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Newsletter of the Halton / North Peel Naturalist Club

Volume 46, Number 4

November-December 2012

Club Activities

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

November 13, 2012: Extinction of Insects. Club Member **Bill McIlveen** will talk about insects and the process of disappearance of some species. Despite their large numbers as species and as individuals, relatively few insect species have been documented as becoming extinct. The presentation will look at case studies where species have apparently disappeared forever and the reasons for their apparent extinction.

December 11, 2012. Our annual **potluck dinner** will take place at St Alban's. Meeting time is **6:30 not 7:30 p.m.** tonight. Please bring a dish of your choice plus your own cutlery, etc. Members can show slides/electronic images of 10-15 min duration each person. Don't miss this fun event!

Outdoor: Trips begin at the Niagara Escarpment Commission (NEC) parking lot at Guelph and Mountainview Road, Georgetown unless stated otherwise. If you would like to meet the group at the trip site, please speak to the trip leader.

Saturday November 17: La Salle Park and area. Fiona Reid will lead a birding outing to La Salle and other lakeshore localities in Burlington. Please call Fiona (905-693-9719) or email Fiona.reid@xplornet.com for time and meeting place.

Sunday November 18: Late Flowering Plants Survey Hike. Bill McIlveen will be leading this eleventh annual survey to find and identify any flowering plants that are still blooming late in the season at sites around Halton Hills. Meet at 1:00 pm. at NEC.

December 27, 2012: Christmas Bird Count. The annual Christmas Count for Halton Hills will take place in the standard survey area around Halton Hills. The area will be divided into smaller areas with participants assisting experienced leaders. This is a great way for beginners to learn their birds. The usual \$5 participation fee is being waived this year. If you would like to join in any aspect of the count, please call Bill McIlveen at (519) 853-3948 (cell) or email wmcilveen@sympatico.ca. See below for more details.

President's Message

Hello and greetings to all our club members.

What a wonderful Fall season we have had. Brilliant colors and good weather, so nice I was loathe to leave, missing the end of it for a trip to Ecuador. It seems I mostly missed a great deal of rain, but it is good to see the water levels up at last and I am sure it will help the trees, shrubs and wildlife heading into winter.

More birds are starting to appear at the feeders, so stock up on sunflower seeds and other treats to keep them going. In our club we will be enjoying our own feasting with our annual pot-luck meeting in December, don't miss it! We have a great program lined up for the remaining winter months and I hope to see you all at either indoor or outdoor events soon.

Best wishes, Fiona Reid

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 (905) 828-1729
Newsletter: Nicole Charlton (519) 993-6870
Ontario Nature Representative: Freyja Forsyth
Public Relations: Vacant
Webmaster; Andrew Kellman
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



Christmas Bird Count

Do you watch the birds at your feeder all winter? The Halton/North Peel Naturalist Club (HNPNC) invites you to help with the Halton Hills 22nd Annual Bird Count. The Club would appreciate your assistance in collecting data by recording and reporting the number and species of birds you observe on December 27th. Report ONLY birds observed on December 27th.

Report the location where you made the observation (Location could be “backyard on Princess Anne Drive” or “Cedarvale Park”). If observations were recorded in more than one location, please keep multiple lists (For example, report 3 Blue Jays in Cedarvale, 10 Gold Finches in backyard). If you are not certain which bird you have seen, don’t guess, do your best to describe it or do not include it.

You may report your observations by December 31st, in one of two ways: E-mail your observations to wmcilveen@sympatico.ca (If you are interested in learning the results for our area, please indicate so in your e-mail). Or if you do not have email, phone Bill at (519) 853-3948

Weather-related Stress on Plants, 2012

W.D. McIlveen

So far, the year 2012 has seen some disruptions in normal weather patterns. In March, we experienced some rather warm days that caused many wild flowers to appear early, foliage on trees and shrubs to emerge early, and for amphibians to start breeding early as well. This was followed by a relatively cool April. Then in June and July there were days with high temperatures and dry conditions. This report examines some of the impacts of those weather conditions on plants.

Temperature and water availability are two of the most important environmental factors that control the welfare of plants. When these are present at high or low values, then we can expect that certain stresses will start to occur or that the plants will perform at less than optimum growth rates. Not all plants will respond in exactly the same way for some are adapted for low temperatures while others prefer warmer temperatures for example.

The conditions that prevailed in the spring 2012 had major consequences for some crops, notably the McIntosh cultivar of apples. Specifically this was because of a frost or low temperature event at a critical time in flowering. As a consequence, the pollination rate was extremely low and little fruit was set. Other cultivars fared somewhat better. It is uncertain whether weather (i.e. frost) was the main factor but it was rather obvious that wild fruit loads on trees and shrubs through Northeastern Ontario were extremely poor and mostly zero by late this summer. A conversation with a wild blueberry seller confirmed that the blueberry harvest was extremely poor and pickers had a very difficult time finding enough fruit to collect and sell. Aside from the very high prices that could be commanded for the limited fruit that was available, it is easy to appreciate that wildlife such as birds and bears will have a difficult time finding food this year.

Locally, the effect of low temperatures in the early growing season did not appear to have significant impacts for native plants. Most native plants do retain some tolerance to short periods of low temperatures. Even at this, the young foliage on Alternate-leaved Dogwood showed a reddish-brown discoloration along the margins and between the veins. Reddish coloration often accompanies a physiological phosphorous deficiency that is induced by cold temperatures. This gradually disappeared as the growing season advanced. There was a small amount of acute necrosis of some Dogwood leaves but this only occurred where ice formed when rain runoff from the house roof froze on the foliage (Figure1).



Figure 1. Ice and cold temperature injury to Alternate-leaved Dogwood, Acton, May 2, 2012.

Weather-stress conditions occurred later in the growing season in the form of drought. It was reported that the timing of the drought was particularly bad for corn producers. Although corn plants were widely seen to be suffering (leaves rolled up) in many parts of the Province, the plants remained alive for a long time. The yield though was impacted

since the silks could not be pollinated during the critical short window when silks and pollen must come together. The overall effect was a low rate of pollination and this in turn will impact upon the amount of seed that gets set. The true impact can only be known after the harvest has been completed. It is expected that the price for corn for animal and human food will be quite high due to shortages in the crop through much of the corn-producing parts of North America.

The reported monthly totals of precipitation for the study period (March through July) may be a somewhat misleading. As shown in Figure 2, the monthly totals at Pearson Airport for March, April and May are not much more than half of the normal amounts for each month. The amount for June is very close to average while that for July is about 30% above average. But timing is everything. Of the total of the 76.4 mm for June, nearly half (37.4 mm) fell on the very first day of the month. In July, the largest rainfall that measured (38.8 mm) fell in a thunderstorm on the very last day of the month. There were a couple of light rains on July 22 and July 25 but these were not even seen in many parts of our area. This means that there was an extended time (over seven weeks from June 2 to July 21) where practically no rain fell at all. In combination with some days with rather high temperatures, most plants without an irrigation source would have been subjected to some very severe drought stress. Figure 3 shows the same data as Figure 2 but the amounts of rain that fell on June 1 and after July 22 have been excluded to provide a more realistic image of the conditions that plants would have experienced.

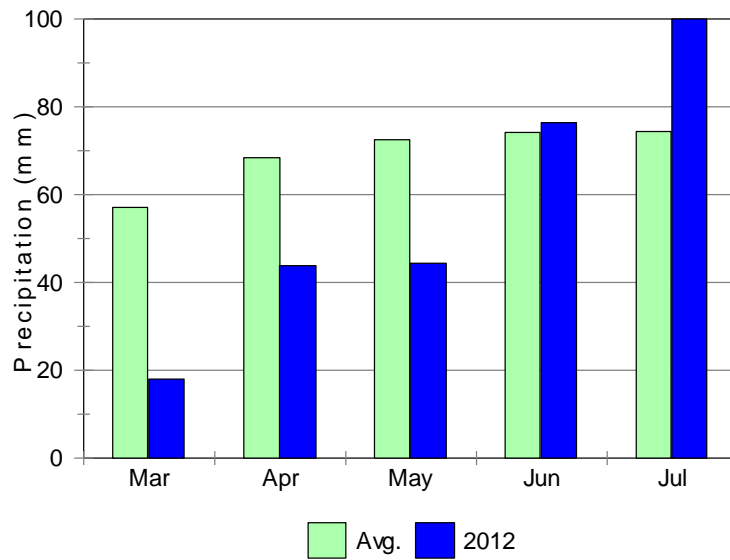


Figure 2. Total monthly precipitation reported at Pearson Airport from March through July, 2012.

Some native plants in our area did exhibit symptoms of weather (drought) stress. Such symptoms included drooping of the foliage and later, complete drying of the foliage. (Figs. 4 and 5).

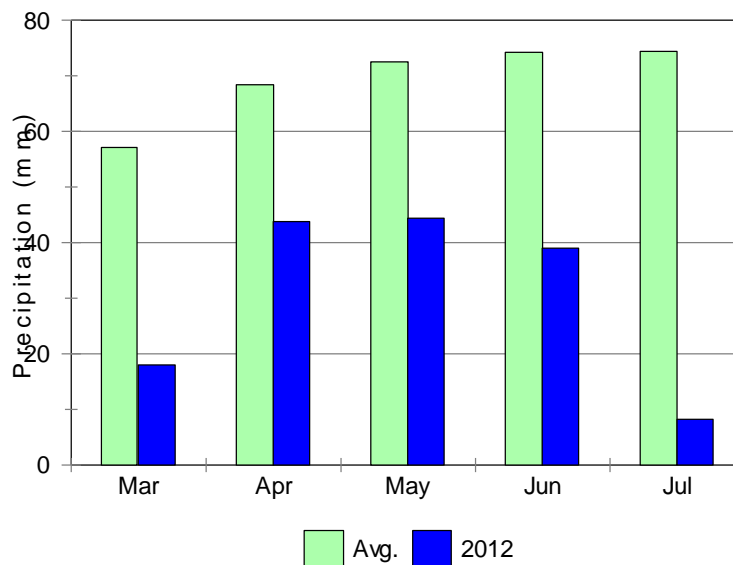


Figure 3. Monthly precipitation reported at Pearson Airport from March through July, 2012 excluding the rain events on June 1 and July 31.

The normal growth of plants includes uptake of water from the soil and transpiration of that water through the foliage. When there is an inadequate supply of water, the plant has several responses to help cope with the shortage. A prime reaction is to close the stomates to reduce the loss of water through the leaves. While water loss may be reduced by this action, it also reduces the amount of nutrients that can be absorbed from the soil and transported to the leaves. Closure of the stomates reduces the amount of carbon dioxide that can be taken up to become involved in the photosynthetic process. Reduced

transpiration means that the foliage does not get cooled through evaporation of the water. As a result, the leaf temperatures get raised above optimum and so the plant cannot grow at an optimal rate. Overall though, it is most desirable to the plant to conserve the water it has, rather than grow large. To compensate for the lack of water, many plants will shed their excess foliage. This effectively cuts down on the total leaf surface that is transpiring at any given time.



Figure 4. Temporary wilting of foliage of Green-headed Coneflower due to drought stress, Acton, July 25, 2012

Hormones produced in the roots trigger the mechanisms that lead to abscission of excess leaves, much like the normal fall of foliage each Autumn. Stressed trees for example might show a high proportion of yellowed foliage (often older leaves and leaves lower on the stem. Another clue to the drought stress is an excess of recently-fallen foliage on the ground much earlier than would normally take place. Sometimes, totally dried or dead foliage will be retained on the branches.

Late in August, large patches of totally brown, necrotic trees and shrubs were seen in the area south of Parry Sound. This area has rather shallow soil the soil is quite



Figure 5. Foliar necrosis due to drought stress on Wild Raspberry, Acton, July 25, 2012.

ight stress but the degree of stress in the summer 2012 in that area is the most severe that the author has witnessed in over 35 years. Whether or not the affected vegetation was killed outright will become known in 2013; however, there is little doubt that there will at least be a notable impact on the affected sites for several years to come. Locally, the stress observed will not likely have an observable enduring impact on perennial species but cumulative stress from similar conditions in future years could produce notable effects, likely as smaller plants with less flowering, lower seed set, or greater incidence of insect and disease attacks.

The Charles Hildebrandt Side Trail

Charles Hildebrandt was known to many of us as a very keen and knowledgeable naturalist and long-time club member. The opening of The Charles Hildebrandt Side Trail at Speyside was an opportunity for his friends and acquaintances to get together. After the opening his family led a group along the rocky path. It leads from the end of the Third Line road allowance to the main Bruce Trail through a beautiful wooded area with many butternut trees. Although the day was grey the fall leaves provided a colourful back drop for the trail's inauguration.



-Valerie M. Dobson



Halton/North Peel Naturalist Club Membership Form

_____ Renewal or _____ New Member(s) Date _____

Name(s): _____

Address: _____

Postal Code: _____ Telephone: _____

E-mail: _____

Membership fee for the period
from September through to August _____ Single (\$30.00) _____ Family (\$40.00)
from December through to August _____ Single (\$22.50) _____ Family (\$30.00)
from March through to August _____ Single (\$15.00) _____ Family (\$20.00)
from 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**

