opossum tracks
6. Muskrat tracks
7. Mink tracks
8. Racoon tracks
9. Turkey tracks

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

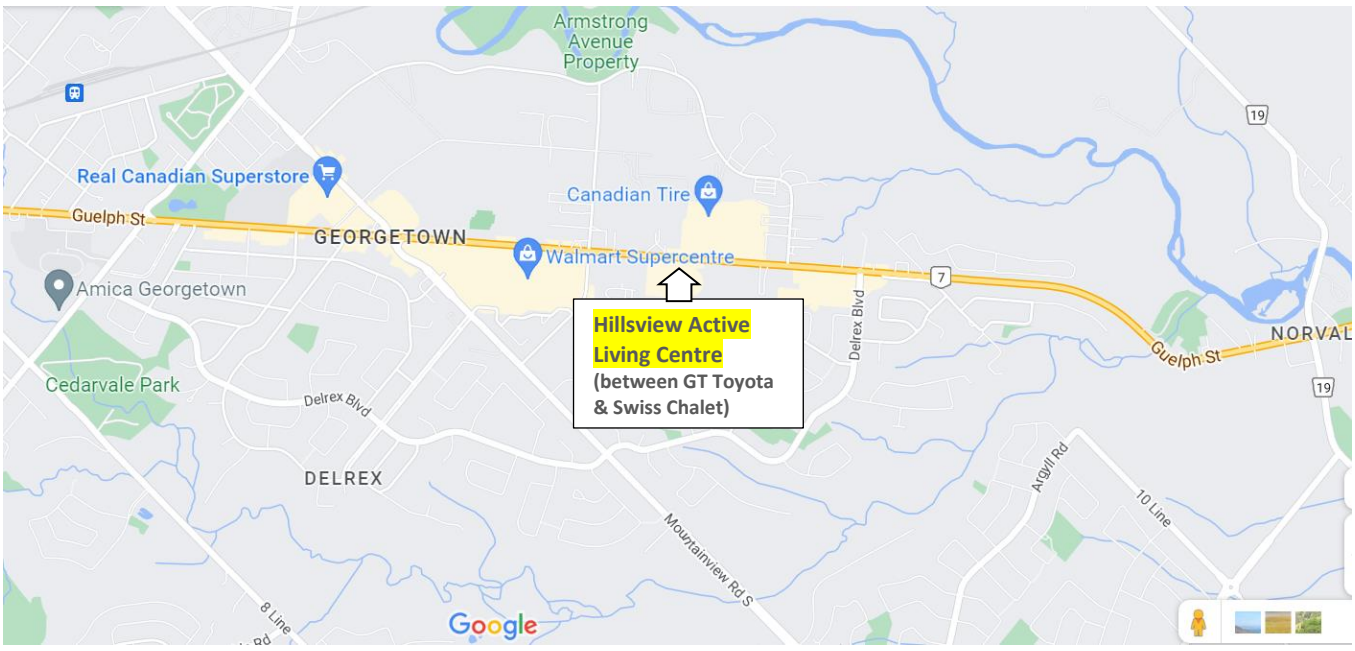
Box 115, Georgetown, Ontario L7G 4T1
Charity Registration number 869778761RR0001
www.hnpnc.com

Board of Directors

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

Appointments

Membership: Lorysa Cornish
Newsletter: Laura Weihs
Webmaster Communications Director: John Beaudette
Member at Large: Fiona Reid
Ontario Nature Rep: Don Scallen
Roving: William McIlveen
Hardy Property Steward: TBD
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