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Newsletter of the Halton / North Peel Naturalist Club

Volume 48, Number 4

March-April 2014

Talks and Walks

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

March 11

Sheila Colla, Bumblebee identification and conservation.

Sheila Colla Ph.D. is a project coordinator for Wildlife Preservation Canada. Her Ph.D. research at York University focused on the conservation and ecology of bumblebees in Eastern North America. Her research has been featured on Quirks and Quarks, the Discovery Channel and the Nature of Things. Sheila will help us identify native bumblebees and, more critically, inspire us to get involved in their conservation.

April 8

Michelle Gorrie, Fish of the Credit River

Club member Michelle Gorrie will talk to us about the fascinating fish that inhabit the watershed. The Credit River, just metres away from our meeting venue in Glen Williams, is home not only to trout and Atlantic salmon, but to a host of lesser known fish that also merit our attention such as sculpins, darters and dace. Michelle will help us identify some of these fish and teach us about their ecology. Invasive gobies and the ominous possibility of an Asian carp invasion of Ontario waters, will also receive attention.

May 13

Josh Feltham, Five-lined Skinks. Josh Feltham, a professor at Fleming College in Lindsay, has been studying five-lined skinks for several years. The five-lined skink is notable for being the only lizard species found in Ontario. Skinks inhabit two distinct areas of the province: sandy areas on the north shore of Lake Erie in extreme southwestern Ontario and, more extensively, along the edge of the Canadian Shield from the Frontenac Axis to Georgian Bay. Josh will fill us in on what he has learned about the behaviour of this fascinating little reptile.

June 10

Join us for a stroll at Scotsdale farm north of Ballinafad at 7pm. Scotsdale is a heritage property containing several hectares of fields, woodlots and wetlands. At this time of year we can look forward to the evening serenades of a variety of nesting songbirds

Outdoor Events

Sat. March 15, 2014. Tundra Swans at Long Point; Flocks of Tundra Swans stop at Long Point during their spring migration to their northern breeding grounds. Many other species of waterfowl, early-returning songbirds, Bald Eagle, and Short-eared Owl may also be seen on this long day trip. Be advised that lunch at the restaurant is usually after 1:00 and we usually do not head for home until around sunset. Bring snacks, water, a lunch or money for the restaurant, and layers of warm clothing, etc. Call Ray Blower, [\(519\)853-0171](tel:519853-0171) by Thursday, March 13 for more details.

Sat. April 12, 2014: Beamer Conservation Area Hawkwatch, Grimsby: Stops on the way to Grimsby include Scotch Block reservoir and La Salle Park to see waterfowl and early songbirds. Beamer C.A., at the top of the escarpment in Grimsby, provides a large clearing and two cliff-edge platforms to search the sky for migrating hawks. Walking trails in the surrounding woods show early wildflowers and more songbirds. Bring a lunch, hat sunscreen, binoculars, etc. Call Ray Blower (519-853-0171) for starting location and time.

Sun. May 18, 2014: Spring Birding at Thickson Wood, Lynde Shores Conservation Area and Cranberry Marsh: If I had only one day in the spring to go birding, this is where I would go. These locations provide a wide variety of habitats including mature forest, meadows, swamps, marshes, old fields and Lake Ontario and its shoreline. The result is a diverse collection of bird species, especially during spring migration. Scheduling on the Sunday of the Victoria Day holiday weekend has resulted, so far, in trouble-free driving to and from these Whitby birding hot spots. Bring a lunch, water, hat, sunscreen, binoculars, etc. Call Ray Blower (519-853-0171) for starting location and times.



Snowy Owl by Fiona Reid

President's Message

Hello members new and old (and young!)

It seems like this winter will never end, but spring will surely start to unfurl as the month marches on.

In the meantime, please spend a few minutes looking at some wonderful images by our club member and HNPNC secretary, Anne McDermaid, on hnpnc.com. Not only will you see a gallery of her inspiring landscapes, but also some beautiful shots of waterfowl in winter. Thanks Anne! We encourage other members to share their work on our website or Facebook pages. See contact info below.

We are also getting thoroughly modernized and now have a Twitter account: @hnpnc launched January 31st with 211 followers.

*Best wishes,
Fiona*

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

Executive

President: Fiona Reid (905) 693-9719
Past President Andrew Kellman (905) 681-3701
Vice President: Don Scallen (905) 877-2876
Secretary: Anne Fraser (905)-877-1844
Treasurer: Janice Sukhiani (647) 408-9515

Appointments

Membership: Valerie Dobson
Newsletter: Jeff Normandeau
Ontario Nature Representative: Freyja Whitten
Public Relations: Vacant
Webmaster: Sandy Gillians
Crozier Property Steward: Marg Wilkes
Hardy Property Steward: Ray Blower

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

www.hnpnc.com



Catching Snow Buntings for banding

The Return of the Phosphorus : Algae Issue

W.D. McIlveen

On February 27, 2014, the International Joint Commission [I.J.C., 2014] released a report on the most recent algae bloom problem in Lake Erie. That report had much in common with a similar problem that existed in the Great Lakes about 50 years before. That problem was the association between phosphorus loading in the water column and the subsequent growth of algae, most conspicuously *Cladophora glomerata*, though blue green bacteria and other species constitute additional problems.

Algae, like all aquatic organisms, are dependent upon the chemical constituent chemicals in the surrounding water. Generally, chemical concentrations in the water are quite dilute. As it turns out, the essential chemical that is most limiting for algal growth is phosphorus. As a result, small increments in the level of soluble phosphorus cause large responses in growth of the algae. When phosphorus levels in lake water increased up into the 1960s, excessive growth of algae occurred in the Great Lakes. The algae washed up on the shores of the lake (Figs. 1 and 2) where it began to decay and caused very unpleasant odors. Decaying algae consumes oxygen and when this happens in the aquatic environment, the eutrophic conditions with insufficient oxygen become limiting to many organisms including fish.



Figure 1. *Cladophora* on shore of Lake Ontario at Lorne Park, Mississauga, 1969. Photo from Mississauga Public Library collection.



Figure 2. Cladophora on shore of western Lake Ontario 1969. Photo by W.D. McIlveen

There were many sources of the phosphorus, however, the prime source was attributed to detergents used by human residents around the lakes [Schindler, 2008]. Despite fierce resistance from the soap and detergent industry, they were forced to remove the phosphate-based chemicals from their product by 1972. Following this, phosphorus levels

in the water gradually declined and the algae problem generally improved.

The removal of phosphorus from detergents did not permanently solve the problem. There was year to year variation in algae growth and the problem appeared in years of heavy growth (Fig. 3).

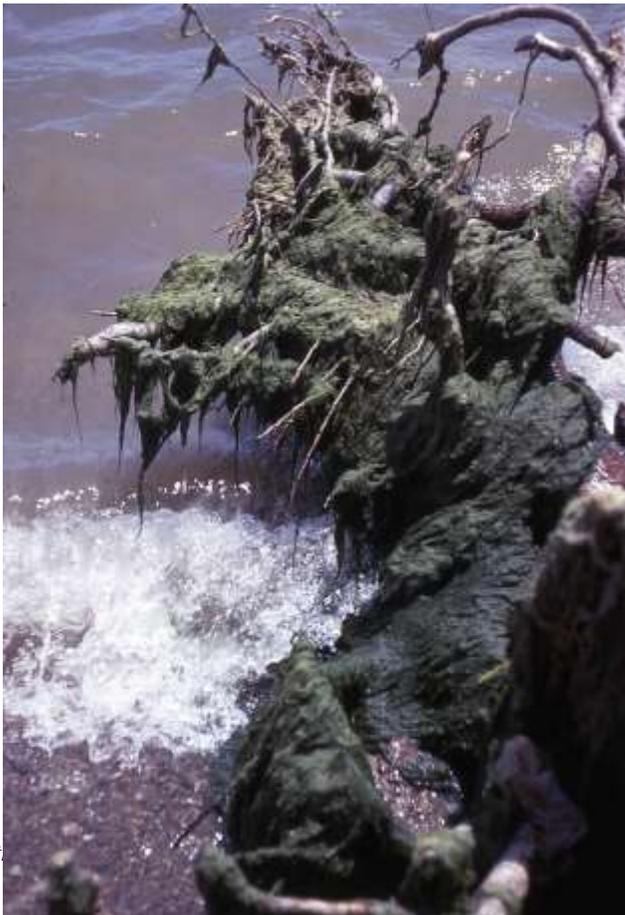


Figure 3. Cladophora on shore of Lake Ontario at Jack Darling Park, Mississauga, Sept. 11, 2011. Photo by W.D. McIlveen

Over time, the human population around the lakes increased further. Other sources of phosphorus grew including releases from sewage treatment plants. As well, new complicating factors appeared. Global warming caused earlier warming of the near-shore waters with the result that alga populations could become established earlier in the Spring. The appearance of the Zebra (*Dreissena polymorpha*) and then Quagga (*Dreissena bugensis*) Mussels made major changes in water quality. These species filter huge quantities of water with the result that water is made clear. With clearer water, light could penetrate to greater depths and this effectively extended the area over which the algae could attach and grow. More growth means more problems. Other introduced species such as the Round Goby (*Neogobius melanostomus*) and large populations of waterfowl that now feed on the mussels further complicate the picture.

In Lake Ontario, the water current in the western portion of the lake is generally counter clockwise when seen from above. This means that the currents along the shoreline off Peel and Halton are from east to west. The Halton shoreline is therefore downstream from any sources of phosphorus in Peel and the City of Toronto. In addition, the nature of the shoreline with piers and other structures influence the movement of the water and can cause floating algae to become trapped. Winds and storms can deposit, and remove, algae on the shore where it is an unwelcome caller in the minds of local residents.

The recent report by the IJC [IJC, 2014] has concluded that the most recent problem of algae in Lake Erie was mainly due to agriculture. This includes large animal production facilities and heavy use of fertilizers for crop production around the Lake. As well, residential use of fertilizers for lawns and gardens contribute a significant amount of phosphorus. The latter source was also confirmed in studies completed in Halton [Aquafor Beech, 2006]. These sources need to be addressed or the eutrophication problem will persist and grow. It is still too early to know what measures will be undertaken in coming years. Phosphate-free lawn fertilizer may be mandated for home-use for example. Conditions around Lake Erie must be altered or the algae issue will continue and grow. The so-called 'dead lake' state could return even though eutrophication actually represents a hyper-lively water body.

References Cited:

Aquafor Beech Limited. 2005. Final report prepared for Conservation Halton LOSAAC Water Quality Study. 127 pp.

International Joint Commission. 2014. A Balanced Diet for Lake Erie: Reducing Phosphorus Loadings and Harmful Algal Blooms. Report of the Lake Erie Ecosystem Priority. 100 pp.

Schindler, D.W. and J.J. Vallentyne. 2008. The Algal Bowl> Overfertilization of the World's Freshwaters and Estuaries. University of Alberta Press, Edmonton. 323 pp.

Halton/North Peel Naturalist Club Membership Form

_____ Renewal or _____ New Member(s) Date _____

Name(s): _____

Address: _____

Postal Code: _____ Telephone: _____

E-mail: _____

Membership renewal fee

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

New members' fees from sign-up date:

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

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

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

Do you have any suggestions for programs or field trips?

WAIVER OF LIABILITY

(**must** be signed by anyone planning to attend field trips or other outdoor activities)

In making this application, I affirm that I am in good health, capable of performing the exercise required to participate, and that I accept as my personal risk the hazards of such participation and will not hold the Halton/North Peel Naturalist Club or its representatives responsible.

In consideration of the Halton/North Peel Naturalist Club accepting my application, I hereby and forever release and discharge the Halton/North Peel Naturalist Club and its officers, directors, servants and agents from any liability whatsoever arising as a result of my participation in these trips and declare that this is binding upon me, my heirs, executors, administrators and assigned.

Signature(s): _____ Date: _____

_____ Date: _____

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

Please fill out this form and bring it in to next indoor meeting or mail with payment to:

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

Halton/North Peel Naturalist Club
Meeting Location
St. Alban the Martyr Anglican Church, 537 Main Street, Glen Williams

