the Esquesing
Newsletter of the Halton / North Peel Naturalist Club

Volume 44, Number 5 May-June 2010

Club Activities

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.

June 8: **Annual Evening Hike**. This hike will either be along Silver Creek or the Credit River - contact Don Scallen at (905) 877-2876 for time and details closer to the event.

Sept. 14: **Kayaking Southern Ontario Waterways**. Join local naturalist and writer Don Scallen for a look at the flora and fauna of southern Ontario waterways. Over the past three years Don has kayaked all the marshes and river mouths associated with Lake Ontario from the Niagara River to Prince Edward County. He has also paddled sections of the Grand, Thames, Detroit and Canard rivers, observing and photographing wildlife.

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.

May 22: Currie Tract. Introduction to warblers and other spring arrivals. We will meet early in the morning to explore this area near Campbellville. In the brushy clearing, surrounded by tall hardwood forest, we can see a great range of spring birds. This is a good outing for those wishing to learn more about (or brush up on) bird identification and calls. We may also stop at Scotch Block reservoir on our way back to Georgetown. Call Fiona (905-693-9719) to arrange meeting time and car pooling. Rain date May 24.

May 23: Spring Birding at Thickson Wood, Lynde Shores Conservation Area, and Cranberry Marsh. This cluster of very good birding locations provide a wide variety of habitats including mature forests, meadows, marshes, swamps, scrub land, and Lake Ontario and its shoreline. As a result, a diverse collection of birds can be seen in this area, especially during spring migration. This outing is scheduled for the Sunday, Victoria Day weekend to minimize the effect of traffic on the drive to and from this Whitby birding "Mecca." Bring warm layers of clothing, binoculars, scopes, water, lunch, hat, sunscreen. Call Ray Blower, (519) 853-0171, to arrange car pooling and meeting spots and times.

May 29: Great Blue Heron rookery visit. Laurie and Judith Reed own a large swamp near Brookville that is summer home to herons, plus a variety of water birds and songbirds. They have been kind enough to let us observe the swamp from a raised viewing platform, and we hope to see young herons on the nest at eye level. Please call Fiona (905-693-9719) to arrange meeting time and car pooling.

June 12: Carden Alvar. This Important Bird Area, 1.5 to 2 hours north of us, is excellent for rare birds including Loggerhead Shrike and Upland Sandpiper. We'll leave Georgetown in the early afternoon and plan on eating dinner at a restaurant in Kirkfield so that we can listen for Whip-poor-will and Common Nighthawk before heading back home. Please call Fiona (905-693-9719) to arrange meeting time and car pooling.

Naturalist Club Evening Walks - – page 10

President's Message

Hello Everyone,

Spring got off to a very early start this year, with many wildflowers blooming two weeks before their typical schedule. We were lucky in having a cool period in late April and early May that kept these precious plants in bloom for a longer period. I think this has actually been one of the best years for buds and flowers since I moved to this area 10 years ago.

Even the salamanders emerged very early, some breeding in late March, others at the beginning of April. The birds, however, with further to travel, are on a more typical schedule and warblers are likely to appear in the next week or two, as usual. They will just be a bit harder to see this year as the trees are almost fully leafed out!

We have some great walks this spring and summer – don't forget to check out our evening walk schedule – and hope to see all of you at our indoor or outdoor events. Happy nature watching!

Fiona Reid

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

Executive		Appointments	
President: Fiona Reid	(905) 693-9719	Membership: Christine Williams	(905) 877-1539
Past President Andrew Kellman	(905) 681-3701	Newsletter: Gerda Potzel	(905) 702-1681
Co-Vice President: Don Scallen	(905) 877-2876	Ontario Nature Representative:	Vacant
Co-Vice President: Ray Blower	(519) 853- 0171	Public Relations:	Vacant
Secretary: Janice Sukhiani	(647) 408-9515	Webmaster	Andrew Kellman
Treasurer: Marg Wilkes	(905) 878-6255	Crozier Property Steward	Marg Wilkes
		Hardy Property Steward	Ray Blower

Membership for one year: $20 Single; $30 Family
The Halton/North Peel Naturalist Club is an affiliated member of Ontario Nature.
www.hnpnc.com

Coming out of Hibernation

At the cottage in March, I experienced a memorable sighting over a frozen lake. It was a warm sunny afternoon around 15 C and I was spending some time sitting down at the lakeshore. The lake was still frozen solid except for a small pool of water at the shoreline close by. I observed a bat come flying out of a cottage property a short distance away. To see this happening in late winter was odd enough, but watching it fluttering about, hunting over the ice for a couple of minutes, then dive down to the open pool for a drink or an insect close to the surface, was quite a sight. From there, it flew back into the area it came from, and I did not see it again.

The next day was also warm and sunny. We were out for the afternoon and evening and when driving back on the cottage road later that night, we observed ten more bats out hunting. Again, something we did not expect to see in the middle of March.

April 6th, a Pine Warbler showed up at the feeders at Upper Canada College, feeding mainly at the suet feeder. For a species usually dependent on a variety of insects, early migrants are able to sustain themselves by feeding on suet. I have observed this in past years as well.

Gerry Doekes

The Red Queen in Evolutionary Theory

"They were running hand in hand, and the Queen went so fast that it was all she could do to keep up with her...The most curious part of the thing was, that the trees and the other things around them never seemed to changed their places at all."

Now, **here**, *you see, it takes all the running* you *can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!'*

These were the words of the Red Queen in *Through the Looking Glass* written by Charles Lutwidge Dodgson, better known to most of us under the pen name Lewis Carroll. Dodgson was an author, mathematician, logician, Anglican clergyman and photographer who lived from 1832 to 1898. Although we generally regard him as a teller of children's stories, his real strengths were as the logician and the mathematician.

At first viewing, the words of the Red Queen sound like a bit of nonsense, as did many of the things said in the Lewis Caroll books. Yet, on reflection, some of these things start to make a lot of sense if one takes the time. And it is the words of the Red Queen that evolutionary biologists have taken to heart.

Leigh Van Valen first proposed the Red Queen evolutionary hypothesis that introduced the idea that there is a constant 'arms race' between co-evolving species. Van Valen observed that improvement in one species will lead to improvement in the co-evolving species because when a species develops a special ability (for example foxes running faster), its co-evolving species will also improve its ability (for example, rabbits running faster). A temporary advantage in one species is soon matched by a complimentary change in another.

The best examples of relationships between species are where at least one is critically dependent on another. There are numerous examples that could be cited but let us consider the relationship between a plant such as potato and the fungus **Phytophthora infestans** that causes late blight; a disease that famously devastated the potato crop in Ireland in 1845 and elsewhere in Europe. Following that crop failure, varieties of potato that could resist the disease were grown (as well as with the eventual introduction of chemical sprays). But each time a new variety was introduced, the fungus also evolved a means to overcome the genetic characteristics that allowed the potato to have some advantage in the relationship. This is a relatively simple relationship where a change in one gene in

the host plant is sequentially matched by one gene change in the pathogen. This is known as the 'gene-for-gene' theory or hypothesis. In other cases, multiple genes may be involved and the process might be quite a bit more complicated but basically, the theory is quite valid.

Although the hand of humans was involved in the plant breeding race for a suitable potato and so speeded up the process, it is the same kind of evolutionary process that occurs in nature. In nature, the process usually occurs over a much longer time. It is decidedly against the fungus' long-term interests to kill all of its hosts, just as much as it is in the interest of the host to find ways to survive attacks by pathogens. A similar kind of process can be applied to many other kinds of relationships such as plants vs. insects or insects vs. insects. Although there are changes going on at the genetic and physiological level, the organisms involved remain basically the same over time. Though about 165 years have passed since the late blight affected the potato crops in Ireland, this is a mere flash in time in terms of natural evolution. Certainly much evolution has taken place thanks to plant breeders in those years, but overall the change has been small and we still have both species with us. So this is where the Red Queen theory seems to apply. Despite all of the genetic change in the potato and the fungus in the short period, we are still are at a stage in our agriculture that greatly resembles the conditions that prevailed in the past. Figuratively, the potato has been running fast; the fungus has been running fast; the plant breeders have been running fast; yet we remain in essentially the same place. The Red Queen's voice thus expressed more wisdom than the apparent nonsense words appear to show.

W.D. McIlveen

Help protect Terra Cotta from invasive plants!

Come learn about some invasive plants and help us stop their spread.

This summer Credit Valley Conservation is planning on mapping select invasive plants at Terra Cotta Conservation Area with the end goal of establishing an invasive species management plan. We are looking for committed volunteers to assist with the data collection by walking the property with a GPS device to locate invasive plants.

The project will start with a workshop to provide training on plant identification for CVC's 16 top invasive plants and on the use of GPS units. Please wear appropriate clothing, footwear and don't forget the bug spray. Light refreshments will be provided, but please bring a lunch. There are three additional work days from which people can choose to attend. We hope volunteers will attend the training workshop and at least one work day.

For people who are interested there is also the potential to help with future removal projects of the invasive species we map during the work days. If you have any questions please contact Freyja Forsyth, either by phone at 905-670-1615 X 481 or at fforsyth@creditvalleyca.ca.

Location: Terra Cotta Conservation Area, 14452 Winston Churchill Blvd., Halton Hills

Cost: Free

Training Workshop: Saturday, June 5, 9:00 am – 3:00 pm, Watershed Learning Centre, Terra Cotta Conservation Area

Work Days: Saturday, June 19, Saturday, July 17, and Sunday, August 8
9:00 am start, Welcome Centre, Terra Cotta Conservation Area

The Ground Beneath Your Feet

So often, we walk through the forest and never give a second thought to what's under our feet. But that soil we walk on is enormously important in determining what vegetation grows, or doesn't grow, on the surface. The plants we see in forests and wetlands reflect what type of soils lay below. It is possible to predict soil type from the vegetation observed, but to be sure, for the Natural Areas Inventory data collection, we use a soil auger (large hand drill – see photo) to collect a soil core sample to a depth of 120 cm.

Drilling down into hard or rocky soil can be tough, and the wet sucking soils of some wetlands can make it just as tough to get the auger back out! Section by section, each piece of soil core is laid out in a line, revealing soil layers.

To understand the soil picture we look for key features, such as the presence and depth of organic soil, the type ("texture") of mineral soil, the depth of the water table and evidence of periodic or permanent water saturation (called "mottles" and "gley" respectively). Organic soil is composed of plant material in various states of decay. It is wet, black, somewhat greasy and often you can still see whether the original plant material was moss or leaves. Organic soil is almost always over top of any mineral soil and if the organic soil layer is thick enough (greater than 40 cm, the primary rooting depth of plants) it determines what grows in the wetland.

Soil Layers

If soil is not organic, it is mineral, composed of varying mixtures of sand, silt and clay, which have arisen from erosion and breakdown of rock. There is a wonderful set of "gettin' dirty" tests that can be done to determine how much sand, silt and clay particles are present in a mineral soil sample – what is called the "texture" of the soil. In one test, you dry a pinch of soil by rubbing it between your hands. When dry, you can feel and see the sand grains, and if a dry stain remains after you dust the sand off your hands, the stain is silt and clay particles caught between your skin ridges. Several other tests use damp soil, tossing it as a ball, squeezing it into a ribbon and rubbing it against metal to assess the proportions of silt and clay. Soil texture determines how well water drains through the soil and how much water is retained in the soil. Sand grains are larger than silt and clay particles, so the spaces between the grains are larger and allow water to drain relatively rapidly through the soil. This rapid drainage results in drier conditions for plant roots and supports species that require or are tolerant of these conditions. The spaces between clay particles are the smallest, so small in fact that a layer of clay can act as a barrier to water drainage, lining low spots to create ponds, swamps and marshes. In mineral soil that is permanently saturated and thus has low oxygen levels, iron is reduced to give

the soil a pale, washed out, often blue, colour, which is called “gley”. When we find a gley layer we then know that the soil

Mottles

from that depth down, is constantly wet. In some cases soils may be saturated only periodically or seasonally and in these cases the soil iron rusts, creating orange spots. These rust spots are called “mottles” and even though they may be found in what appears to be dry soil at the time (e.g. the end of summer), we still know that at other times the soil is temporarily saturated. Soils that are wet permanently or temporarily will support water-tolerant species.

Even without a soil auger, you can still get an idea of what the soil below the surface is like by looking at where trees have toppled over or hillsides have eroded, exposing deeper layers. Animals that burrow also often pile deeper soil types in front of their diggings too. I find it exciting to dig a soil sample because even though I may predict what I’ll find, there is always the chance to be surprised by something unexpected.

The NAI is a partnership between the Halton/North Peel Naturalist Club, the South Peel Naturalists’ Club, Credit Valley Conservation, the Toronto and Region Conservation Authority and the Region of Peel. The NAI project receives generous financial support from the Ontario Trillium Foundation.

Dawn Renfrew
Coordinator, Natural Areas Inventory Project
Credit Valley Conservation

A Long Point Swans Trip

Our club swan outing to Long Point, scheduled for Saturday, Mach 13th did not get off the ground due to cold and rainy weather.

Fortunately, Ross Evans and I were available to make the trip on Tuesday, the 16th when a beautiful, sunny day was to be had.

Our first stop of the day was near Caledonia, in search of reported Short-eared Owls. None were found but the countryside provided us with several Red-tailed Hawks and one Rough legged, most perching in large bur oaks that dot the open fields. We also saw a few kestrels, one hovering over a fallow pasture hunting for voles.

Because we had started the day late, we made a change from our normal schedule and headed for lunch in Simcoe. Along the way we saw 80 Tundra Swans loafing in a ploughed field with some Canada Geese.

As a result of the early warm weather there was no snow to be seen on the ground and very little ice in Lake Erie. The birds, on land and lake, were very dispersed and not flocked together like they are when the weather is bad and the landscape frozen.

Later in the day near Lee Brown's, we pulled over behind a couple of cars parked at the roadside. The sight to be seen was a pair of Sandhill Cranes perhaps 30 metres back from the road. They were foraging about, side by side, facing the road – a lovely sight. Unfortunately, a couple of people exited their cars to photograph the birds and they moved away into the field.

As we were driving near the south end of the causeway to Long Point we came across a well-spaced collection of six or seven muskrats. They were all nibbling on the material deposited by the waves on the beach.

Our next stop was the small viewing platform at the south-west corner of the bay. A pair of Sandhill Cranes flew north on the west side of the road after we exited the car. From the platform we saw Canvasbacks, Gadwalls, Redheads, Buffleheads, American Wigeon, Ring-necked Ducks, and Black Ducks. Off to the east, near the edge of the marsh, we saw about 1200 swans – a mixture of Tundra and Mutes.

Unfortunately, during our trip this time, we saw no flying swans which is something that many of us consider to be the highlight of the day.

Next we went to the west end of Hastings Drive and immediately set up our scopes to check out a huge stick nest we saw as we drove in. While we were confirming that there was a white head showing above the rim of the very distant nest, another adult Bald Eagle few into the next tree. The tree was about a kilometre away, but it was easy to see him hop down, through the branches to the next, and begin tearing at the food he had brought.

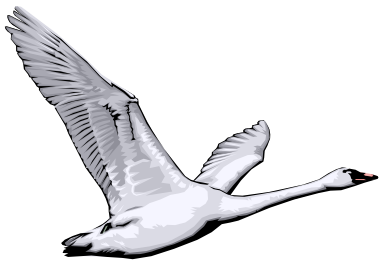
A short while later we were at Old Cut Station. In the woods we heard repeated, single peeps that we did not recognize. It was soon revealed to be a small flock of Golden-crowned Kinglets. They casually flitted from branch to branch in the conifers, looking for their tiny prey, paying no attention to us, just a few steps away.

It was now late afternoon and we headed toward Nanticoke. Steaming along a country road, we stopped and backed up to identify some black blobs we had passed. They turned out to be about 70 contented Wild Turkeys feeding in a sunny field on the east side of a deciduous forest.

We were now down to our final mission for the day. We proceeded to the Fisherville Raptor Preserve to search for Shot-eared Owls. We arrived shortly before sunset and were able to check the trees, hydro wires, and fence posts, but had no luck.

As the sun goes down, these owls usually fly up from their roosts, which are often on the ground. They then fly about, stretching their wings, and eventually disperse across the landscaper to hunt. Unfortunately, on this trip, there were no own silhouettes doing the "owl ballet" against a sunset-coloured sky. Hopefully, next year we'll be luck enough to see that lovely sign again.

Ray Blower



How Can I Help Nature?

As you can imagine, after two Natural Areas Inventory (NAI) project field seasons, a lot of data has been accumulated and we are now in the process of writing up the first volume of summaries of field sites. Our goal is to have a web-based version of this available by the end of the year. This review of sites visited has produced several general recommendations on how natural areas can be better protected, that I would like to share.

Healthy ecosystems usually have complex structure. In forests, this is reflected by having variety in not only the species that are present, but also by having variety in the age and size of individuals of each species. In addition to high tree canopy layers, healthy forests also have lower vegetation layers made up of younger individuals of canopy species that will eventually grow to replace aging mature individuals, shrubs and low non-woody species (wildflowers and grass-like plants). This underbrush is important in providing habitat to forest-dwelling wildlife.

Woody debris on the ground also plays an important ecological role, retaining water and then slowly releasing it, providing damp microhabitats for small wildlife species such as salamanders, providing essential nutrients back to the soil through decomposition and providing a home to many insects and fungi Removal of underbrush, young trees and woody debris in order to "tidy up" a forest effectively removes a substantial part of the forest complexity and can greatly reduce the number of species the forest supports. Large diameter, standing dead trees also play an important role, providing shelter and nesting opportunities for a variety of birds and mammals, and a substrate for wood-boring insects and the birds that feed on them. Large dead trees should be left in place where they do not pose a safety hazard.

In an increasingly fragmented landscape, connections between natural features become ever more important. Wildlife need to have naturally vegetated corridors that connect the variety of habitats they occupy (on either a daily or seasonal basis) so they can move freely and safely between feeding and resting areas or breeding and overwintering areas. Over the longer term, young need to be able to disperse to avoid overpopulation. Members of different populations need to mix to avoid inbreeding and if something happens to remove a species from an area, natural corridors become the routes for re-colonization. Restoration plantings and allowing for natural regeneration can restore links between isolated natural habitats. Wide roads and fences can act as barriers to wildlife movement. Culverts can act as passages but they must be kept in good repair and be properly sized to be effective.

At the home garden level, individuals can contribute to wildlife corridors by providing plantings that offer shelter and food to wildlife.

The edges of streams and ponds are special areas where ecosystems transition between terrestrial and aquatic communities. In addition to harbouring its own set of species, the vegetation of this zone functions to stabilize the banks of the stream or pond against erosion, slows runoff, provides shelter to wildlife both on the banks and in the water, and taller shrubs and trees provide shade preventing the water from

overheating. Removal of vegetation from the edges of streams and ponds and mowing to the water's edge negatively impacts how the stream and pond ecosystems function. If manicuring of nearby vegetation is to occur, a buffer strip of natural vegetation is recommended.

Urban landowners can reduce their impact on natural areas by adopting lawn and yard care practices that reduce or eliminate the discharge of fertilizers, herbicides, pesticides, pet waste, and rock salt via runoff into ground or surface water features, reducing the biodiversity that struggles to survive alongside urban watercourses. Salt water or chlorinated water drainage from backyard pools into natural areas impacts the plants and wildlife of these areas.

An often-forgotten means of accidentally spreading seed of invasive species is via the boots and clothing of hikers of our area's many trail systems. Similarly, aquatic invasive species can be transported between separate bodies of water on boats, motors, fishing gear and waders. It is recommended to clean all clothing and equipment of debris on leaving a natural area, and certainly before entering another area.

Regardless of whether you have a big yard, a small yard or no yard, there are ways for everyone to help protect our special natural areas!

The NAI is a partnership between the Halton/North Peel Naturalist Club, the South Peel Naturalist' Club, Credit Valley Conservation, the Toronto and Region Conservation Authority and the Region of Peel. The NAI project receives generous financial support from the Ontario Trillium Foundation.

Dawn Renfrew
Coordinator, Natural Areas Inventory Project
Credit Valley Conservation

Natural History Workshops
Queen's University Biological Station
Kingston, Ontario

July 23-24 - The Secret Lives of Wildflowers (2-day workshop)
July 25 - There Be Dragons: Introduction to dragonflies and damselflies (Session #1)
July 26 - There Be Dragons: Introduction to dragonflies and damselflies (Session #2)
October 4-8 - Fabulous Fall Fungi (4-day workshop)

Instructor: Richard Aaron (natureteacher1@gmail.com)
For details and to register: www.queensu.ca/biology/qubs.html

Exploring our Watersheds
Ontario Nature's 79th Annual General Meeting & Carolinian Canada Coalition's 2010 Form & Annual General Meeting
May 28-30, Lambton College & Inn, Sarnia, Ontario

Hosted by: Lambton Wildlife Incorporated, Friends of Pinery Park, Sarnia Urban Wildlife Committee, Sydenham Field Naturalists

TALKS, WALKS AND WORKSHOPS

For more information: www.carolinian.org 519-433-7077 conference@carolinian.org or www.ontarionature.org 1-800-440-2366 ext.240 barbaraw@ontarionature.org

Naturalist Club Evening Walks - Summer 2010

Halton/North Peel Naturalists and South Peel Naturalist Clubs

In 2010, our evening walks will focus on green spaces within the Sixteen Mile Creek area.

All walks are on Mondays and start at the meet location at 7:00pm sharp.
Please wear appropriate clothing and footwear and be prepared for biting insects.

Date	Location	Meeting Place	Leader
17-May	Milton Pond	Milton 401	W.D. McIlveen
24-May	Drumquin Woods	Drumquin Park	W.D. McIlveen
31-May	Sixteen Conservation Area	Sixteen Conservation	W.D. McIlveen
7-Jun	Lion's Valley	Neyagawa	Leanne Wallis
14-Jun	Riverwood Conservancy	Riverwood Conservancy	Audrey Oswald
21-Jun	Britton Tract	Milton 401	W.D. McIlveen
28-Jun	Crozier Tract	Milton 401	W.D. McIlveen
5-Jul	Sideroad 17 Trail	Milton 401	W.D. McIlveen
12-Jul	Robertson Tract	Campbellville Parking	W.D. McIlveen
19-Jul	Currie Tract	Campbellville Parking	W.D. McIlveen
26-Jul	Bruce Trail Speyside	Milton 401	W.D. McIlveen
2-Aug	Turner Tract	Campbellville Parking	W.D. McIlveen
9-Aug	Esquesing Tract	Milton 401	W.D. McIlveen
16-Aug	Speyside - Vanderleck Trail	Milton 401	W.D. McIlveen
23-Aug	McCraney Valley Park	Oakville Town Hall	W.D. McIlveen
30-Aug	Rattray Marsh	Green Glade School	Kirsten Burling

Meeting location descriptions: (In larger parking lots, we will try to meet at places nearest the entrance)

Milton at Hwy 401 – Commuter parking within cloverleaf of Highway 25 at Hwy 401 in southeast corner

Drumquin Park– Parking area for ballparks on north side of Britannia Road west of Trafalgar Road

Sixteen Conservation – Parking lot on north side of Lower Baseline Road at junction with Sixteen Mile Creek west of Trafalgar Road

Neyagawa – Parking lot at southeast corner of Neyagawa Boulevard and River Glen Boulevard

Riverwood Gardens - 1401 Burnhamthorpe Rd West North side of Burnhamthorpe, east of the Credit River at Credit Woodlands

Campbellville Parking – Commuter parking at west of Guelph Line at intersection with Hwy 401, Enter off Reid Sideroad

Oakville Town Hall - 1225 Trafalgar Road, east side of Trafalgar about a half km north of QEW

Green Glade School – Green Glade off Meadow Wood Road, Clarkson

Not as advertised! Some destinations may change if preliminary site visits determine that a site lacks sufficient interesting items. In such cases, the meeting location will remain unchanged but the trip destination will be altered to a location nearby.

For more information, call Bill McIlveen (519) 853-3948 or cell (905) 867-9294