The Esquesing

Halton/North Peel Naturalist Club

www.hnpnc.com

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Fly Agaric Button Stage

Photo Credit: Don Scallen

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President's Message

Days are longer and the sun seems to shine more brightly at this time of year.

I always laugh at the earnest reporting around Groundhog Day. Given that (technically at least), spring arrives 6 weeks after February 2nd, of course spring arrives 6 or 7 weeks later, no matter what the groundhog has or hasn't seen! Maybe it's just to give us hope and something comedic to distract us when the winter seems never ending.

Now, February 10th, apparently, we have had 21 straight days of temperatures below freezing! Having grown up in Timmins, New Liskeard and Sudbury, this means nothing to me. It was normal to have at least two weeks of -40 in the winter in New Liskeard. Yes, I walked to and from school, uphill in both directions (LOL), and survived. It is absolutely true, though, that it is a "dry cold" in the north and not as bone-chilling as the damp cold of southern Ontario. Finally, today the temperature was only just below freezing when I went out with the dog and there were many songbirds singing. Hope springs eternal!

Our club is celebrating its sixtieth anniversary this year. We will have some events on April 18th to recognize this and celebrate the longevity of our club. Our event is happening during Earth Week and coincides with Halton Hills' Earth Week activities. Our executive and directors are busy working on the details. So far, we expect to be at Mold-Masters Arena on that day. Past presidents for whom we have contact details will be invited, as well as nearby naturalist clubs. Some of our members will give talks. Personally, I just want to make sure we have a big birthday cake!

There will be more details to come so keep an eye on your inbox.
Yours in nature,
Margaret

Talks and Walks

Indoor Events - Talks

Time/Date: 7:30 pm on the second Tuesday of the month
Location: **St Alban's Hall,** 537 Main Street, Glen Williams, ON L7G 3T1
Map on last page of the newsletter.

Talks

March 10: Sea Mammals & Sea Birds, Personal Experiences by Patrick O'Reilly
April 14: Niagara Escarpment: Land Between Waters by Mark Zelinski
May 12: Costa Rica Trip Photos and Observations by Des MacNeal
June 9: Bird House Checks at Scotsdale Farm

Upcoming Adventure Walks and Events

The Shrubs and Vines of Scotsdale Farm

W.D. McIlveen

In 1983, Jocelyn Webber prepared a summary of the flora and fauna observed on the Scotsdale Farm property located at Silver Creek northwest of Georgetown. Since then, W, D. McIlveen has recorded any biota observed during visits to the property alone, with the Halton/North Peel Naturalists, or with a site visit by the Field Botanists of Ontario. The present report is a summary of the data that has been accumulated to date for the shrubs and the vines. The Webber report considered the two plant groups but they have been separated for the present report. Some species considered as shrubs or as trees by Webber were moved between the groups based on interpretation of size. This small change needs to be considered by anyone reading only that report.

The current report lists 51 shrub species and 12 vine species. These comprise 17 and 9 plant families respectively. The vast majority of species are native and only 10 shrubs and 2 vines represent species that have been introduced from elsewhere. While there is always the possibility that additional species might be discovered with more non-natives among them, the present list shows a higher proportion of native species than comparable sites in the area. This interpretation might change after the more disturbed areas (farm fields and roadsides) are examined.

While the wet swampy area adjacent to Trafalgar Road is not particularly novel, it does provide wetland habitat for less-common species for Southern Ontario. These include things like Labrador Tea, Winterberry, Teaberry, Dewberry and Swamp Rose. That area is not far from the Ballinafad Bog which has additional bog species that are not known from other parts of Halton.

List of Shrubs Observed at Scotsdale Farm

Family	Common Name	Scientific Name	Status
Anacardiaceae	Climbing Poison Ivy	*Toxicodendron radicans*	
Apocynaceae	Periwinkle	*Vinca minor*	Alien
Caprifoliaceae	Limber Honeysuckle	*Lonicera dioica*	
Celastraceae	Climbing Bittersweet	*Celastrus scandens*	
Cucurbitaceae	Wild Mock-cucumber	*Echinocystis lobata*	
Ranunculaceae	Virginia Clematis	*Clematis virginiana*	
Smilacaceae	Herbaceous Carrionflower Hispid Greenbrier	*Smilax herbacea* *Smilax tamnoides*	
Solanaceae	Bittersweet Nightshade	*Solanum dulcamara*	Alien
Vitaceae	Thicket Creeper Virginia Creeper Riverbank Grape	*Parthenocissus inserta* *Parthenocissus quinquefolia* *Vitis riparia*	
Adoxaceae	Red Elderberry Nannyberry Cranberry Viburnum	*Sambucus racemosa* *Viburnum lentago* *Viburnum opulus* ssp. *opulus*	 Alien
Anacardiaceae	Western Poison Ivy	*Toxicodendron rydbergii*	
Aquifoliaceae	Common Winterberry	*Ilex verticillata*	
Berberidaceae	Japanese Barberry	*Berberis thunbergii*	Alien
Betulaceae	Beaked Hazelnut	*Corylus cornuta*	
Caprifoliaceae	Canada Fly Honeysuckle Tartarian Honeysuckle Common Elderberry	*Lonicera canadensis* *Lonicera tatarica* *Sambucus canadensis*	 Alien
Cornaceae	Red-osier Dogwood	*Cornus stolonifera*	

List of Shrubs Observed at Scotsdale Farm			
Family	**Common Name**	**Scientific Name**	**Status**
Diervillaceae	Northern Bush-honeysuckle	*Diervilla lonicera*	
Ericaceae	Eastern Teaberry	*Gaultheria procumbens*	
	Common Labrador Tea	*Rhododendron groenlandicum*	
Grossulariaceae	American Black Currant	*Ribes americanum*	
	Prickly Gooseberry	*Ribes cynosbati*	
	Swamp Red Currant	*Ribes triste*	
Hydrangeaceae	European Mock-orange	*Philadelphus coronarius*	Alien
Oleaceae	European Privet	*Ligustrum vulgare*	Alien
	Common Lilac	*Syringa vulgaris*	Alien
Rhamnaceae	Alder-leaved Buckthorn	*Endotropis alnifolia*	
Rosaceae	Scarlet Hawthorn	*Crataegus coccinea*	
	Dotted Hawthorn	*Crataegus punctata*	
	Fleshy Hawthorn	*Crataegus succulenta*	
	Canada Plum	*Prunus nigra*	
	Smooth Rose	*Rosa blanda*	
	Multiflora Rose	*Rosa multiflora*	Alien
	Swamp Rose	*Rosa palustris*	
	Allegheny Blackberry	*Rubus allegheniensis*	
	Wild Red Raspberry	*Rubus idaeus* ssp. *strigosus*	
	Black Raspberry	*Rubus occidentalis*	
	Purple-flowering Raspberry	*Rubus odoratus*	
	Dewberry	*Rubus pubescens*	
	White Meadowsweet	*Spiraea alba* var. *alba*	Alien
	Vanhoutt's Meadow-sweet	*Spiraea vanhouttei*	Alien
	Japanese Spiraea	*Spiraea x bumalda*	Alien
Salicaceae	Bebb's Willow	*Salix bebbiana*	
	Sage Willow	*Salix candida*	
	Pussy Willow	*Salix discolor*	
	Cottony Willow	*Salix eriocephala*	
	Prairie Willow	*Salix humilis*	
	Shining Willow	*Salix lucida*	
	Corkscrew Willow	*Salix matsudana*	Alien
	Meadow Willow	*Salix petiolaris*	
Taxaceae	Canadian Yew	*Taxus canadensis*	
Thymelaeaceae	Eastern Leatherwood	*Dirca palustris*	

References

Webber, J.M. 1983. The vegetation, flora and fauna of Scotsdale Farm/Bennet Estate. A reconnaissance biological inventory. A report prepared for the Ontario Heritage Foundation. 61pp

The Wonders of Moth Antennae

By Don Scallen

Polyphemus moths mating..The male on the left has larger antennae than the female which is typical in moths. Males are the mobile partners. Larger antennae are needed to pick up female pheromones

Polyphemus moths mating..The male on the left has larger antennae than the female which is typical in moths. Males are the mobile partners. Larger antennae are needed to pick up female pheromones Polyphemus moths mating..The male on the left has larger antennae than the female which is typical in moths. Males are the mobile partners. Larger antennae are needed to pick up female pheromones

You'd be hard-pressed to find structures in nature as wondrous as moth antennae.

Moths are utterly dependent on these feathery organs for survival. Deprived of antennae, moths can't find mates and can't fly properly. It also appears that moth antennae can influence gender expression.

Promethea Moth, Male

Among the multi-faceted functions of moth antennae is their ability to detect odors wafting through the air – the "come-hither" (pheromones) released by females to summon males.

The air is filled with thousands of different insect pheromones in the spring. Male moths filter out this multitudinous "noise" and respond only to the scent meant for them.

The sensitivity of their antennae is mind-boggling. Male moths can detect one female pheromone molecule per billion molecules of air. This allows them, according to some estimates, to detect females from distances of 7km or more.

Human engineers at the University of Washington are capitalizing on this stunning odor sensitivity by attaching sphinx moth antennae to tiny drones. In a scenario straight out of science fiction, the robotic drones have been guided by the moth antennae to the specific floral scents that the moths find appealing!

But moth antennae are more than pheromone detectors. They also serve as organic gyroscopes, helping moths to stabilize their flight. In moths, controlled flight is only possible via a link between antennae, brain and wings.

Want more moth antennae wonders? They appear, at least in some species, to be crucial to the expression of gender. In one experiment the antennae of male moths were replaced with antennae of female moths. The males then switched gender roles. Instead of pursuing females they began looking for plants to lay (non-existent) eggs on!

Moth antennae are stunningly complex and over-the-top fascinating. My guess is that they will reveal even more of their secrets in the years ahead.

This article originally appeared in https://www.inthehills.ca/2026/02/the-wonders-of-moth-antennae/

Close up of a cecropia antenna. This moth has lost it's right antenna and it probably can't fly straight.

Christmas Count Data Revealing Population Trends Among Canada and Cackling Geese

W.D. McIlveen

The original fauna history for Ontario up to the time that European settlement started indicates that Canada Geese were very abundant in the extreme southwest part of the province. After the European settlers arrived, extensive land clearing for agricultural crops rendered the land more favorable for the Geese. Instead of aiding Goose reproduction, the settlers hunted the Geese to aid their families. The unrestricted hunting drastically reduced goose populations to the point that, by the turn of the twentieth century, Canada Geese had all but disappeared from nearly all of their former breeding range within southern Ontario. They were considered to have been extirpated.

At the low point in Goose populations around 1900, the species was a particular interest to Jack Miner. For several years, he attempted to lure migrating geese to his Kingsville property. After a four-year effort, he was able to have eleven migrating Canada Geese land on his property in 1908. In 1915, he banded his first Canada Goose to help trace its migration habits. By the time he died, Miner had banded over 50,000 wild ducks and 40,000 migratory Canada Geese.

Through the late 1960s and early 1970s, the Ontario Ministry of Natural Resources and local conservationists worked to return Canada Geese to southern Ontario. By then, the local landscape with its lawns in parks, golf courses, and larger private homes as well as ponds and various watercourses provided ideal breeding habitat for the Geese. The reintroduction project was a success! Some will argue that the effort was too successful as the Geese have become a nuisance and now few even migrate south for the winter. Those remaining migratory populations of Canada Geese still fly between their traditional breeding grounds in Canada and Alaska and their overwintering grounds in the United States and Mexico. Canada Geese were probably exclusively migratory in the past, but, in modern times, their habits have changed considerably and large numbers spend the winter or the whole year in Southern Ontario as a resident species..

Migratory birds found in Canada are covered under the Migratory Birds Convention Act (MBCA). That act fulfills the terms of the Migratory Birds Convention of 1916 that was signed between Canada and the USA. The rules and regulations that relate to management measures for different species have changed over time as needed by the current situation. Despite particular changes that occur from time to time, the overall main consideration is that Canada Geese cannot be hunted without a current hunting permit. This requirement does impose limits on what might be attempted to control and manage Canada Goose populations.

Variations among Canada Geese groups had been recognized for a long time. The variations were based on size and small physical differences. In total, eleven races had been identified. In 2004, further work resulted in a taxonomic split of the group into two separate species. One group kept seven subspecies as part of the usual larger-bodied Canada Goose. The other species recognized was the smaller Cackling Goose with four of the subspecies. As might be expected, no Cackling Geese appear in any Christmas Count before 2004 when the taxonomic change was made. After that year, small numbers of the Cackling species have been reported regularly. To date (from 2004 to 2023), the species has been encountered at 63 different Count circles. Overall, the populations trends appear to be increasing over time (Fig. 1). One might wonder though

if some of that increase might be due to Count observers becoming more familiar with the species and being able to recognize it among its larger brethren.

Recognized species and races of Canada Goose	
Canada Goose *Branta canadensis*	**Cackling Goose *Branta hutchinsii***
B. c. canadensis – Atlantic Canada Goose	*B. h. hutchinsii* – Richardson's (or Hutchins's) Cackling Goose
B. c. interior – Hudson Bay Canada Goose	*B. h. taverneri* – Taverner's (Alaska) Cackling Goose
B. c. maxima – Giant Canada Goose	*B. h. minima* – Cackling Cackling Goose
B. c. moffitti– Moffitt's or Great Basin Canada Goose	*B. h. leucopareia* – Aleutian Cackling Goose
B. c. parvipes – Lesser Canada Goose	
B. c. occidentalis – Dusky Canada	
B. c. fulva – Vancouver Canada Goose	

The species or subspecies that we usually see in Ontario is the large bodied Giant Canada Goose. Any other race that might be present as a vagrant would be nearly impossible to detect within the usual flock. That large race was nearly extirpated in the early 1900s but the population revived and has become very common (Fig. 2). That increase is further emphasized by virtue of the fact that it no longer migrates. By comparison, the Cackling Goose can be picked out from the flock by its generally smaller stature. It does not breed locally.

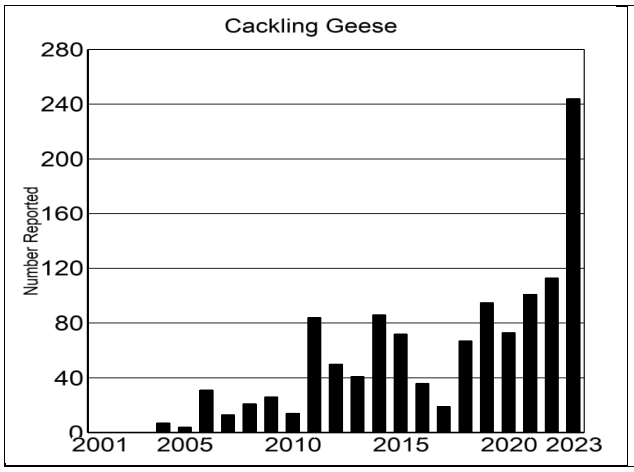


Fig. 1. Count trends for Cackling Geese

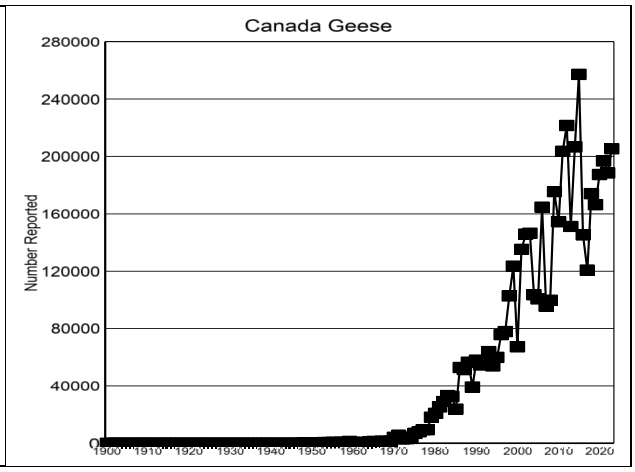


Fig. 2. Count trends for Canada Geese

The Canadian Wildlife Service estimates the North American population of Canada Geese to be in the order of seven million birds. In 2023, there were 56.5 thousand breeding pairs of Canada Geese in southern Ontario. Since 2010, the number of Canada Geese tallied during Christmas Counts has been in the order of 200,000 birds. This tally comes from only within the Count circles and likely misses a large number of birds in the areas between circles. These numbers indicate that at least some of the birds that breed in the north will remain over winter within Southern Ontario.

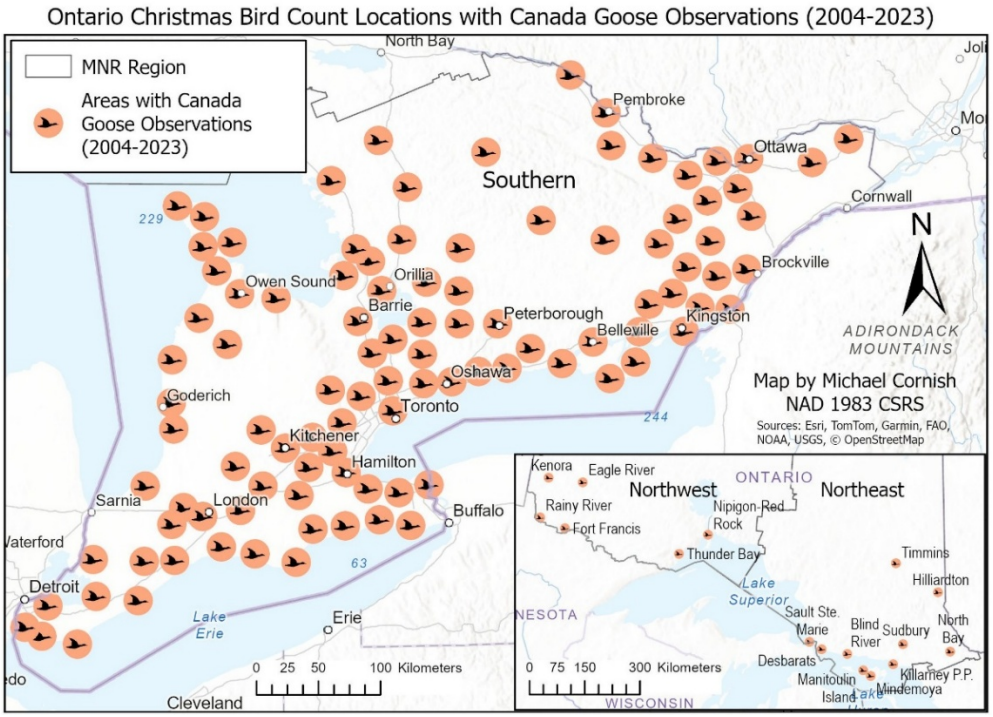


Figure 3. Symbols represent the approximate Christmas bird count area (15 mi/24 km diameter circles) where Canada Geese have been observed over two decades.

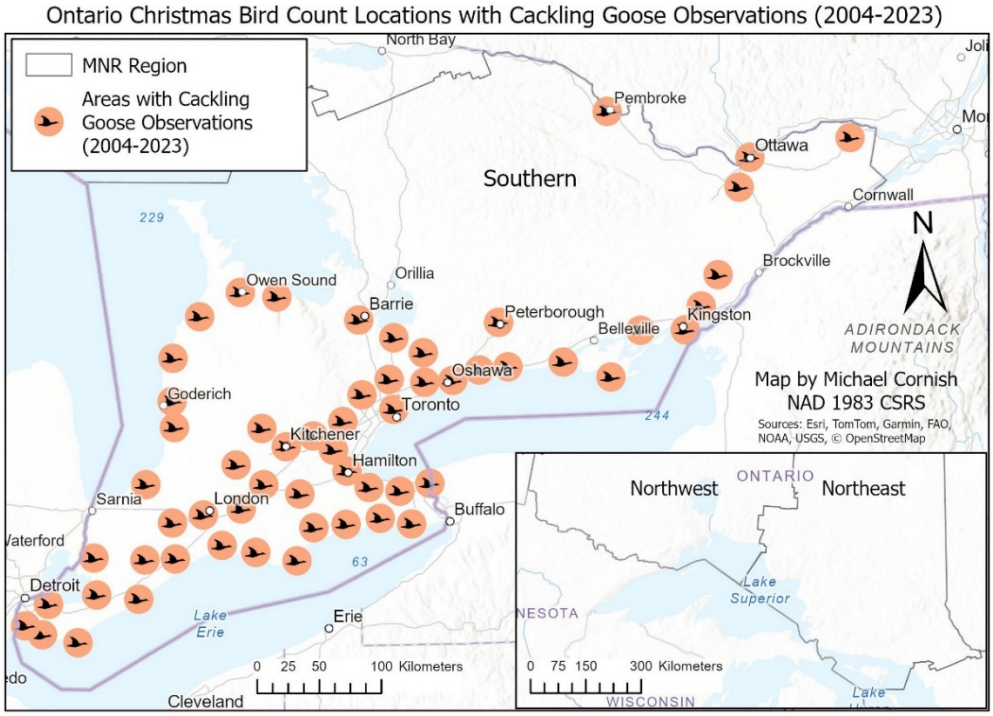


Figure 4. Symbols represent the approximate Christmas bird count area (15 mi/24 km diameter circles) where Cackling Geese have been observed over two decades.

Figure 3 indicates that Canada Geese can now be found on most Christmas Bird Counts all across Southern Ontario. Such a distribution was essentially unknown before the mid-1970s. This amazing increase came about after that time but we should not lose sight of the fact that about 50 years have gone by since the first

notable breeding in Southern Ontario commenced. Much of the wintering pattern is dependent upon the availability of food.

With respect to Cackling Geese, they were not even accepted as a separate species until 2004. They are much less likely to be tallied during the breeding season than does its larger cousins for it breeds elsewhere. We cannot expect to see Cackling Geese breeding through parts of Southern Ontario. But given the example of the breeding behaviour of Canada Geese, we cannot exclude the possibility that over time some members of the Cackling Goose population might likewise start breeding in southern parts of the province.

Fig. 5. Canada Geese, Oakville Lower Baseline east of 4th Line, Dec. 18, 2021

Hydrocarbon Resources of Halton

W.D. McIlveen

If one were to ask a typical resident about the mineral resources of Halton, many might mention the limestone quarries and possibly some sand and gravel operations. Those same people would likely go for many months without giving that topic a single thought. A few people might recognize that extraction of clay for making brick was an allied industry though that activity is much-reduced from the levels of former times. Although they rely heavily on water for normal living, it is also a mineral resource available in Halton. People may realize that many rural homes have their own wells but town folk may not know exactly where their water originates. Almost no one will know that Halton does have a small hydrocarbon resource of its own. They can be excused because that information has rather limited distribution. The present account is an attempt to make that information more accessible.

The information is available on the internet at https://geohub.lio.gov.on.ca › datasets › petroleum-well. That database contains some details regarding the locations and types of petroleum wells in the province. There are records for over 27,000 oil and gas wells in Ontario. Most records refer to areas further south and west like Sarnia and north of Lake Erie. Peel has only 28 such wells while Halton has 67 wells. This report focuses on the latter.

The wells of interest are located throughout Halton. There is a concentration of wells in the vicinity of Sideroad 15 and the 4th Line in Esquesing as the attached map indicates. Esquesing and Trafalgar can claim the majority of wells.

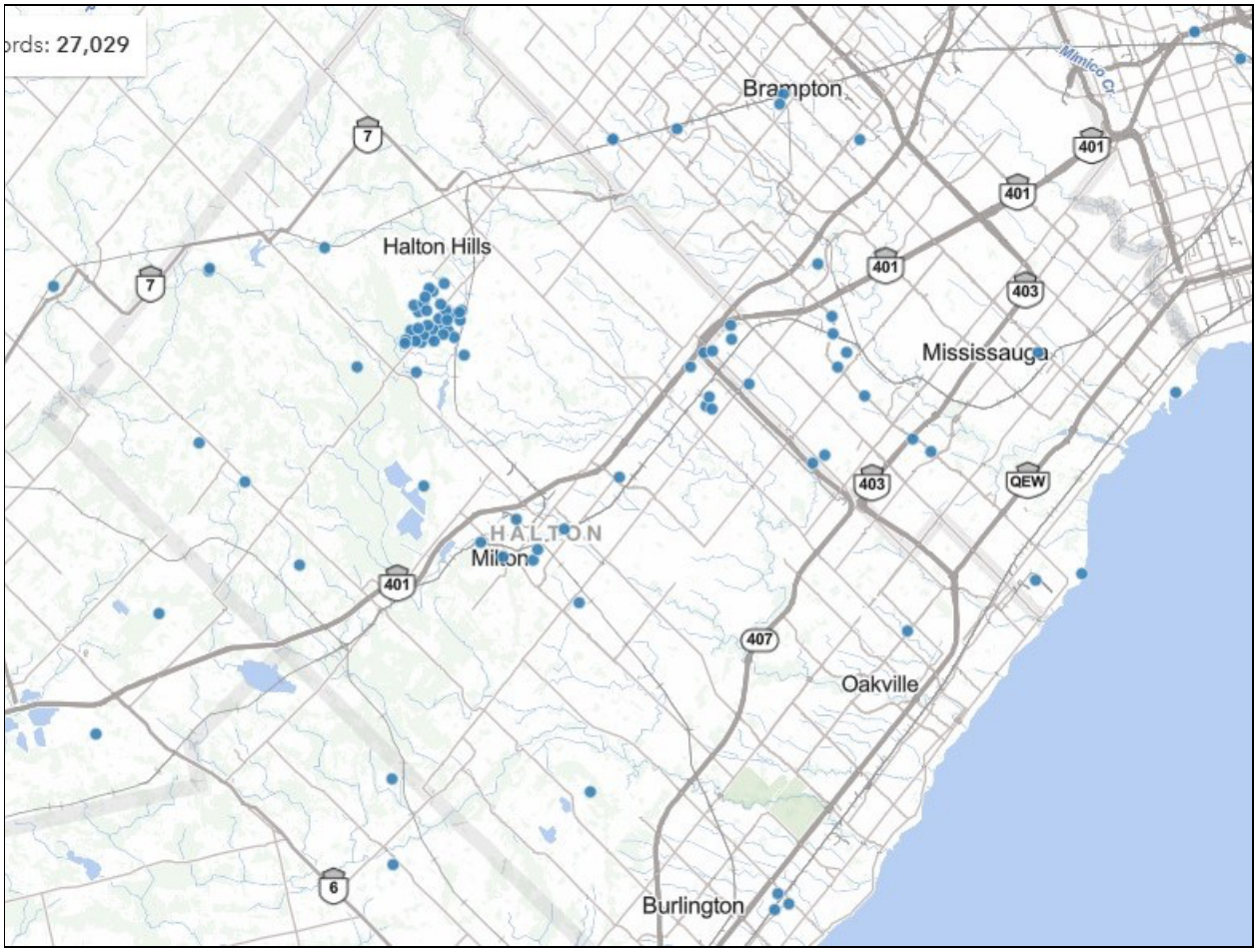
Township	No. Wells
Esquesing	38
Nassagaweya	6
Nelson	4
Trafalgar	17

The earliest two wells were dug in 1866. No more wells were started until 1915. Between 1915 and 1950, 11 new wells were created. The majority of wells were sunk in the period 1950 and 1967 when 40 wells were dug. Afterwards, only one well was installed in each of 1983 and 1989.

Drilling Results	No. Wells
Dry Hole	11
Gas Showing	22
Gas Well	19
Oil and Gas	2
Private Gas	4
Test Well	3

Two wells were relatively shallow at less than 200 feet. Four wells extended between 300 and 500 feet. The majority of wells (41 wells) reached over 500 feet. Eighteen wells exceeded 600 feet. The deepest well was 1280 feet deep.

Eleven of the wells turned out to be dry, lacking in either gas or oil. Forty seven wells had some level of natural gas with 2 also containing some oil. The quantities of hydrocarbon appear to be limited with the result being no development of any commercial oil field. Four of the wells were apparently developed by the land owner for the purpose of heating their own homes. There is no indication that any further development of the hydrocarbon resource in Halton is feasible. In 2023, all of Ontario produced only 498 barrels per day of light oil while natural gas production in Ontario averaged 6.2 million cubic feet per day. These production rates represent less than 0.1% of total Canadian oil production and about 3% of Canada's natural gas production.



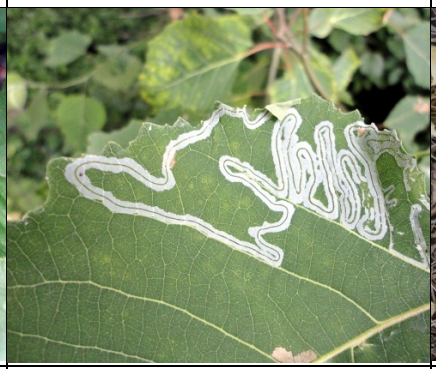
Locations of hydrocarbon wells in Halton

It is quite well-known that abandoned oil wells constitute an environmental threat. There is no indication that any of the Halton Hills wells poses such a threat. The quantity of hydrocarbons seems to be limited and there is no indication of any oil spillage near the wells. At least 60 years has passed since the installation of the majority of the wells. Any gas would have been venting over that time although the natural gas is an undesirable product to be getting into the atmosphere. Any companies that created the wells are long-since gone leaving the land owner with responsibility for the clean-up if needed. The Province of Ontario has undertaken programs to assist in plugging abandoned wells though this is likely not needed in the Halton area

The chance that Halton's own natural hydrocarbon supply will contribute to any major change in the future use of gas or oil resources in Canada is indeed remote.


Abandoned well

Monthly Quiz

Quiz – Match the leaf miner species with the names given in the list.		
		
1	2	3
		
4	5	6
		
7	8	9
		
10	11	12

Choices

A - Basswood Square-blotch leaf Miner (*Phyllonorycter lucetiella*) Elliot Tract
B - Maple Trumper Skeletonizer (*Catastega aceriella*) Acton
C - Leatherwood Leaf Miner (*Leucanthiza dircella*) Robertson Tract
D - Milkweed Leaf Miner (*Liriomyza asclepiadis*) Windsor
E - Raspberry Leaf Miner (*Agromyza idaeina*) Halton Britton Tract
F - Witch-hazel Leaf Folder (*Episimus argutanus*) Rattray
G - Leaf Miner of Blue Beech (*Cameraria corylisella*) Turner Mahon Tract
H - Elm Leaf Miner (*Kaliofenusa ulmi*) Speyside
I - Digitate Locust Leaf Miner (*Odontota dorsalis*) Cawthra Woods Mississauga
J - Aspen Leaf Miner (*Phyllocnistis populiella*) Mississauga McFarren Woods
K - Aspen Petiole Miner (*Ectodemia argyropeza*) Lions Valley Park Oakville
L - Poison Ivy Leaf Miner (*Simplomorpha promissa*) Cawthra Woods

Answers to Quiz:

Picture	Answer
1	E
2	B
3	C
4	K
5	F
6	H
7	D
8	I
9	A
10	G
11	J
12	L

Monthly Memes

Halton/North Peel Naturalist Club Membership Form

Name: _____

Address: _____

City: _____ Province: _____ Postal Code: _____

Telephone: _____

Email: _____

Application Type: New_____ Renewal_____

Membership Type: Single ($40)____ Family ($50)____

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.

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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.

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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: Margaret Beaudette
Vice President: Ian Jarvie (905) 877-1441
Treasurer: Helen Pettingill
Secretary: Pedro Pereyra
Past President: Yves Scholten

Appointments

Membership: Leslie Bissegger
Newsletter: Imogene MacMoffat (geniemac16@gmail.com)
Webmaster Communications Director: John Beaudette
Roving: William McIlveen
Ontario Nature Rep: Don Scallen (905) 876-6180
Crozier Property Steward: Pedro Pereyra
Hardy Property Steward: TBD

Meeting Time/Date: 7:30 pm on the second Tuesday of the month
at
St Alban's Hall, 537 Main Street, Glen Williams, ON L7G 3T1