



TORONTO FIELD NATURALIST

Number 599 November 2013



Common loon, graphite pencil and digital painting, by Joanne Doucette

REGULARS

Coming Events	19
Extracts from Outings Reports	8
From the Archives	16
In the News	17
Keeping in Touch	11
Monthly Meetings Notice	3
Monthly Meeting Report	7
President's Report	6
TFN Outings	4
Weather – This Time Last Year	19

FEATURES

TFN for All Seasons	10
What should TFN do about Climate Change?	12
Toronto's Native Summer Lilies	13
Common Loon Reproductive Success in Canada	14
TFN Grant Report: Adopt-A-Pond Conservation Programme	18

Toronto Field Naturalist is published by the Toronto Field Naturalists, a charitable, non-profit organization, the aims of which are to stimulate public interest in natural history and to encourage the preservation of our natural heritage. Issued monthly September to December and February to May. Views expressed in the Newsletter are not necessarily those of the editor or Toronto Field Naturalists. The Newsletter is printed on 100% recycled paper.

ISSN 0820-636X

IT'S YOUR NEWSLETTER!

We welcome contributions of original writing of observations on nature in and around Toronto (up to 500 words). We also welcome reports, reviews, poems, sketches, paintings and digital photographs. Please include "Newsletter" in the subject line when sending by email, or on the envelope if sent by mail. Please re-name digital photographs with the subject and your name (abbreviations ok); scale your photos *to less than 200KB each*. In the accompanying email include location, date and any interesting story or other information associated with the photograph.

Deadline for submissions for December issue: Oct 30

NEWSLETTER COMMITTEE

Jenny Bull (co-editor), Vivienne Denton, Karin Fawthrop, Nancy Fredenburg, Elisabeth Gladstone, Judy Marshall, Ruth Munson, Toshi Oikawa, Wendy Rothwell (co-editor).

Printing and mailing: Perkins Services Inc.

BOARD OF DIRECTORS

President & Outings	Margaret McRae	██████████
Past President	Bob Kortright	██████████
Vice President & Monthly Lectures	Nancy Dengler	██████████
Secretary-Treasurer	Charles Crawford	██████████
Communications	Alexander Cappell	██████████
Membership & Newsletter	Judy Marshall	██████████
Newsletter	Vivienne Denton	██████████
Monthly Lectures	Lavinia Mohr	██████████
Nature Reserves & Outings	Charles Bruce-Thompson	██████████
Outreach	Stephen Kamnitzer	██████████
Webmaster	Lynn Miller	██████████

MEMBERSHIP FEES

\$20 YOUTH (under 26)

\$30 SENIOR SINGLE (65+)

\$40 SINGLE, SENIOR FAMILY (2 adults, 65+)

\$50 FAMILY (2 adults – same address, children included)

No HST. Tax receipts issued for donations. Send membership fees and address changes to the TFN office.

Please note: TFN does not give out its membership list.

Toronto Field Naturalists

1519-2 Carlton St, Toronto M5B 1J3

Tel: 416-593-2656

Web: www.torontofieldnaturalists.org

Email: office@torontofieldnaturalists.org



Watercolour by Nancy Anderson

NATURE ARTS NEWS

TFN Nature Arts member Nancy Anderson had a pastel artwork chosen for exhibit in "A Taste of the Wild" held at the Beaux Art Gallery in Brampton. Her work titled "Mama and Simba" was of her cats. Last year another pastel "Mama and Amber" of the dairy cow and calf from Riverdale Farm was in the show. It is a prestigious, internationally juried wildlife art show held each September. Congratulations Nancy!

Gail Gregory,
Nature Arts Organizer

TFN MEETING

Sunday, November 3, 2013

2:30 pm

The Flies We Despise: Reflections on the Wonderful World of Black Flies

Doug Currie, senior curator of Entomology, Royal Ontario Museum will explore fascinating and little-known aspects of black fly biology and discuss the broad spectrum of research currently undertaken in his lab.

VISITORS WELCOME!

SOCIAL: 2:00 – 2:30 pm

Room 003, Northrop Frye Bldg, 73 Queen's Park East

Immediately southeast of Emmanuel College, south of the Museum subway station exit on the east side of Queen's Park. Enter on either the west or north side of the building. The west entrance is wheelchair accessible.

For information: call 416-593-2656 up to noon on the Friday preceding the lecture.

Upcoming TFN Lectures

- Dec 1 **The Don River**, John Wilson, long-time veteran and former chair of the Task Force to Bring Back the Don
- Feb 2 **The Sky Above: Another Aspect of Our Natural World**, Paul Delaney, popular lecturer and astronomy professor at York University
- Mar 2 **In the Eye of the Beholder: A Study of Beauty in the Natural World**, Kyle Horner, wildlife photographer, birder and naturalist
- Apr 6 **The Reluctant Twitcher**, Richard Pope, a relatively normal birdwatcher who became a reluctant twitcher in 2007 and wrote a book by the same name.
- May 4 **Sand Dune Conservation**, Geoff Peach, co-founder of the Lake Huron Centre for Coastal Conservation

TFN OUTINGS

- TFN events are conducted by unpaid volunteers.
- The club assumes no responsibility for injuries sustained by anyone participating in our activities.
- Children and visitors are welcome at all TFN events. Children must be accompanied by an adult.
- If you plan to bring children in a stroller, be aware that there may be steps or other unsuitable terrain.
- Please do not bring pets.
- To get to outings on time, check TTC routes and schedules (www.ttc.ca or 416-393-4636).
- Outings go rain or shine: check the weather by calling 416-661-0123 so you will know what to wear.
- Wear appropriate footwear for walking on trails which may be muddy, steep or uneven.

- Sat
Nov 2
11:00 am **THE BRICK WORKS – Nature Arts**
Leader: Charles Bruce-Thompson
Meet at the free Shuttle Bus stop or nearby garden centre. Bring what you need for sketching, writing or photography. Share any works you wish with the group after lunch (bring or buy). In addition to the shuttle from outside the Broadview subway station, you can drive, bike or call the TTC for bus service to the site.
- Sun.
Nov 3
2:30 pm **LECTURE – The Flies We Despise: Reflections on the Wonderful World of Black Flies**
Speaker: Doug Currie, senior curator of Entomology, ROM
Northrop Frye Bldg., Room 003. See page 3.
- Tues
Nov 5
9:45 am **TORONTO ISLAND – Birds**
Leader: Anne Powell
Meet at the Island ferry dock in time to catch the 10:00 am ferry to Ward’s Island. Bring binoculars and ferry fare. Morning only.
- Sat
Nov 9
10:30 am **TAYLOR CREEK AND LOWER DON – Nature Walk**
Leader: Ed Freeman
Meet at the golf course driveway next to Victoria Park subway station. Finish at Evergreen Brick Works for warm up and ride to TTC. Bring lunch.
- Wed
Nov 13
1:30 pm **ST GEORGE STREET -- Trees and Architecture**
Leader: Richard Partington
Meet at the northwest corner of St George St and College St. We shall wind our way north through the U of T campus noting things of arboreal or architectural interest. A continuation of the August 7th walk. Bring binoculars. 2 1/2 hours.
- Sat
Nov 16
10:00 am **ROSETTA MCCLAIN GARDENS AND BLUFFS – Trees and Plants**
Leader: Bob Kortright
Meet at the entrance to Rosetta McClain Gardens at Kingston Rd and Glen Everest Rd. We will visit the lakeshore as well as the gardens. Bring binoculars. Morning only.
- Sun
Nov 17
2:00 pm **NORDHEIMER RAVINE – Lost Rivers Walk**
Leaders: Helen Mills and friends
Meet at St Clair Ave W and Wells Hill Ave, two blocks east of Bathurst St. See restored Nordheimer, Glen Edyth and Roycroft wetlands bedding down in autumn. A joint walk with Toronto Green Community.
- Tues
Nov 19
10:00 am **EAST DON PARKLAND – Nature Walk**
Leader: Stephen Kamnitzer
Meet at the southwest corner of Leslie St and Sheppard Ave E outside the Leslie subway station. Return to the starting point using the Leslie St bus after an optional coffee stop at the Tim Hortons at Leslie St and Cummer Ave. Bring binoculars. Morning only.

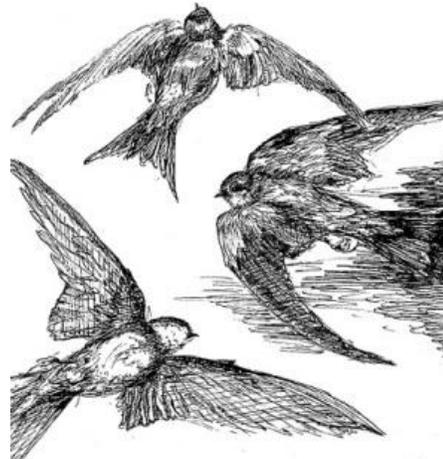
Sat **TAYLOR CREEK PARK – Nature Walk**
 Nov 23 Leader: Dianne Dietrich
 10:00 am Meet at Victoria Park subway station entrance. We will explore wetlands, new and old, recent weather damage, and enjoy what fall brings to us. Ending around 1 pm near Main subway station.

Tues **HUMBER BAY PARK EAST – Birds**
 Nov 26 Leader: Doug Paton
 10:00 am Meet at the southwest corner of Lake Shore Blvd W and Park Lawn Rd. Bring binoculars. Morning only.

Sat **G ROSS LORD PARK – Nature Walk**
 Nov 30 Leader: Alexander Cappell
 10:00 am Meet at the northeast corner of Finch Ave W and Torresdale Ave (2nd street west of Bathurst St). Passing through a meadow into the West Don valley and following the river north to Steeles W and Dufferin, we'll see a columbarium, a floodplain, the confluence of two rivers, an interfluvial ridge, a forest, a wetland and a magnificent old willow tree. About 3 hours, finishing at a coffee shop.

My Nature Walk
 jkennethcook

soaring,
 blue swallow
 swooping,
 veering,
 dipping
 down
 skimming pond surface.



Bank swallows, drawn by Diana Banville

two red fox cubs stare
 from mouth of their den. I'm (t.h.e.i.r)
 first glimpse of nature.

	s * p * a * r * k * l * i * n * g	shafts of sun
pierce	t ~ r ~ e ~ m ~ b ~ l ~ i ~ n ~ g	forest cover
to	\ d / a \ n / c \ e /	with shadows.

foam wavelets
 capped lap
 the coloured pebble margin
 of DEAD, p-o-i-s-o-n-e-d lake.

PRESIDENT'S REPORT

It has been a very busy time since my report in the last newsletter.

I had been totally involved in producing the anniversary show, *TFN for All Seasons*, which took place on October 4th at the Papermill Theatre. It was a wonderful experience working with such knowledgeable, talented TFN members, doing something we hadn't done before. Richard Partington, our director, and Ed Freeman, our audio-visual person, were exceptional in getting everything working together. Joanne Doucette, Madeleine McDowell, Phoebe Cleverley, and Joe Bernaske prepared great skits and readings. Elizabeth Block and Richard Partington sang several solos and we also had sing-alongs for audience participation. Paula Davies organized the refreshments and provided a wonderful cake. The show was well-attended and everyone enjoyed it. My heartfelt thanks to all who participated in the show, or helped at the theatre and to those who attended.

There was a little glitch with the refreshments for which we apologize. Coffee and tea were supposed to be provided free to the patrons and billed to TFN but this was not communicated to the front-of-house manager and people were asked to pay \$2.00 per cup. It took a while before I realized that few people were drinking coffee and tea and found out that they were being charged. At this point, all we can do is apologize.

Our Annual General Meeting took place on October 6th. We passed a few bylaw amendments regarding the auditor and nominated Peter Hogg as our auditor or

financial reviewer for next year. We were very happy with his service this year. I offer my thanks to Corinne McDonald and Tom Brown who are leaving the board. Corinne has worked with Nancy Dengler in providing the lecture series and the write-ups of the lectures in the newsletter, and Tom Brown looked after Outreach last year but has moved to Kitchener so is no longer available to us. We are also pleased to have Vivienne Denton and Stephen Kamnitzer join us on the board. Vivienne has been compiling the outings reports for the newsletter and I have worked with her at the Todmorden Mills Wildflower Preserve where we are both stewards. Stephen Kamnitzer has been looking after outreach for the last few months. We still have one vacancy on the board.

Frances Money gave the lecture on Natural Brazil, substituting for Peter who injured his back that morning and he was substituting for Matt Ellerback who cancelled on short notice. We enjoyed the presentation and the wonderful photos of Brazilian wildlife, and all went well.

We are planning to hold a book sale before the December 1st meeting, as we have received a donation of a large number of nature books. We would be happy to receive more nature books in good condition for the sale. You can bring them to a meeting or drop them off at the office on Friday mornings.

Margaret McRae



TFN's 90th Anniversary cake depicting the four seasons. Photo: Wendy Rothwell

MONTHLY MEETING REPORT

Natural Brazil,
Sunday, October 6, Peter and Frances Money, naturalists and TFN members

Peter Money (who wrote the presentation) and Frances Money (who presented the slide show) explored the biodiversity and natural habitats of the birds, plants and mammals of several regions of Brazil including:

The **Atlantic Coastal Rainforest** is on the eastern highlands. The Itatiaia National Park forest is lush even in the dry season, abounding with tree ferns and epiphytic bromeliads. The dusky-legged guan is endemic. Other



Violet-capped woodnymph hummingbird

birds include hummingbirds, parakeets, pigeons, flycatchers, woodpeckers, tanagers and the white-tailed pale trogon. Notable mammals include the brown capuchin monkey. Caratinga Biological Research Station shelters the endemic and endangered northern muriqui monkey, the largest primate in the Americas. Their long arms make them seem much larger than their 39 cm length. Only about 6 to 7% of their habitat remains. The endangered northern brown howler monkey is also found there. The very long-legged, one-meter-tall maned wolf (the largest canid in South America) is found in drier parts of the rainforest and, more commonly, in the Cerrado. Fruit makes up 30% of their diet.

The **Cerrado** (uplands west of Atlantic Coastal Rainforest) is grassland somewhat like the African savannah but with treed areas. Serra do Cipó National Park is known for its plant diversity, though unfortunately there are no guidebooks. Serra da Canastra National Park is a table land with many streams. Notable fauna include the 58 cm long predatory southern crested caracara; the rare and endangered pampas deer; the threatened giant anteater (over 2 m from nose to tip of the tail); and the black-tufted marmoset, a tiny monkey with a body length of 23 cm and tails 32 cm.



Giant anteater

Pantanal (west of the Mato Grosso Plateau) is one of the world's largest wetlands, well known for the diversity of its birds including vultures, kites, herons, ibis, storks, flycatchers and kingfishers. The triplaris tree has a symbiotic relationship with an ant species that attacks anything that touches the tree. Mammals include capybara, the world's largest rodent (about 65 kg); endangered giant river otter (up to 34 kg and 2 m long); vulnerable marsh deer (South America's largest at 1.8 m in length); and the endangered jaguar that here hunts during the day rather than nocturnally as it does elsewhere.



Jaguar

Those present warmly appreciated the photographic tour of the geology, flora and fauna of Brazil. Many thanks to Peter Money, who kindly stepped forward when the scheduled speaker cancelled on short notice, and Frances Money who stepped forward on a few hours' notice to make the presentation using Peter's script when an injury prevented him from doing so.

Reported by Lavinia Mohr

EXTRACTS FROM OUTINGS LEADERS REPORTS

Burke Brook to Sherwood Park, Aug 27. Leader: Nancy Dengler. There was thunder and heavy rain. We noted American hornbeam in fruit in Lawrence Park Ravine, and 25 or more common nighthawks low over the intersection of Lawrence and Yonge just as the sky darkened and it started to pour.

Glendon Ravine and Sunnybrook Park, Aug 28. Leader: Tom Atkinson. The start of the day was extremely humid and enervating. The mosquitoes were pesky initially, then voracious about half way through the walk. The evidence of the summer storms and high water (washed out pathways, detritus, sand on the paths) was everywhere. The new elevated walkway in the north part of Wilket Creek was well received by attendees. We noted many native and non-native trees and shrubs including far too many tree-of-heaven. We observed turtlehead, asters, goldenrods, yellow and orange jewelweed and invasives swallowwort and Japanese knotweed, which is very common and spreading in places.

Glendon Ravine, Aug 31. Leader: Nancy Dengler. A circular route, through Glendon Campus, the TRCA trail through Glendon Forest to Sunnybrook Park, and then up the Burke Brook ravine, was made possible by the well-made and fenced new trail, which gives access to a beautiful segment of the West Don watershed and protects this relatively undisturbed ravine. Native plants in flower: white snakeroot, boneset, devil's beggar-ticks, turtle head, white flat-topped aster, grass-leaved goldenrod, Canada goldenrod, Joe-Pye weed, ditch stonecrop, ground nut, prickly cucumber, virgin's bower, panicked aster, calico aster. We came across an American toad.

Nature Arts, Ward's Island, Sept 7. Leader: Joe Bernaske. As it was raining all day, we sat on the porch of the Island Cafe and did watercolour painting, pencil sketching and wrote poems, and some walked on the deserted Ward's Island beach in the rain. The goldenrod, evening primrose and New England aster were in bloom and there were pods on the milkweed. Brown-lipped snails were abundant.

Lost Rivers, Norway Village, Sept 12. Leader: Linda McCaffrey. The upper Beach area of Toronto was once covered in Norway pine. Logging was the founding industry of Norway Village. There are very few Norway pines in the Upper Beach now. One distressed specimen survives in the Cemetery. Sad for a tree once known to live up to 500 years! The creek is easy to trace but is buried.

Lost Rivers, Gerrard Prairie, Sept 15. Leader: Richard Anderson. The meadows of Gerrard Prairie, now threatened with development, were alive with late summer blooms, grasses and forbs wafting in the wind, and surging choruses of insects. We saw monarch butterflies in flight and feeding, a praying mantis and various beetles. The white oak woodlands on the northern edge of the prairie have seen considerable use by dirt bikes. Graffiti has been sprayed onto the trunks of mature white oaks. We admired the cattails in the swamp and in the sandy soils adjoining the swamp we found a DeKay's brown snake, 6 cm and very active. We observed a kestrel and blue jays, and someone thought they caught a glimpse of a coyote.

Back-lane flora of downtown Toronto, Sept 21. Leader: Alexander Cappell. We walked through lanes near Bloor where we found traces of buried Taddle and Russell Creeks. The plant list for the urban forest that follows is nowhere near complete. In addition to weed trees, there are city trees, back yard trees, flower gardens, garden escapes, vegetable gardens and lane weeds. Here is a sampling of what we saw. Trees: plane, crab apple, maple (5 species), ailanthus, mulberry, Amur cork, horse chestnut, edible chestnut, American beech, magnolia, hackberry, elm (3 species), tulip tree, magnolia, oak, juniper, cedar, spruce, yew, willow. Vines: edible grape, riverbank grape, euonymus, climbing hydrangea, Boston ivy, English ivy, Virginia creeper, honeysuckle, trumpet creeper, trumpet vine, silver lace. Other: goldenrod, aster, galinsoga, burning bush, jimson weed, zucchini, tomato, climbing nightshade, castor (*Ricinus communis*), sunflower, coneflower, rudbeckia, hosta, ragweed.



Hawk watching outing, Sept 22. Photo: Terry Whittam

Hawk watching, Rosetta McClain Gardens, Sept 22. Leaders: Vicki Bondy & Terry Whittam. It was a fabulous day with lots of sunshine, lots of birders, and of course, lots of birds! We counted: 89 turkey vultures, 8

ospreys, 3 bald eagles, 7 northern harriers, 255 sharp-shinned hawks, 6 Cooper's hawks, 51 broad-winged hawks, 3 red-tailed hawks, 124 American kestrels, 1 merlin, and 1 peregrine falcon. A great hawk watching day with 548 raptors flying by! Super educational experience for those learning their hawks!



Mount Pleasant Cemetery outing. Photo: Donata Frank

Trees, Mount Pleasant Cemetery, Sept 24. Leader: Roger Powley. We looked at native and common ornamental trees and saw a raccoon in hollow tree.

Wilket Creek, Sunnybrook and Serena Gundy Parks, Sept 28. Leader: Ken Sproule. We saw (mostly heard) few birds (black-capped chickadee, blue jay, goldfinch, hairy woodpecker). Some of the more interesting plants observed were blue-stemmed goldenrod, clustered snakeroot, monkey flower, water plantain, ditch stonecrop and Indian pipe. We also saw a couple of interesting fungi [see back cover and stinkhorn at right]. The highlight was a fruiting osage orange tree.

Lake Iroquois shoreline, Sept 29. Leader: Alexander Cappell. We headed to where the Iroquois shoreline turns abruptly north and was the east bank of Humber Bay just after the glaciers retreated. The land is very hilly because of the shoreline, with ravines of west-flowing lost creeks (in particular, Lavender Creek) and, to the west, maybe baymouth sandbars. We saw a house with a stand of fruiting fig trees and the curbside lined with bushels of crushed grapes (wine-making?) abuzz with wasps.

At right from top: Raccoon napping in hollow log, Mount Pleasant Cemetery, Sept 24;

stinkhorn fungus and osage orange fruit, Don Valley, Sept 28.

Photos: Ken Sproule



TFN FOR ALL SEASONS!

There was a packed house at Papermill Theatre, Todmorden Mills on October 4th to celebrate TFN's 90th anniversary. We were treated to a wonderful evening of music, poetry, story-telling, history, humour and fun.

Margaret McRae's interesting account of our club's history, Richard Partington's personal memories of the Junior Field Naturalists Club, and Charles Bruce-Thompson's chronicle of our nature reserves all helped us to appreciate the important contribution the Toronto Field Naturalists has made in helping Torontonians to learn about, appreciate and preserve our natural heritage. Councillor Mary Fragedakis presented a scroll from the City honouring these achievements.

Structured on themes of the four seasons, the program included haikus by Joe Bernaske, poems beautifully read by Phoebe Cleverley and Madeleine McDowell, delightful First Nations creation stories related by Joanne Doucette, and enchanting songs by Elizabeth Block and Richard Partington. The audience enthusiastically joined in sing-alongs. Madeleine McDowell shared some fascinating history of nature in Toronto, including Hurricane Hazel's impact on the Humber watershed. Each season featured a humorous depiction of TFN outings, and a highlight was "Avian Field Naturalists" – a skit portraying bird-watching from the birds' point of view, with imaginative narrative by Phoebe Cleverley and creative masks by Joanne Doucette. Throughout the show, the action on-stage was complemented by video illustrations designed by Ed Freeman and Anna Louise Richardson.



Phoebe Cleverley cuts the 90th birthday cake as Margaret McRae looks on. Photo by Wendy Rothwell



In rehearsal: Peter Money as owl and Anne Powell as cardinal. Photos by Margaret McRae

Hearty congratulations to Producer Margaret McRae for coming up with the idea and working so hard to bring it to fruition, to Director Richard Partington for his professional leadership, and to all the cast members for sharing their remarkable talents and collaborating to make this such an enjoyable and memorable show.

The evening concluded with an opportunity to socialize and partake of a beautifully designed and delicious cake. Thank you to all the volunteers who worked behind the scenes contributing to the success of the event.

Wendy Rothwell

* * *

Breathless!!

Margaret McRae, TFN President, had the concept for a stage production celebrating our club's 90 years. She approached and gathered volunteers to produce, write and perform "For All Seasons" on October 4 at the Papermill Theatre, Todmorden Mills, a site familiar to field trip leaders and followers.

Segments included original comic skits, one for each season, depicting the predictable minor glitches/ annoyances that outing leaders and followers endure – goose poop to avoid, swarming mosquitoes, fire ants and so on. Ed Freeman did brilliant power point projections for backgrounds and several illustrated historical narrations/reviews of noteworthy events as the club evolved.

I cannot adequately describe the raves, congratulations, hearty applause and handshakes going around the apres gathering, as the talent mingled with theatre-goers, about the people who made a perfect entertainment worthy of such a remarkable club. This rare one-night stand should have been up in neon lights on the marquee!

Susie Weiss

KEEPING IN TOUCH



We were so glad to finally see some monarch butterflies in Humber Bay Park on September 8 after their obvious almost absence this summer. Let's hope they recover and return.

Miriam Garfinkle

After the dearth of monarchs this summer, it has been gratifying this week to see many of them flitting around a garden in High Park, no doubt preparing for their migration. The small round garden in front of the Park office has been planted this year with flowers that attract butterflies, including American painted lady (pictured here) and cloudless sulphur, and bees, which are also a matter of concern.



Wendy Rothwell

I visited your wonderful TFN website and was quite smitten by the look. The nature art section is particularly nice. It is nice to see that the club is thriving: it looks as if you have as many walks - if not more - than you used to have, and you still have your great monthly lectures. The website, which didn't exist when I was a director, is a very nice addition.

André Vietinghoff

Andre is a former TFN member who now lives in New Brunswick

In the spring, I ordered three praying mantis egg cases from an Ontario company called "Natural Insect Control". I know the egg cases hatched because I saw some baby praying mantises in the spring. Last Friday night, I got home at 10:00 p.m. I had left the front lights on and they had attracted a lot of insects. Much to my delight, there were two huge mantises catching bugs, working, doing what they're supposed to do. In spite of their intimidating appearance, they are harmless to humans and are a fantastic component of organic insect control. I'm hoping that they will mate and make some more egg cases in the neighbourhood.



Mara Glebovs (a happy praying mantis mom)

I took a wet walk on the TFN's Jim Baillie Reserve on Saturday and found this fine fungus [a giant puffball]. With me is Derek Connelly. We have just formed a new naturalist club - North Durham Nature - and are scouting out potential field trip sites.

Mark Stabb, NCC

Ed: Mark was the Nature Conservancy of Canada contact person when a TFN donation was made to protect land in the Oak Ridges Moraine. Mark led TFN members on a walk on this land.



WHAT SHOULD TFN DO ABOUT CLIMATE CHANGE?

Field naturalists must be more concerned about climate change than your average citizen, for the simple reason that we are keen observers of the natural world around us, and take such great pleasure in observing the animals and plants with which we share space on Planet Earth. The natural world is imperiled because it cannot adapt to climate change that is happening with unprecedented rapidity, especially in a landscape that is fragmented by human activities.

The Fifth Report of the Intergovernmental Panel on Climate Change (IPCC), released in September 2013, tells us in more precise terms what we have all seen. Global warming is a reality:

- * Global average temperature has already risen almost 1 degree Celsius since 1901.
- * That human activities are driving climate change is now considered 95% certain (compared with 90% in 2007).
- * The decade 2000 to 2010 was the warmest on record.
- * Canada has experienced double the average global warming.
- * Fossil fuel burning and deforestation are the two biggest drivers of rising greenhouse gas (GHG) emissions.
- * Impacts include more intense droughts; more extreme precipitation and flooding; rapid loss of Arctic sea ice; accelerating melting of glaciers and ice sheets and warming oceans which accelerate the rise in sea level, contributing to coastal flooding; and ocean acidification (due to absorption of large amounts of carbon dioxide), which is accelerating loss of fisheries.

Good news is scarce in the IPCC report and the response to it by leading environmental organizations. However, the report shows that prevention of the most serious risks of climate change is still possible, although the window of opportunity is closing and far-reaching action is needed, and soon.

We are too sadly aware of the failure of the federal government to act on climate change, and indeed its abandoning the modest commitment Canada made under the Kyoto Accord, and its active promotion of tar sands extraction, which will add to our already high greenhouse gas emissions.

The best news on mitigation can be seen in provincial and municipal action. Ontario eliminated coal-fired power in favour of clean energy, achieving the single largest reduction of carbon pollution in North America. B.C.'s 2008 carbon tax has resulted in declining fossil fuel use, 19% compared with that in the rest of Canada, while its economy has outperformed that of the rest of Canada. High technology industries have benefited. These indicators show what can be done. But federal action is essential to help build needed international agreement, in addition to reducing Canadian emissions and preparing Canada for climate change impacts.

What can Toronto Field Naturalists do? We can at the very least join with other concerned organizations to communicate the need for action to the public and governments around the world. One practical step would be to join the Climate Action Network Canada/Reseau Action Canada (CAN/RAC), the Canadian part of CAN International, which includes over 700 Non-Governmental Organizations (NGOs) in 95 countries promoting action to limit human-induced climate change to ecologically sustainable levels. Nature Canada and Saskatchewan Nature are already members, along with some 100 other groups, including World Wildlife Fund, David Suzuki Foundation, Greenpeace, Pembina Institute, Environmental Defence, Canadian Parks and Wilderness Society, Toronto Environment Alliance, Assembly of First Nations, United Church of Canada, and the Canadian Labour Congress.

The TFN publishes an excellent newsletter, which could include updates on climate issues. Its monthly lectures could include climate topics, and speakers on whatever bird or beast could be asked to incorporate implications for climate change in their remarks.

Few Canadians are climate change deniers, but few understand how fast it is happening, and how urgently strenuous action is needed. Let's do our part to take advantage of that window of opportunity to prevent runaway global warming, for the benefit of future generations and all our fellow species on Planet Earth.

Dr Lynn McDonald,
TFN member and professor emerita,
Dept. of Sociology and Anthropology,
University of Guelph

TORONTO'S NATIVE SUMMER LILIES

Until fairly recently the Lily family (Liliaceae) was considered to include between 200 and 300 genera. This classification is reflected in the TFN's *Vascular Plants of Metropolitan Toronto* (2nd ed. 1994) and wildflower guide books of the same period. By 2004, when *The ROM Field Guide to Wildflowers of Ontario* was published, many Ontario species previously known as lilies had been separated out, based on molecular studies, into other families (see p. 71). The revised Liliaceae family then included about 19 genera and about 600 species.

Toronto's summer-blooming true lily, Michigan lily (*Lilium michiganense*), is an attractive plant, up to 2.4m tall with flowers up to 10cm across with backward-curving sepals and petals. It was recorded as common in Toronto in moist forest fringes and thickets. Ontario is the only Canadian province where it has been reported, but it is found locally throughout much of the eastern and central U.S. It may be confused with Turk's cap lily (*Lilium superbum*), a garden escape native to neighbouring states to the south, which also has backward-curving sepals and petals.



Above and left:
Michigan lily
(*Lilium michiganense*)

Right: Wood lily
(*Lilium philadelphicum*)

Photos: Peter Money

The list of occurrences of Michigan and Turk's cap lilies in TFN's *Vascular Plants of Metropolitan Toronto* (1994.....) does not distinguish between them. I think my photos, taken in Garthdale Park (which was not recorded as a locality in *Vascular Plants ...*) in July 1997, must be of *Lilium michiganense*. If keen to be a botanical detective, review the key to the lilies in the *Flora of North America* (FNA) online! The FNA states that the one reliably distinctive feature is a pale green style in *Lilium superbum* and an entirely or distally red one in *Lilium michiganense*. Newcomb states that *Lilium superbum* has a "clearly defined" green star at the centre of the flower but the green star in *Lilium michiganense* is **not** clearly defined!



Lilium philadelphicum (so-called "wood lily", a misnomer) is distinctive. It is up to 90cm tall with erect bell-shaped flowers up to 8.5cm across. It is very rare in Toronto, probably extirpated due to loss of favoured habitats (tall-grass prairies, dunes, alvars, dry open woods). It occurs from southeastern Ontario northeast to the James Bay eco-region and also north of Lake Superior. The provincial flower of Saskatchewan, it is known in every province from Quebec to B.C. and in most of the U.S. except the far west.

You may find Michigan lily or even Turk's cap lily in wet thickets in Toronto. See if you can make the distinction! Please report your data to the TFN.

Peter Money

For the FNA lily key, visit:
www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=118558

COMMON LOON REPRODUCTIVE SUCCESS IN CANADA

by Dr Doug Tozer, Ontario Program Scientist, Bird Studies Canada

This article first appeared in *BirdWatch Canada* Winter 2013 (No. 62) and is reprinted with permission from Bird Studies Canada, www.birdscanada.org.

When it comes to the reproductive success of Common Loons in Canada, the west is best, bigger is better, acid is bad, and the clock is ticking. That is, the number of chicks that adult loons raise to independence is highest in British Columbia and the Prairie provinces compared to farther east; is higher in larger lakes than in smaller ones; is lower where lake acidity is higher; and is lower now than it was 20 years ago.

We know these things because of Bird Studies Canada's Canadian Lakes Loon Survey (CLLS). CLLS participants have monitored Common Loon reproductive success each year since the early 1980s in Ontario and nationally since the early 1990s. Participants also collected information on the number of breeding pairs on particular lakes and what influences their reproductive success.

The program originally grew out of concern that pollutants were negatively affecting the health of Canada's lakes. It turns out that loon reproductive success is an excellent measure of the health of a lake, from tiny aquatic microbes up to the fish that loons eat. The various animals are interconnected along a food chain, so that every time an individual animal eats another one, some kinds of pollutants can accumulate in greater and greater concentrations in the next animal's tissues.

When pollutants finally reach loons – the final link in the chain – they are at their highest concentrations. But rather than killing loons outright, they can simply make them bad parents (more on that later).

Loon reproductive success is a sensitive indicator of the overall health of a lake, while signs of trouble from animals lower down on the food chain may be more subtle.

Adult Common Loons typically return to the same lake year after year, so breeding pairs and their chicks feed almost exclusively on their nesting lake. Thus, declines in reproductive success on a particular lake are likely due to problems on that lake, and not from elsewhere (e.g., on wintering grounds or while migrating north in the spring). Fortunately, Common Loons are easy to identify and fun to watch throughout the summer, making CLLS participation both easy and popular.

Recently, BSC staff took a closer look at the bigger picture. Massive amounts of CLLS data were analyzed for patterns in Common Loon reproductive success across

Canada. Mercury and acid rain pollution negatively affect loons and lake health, but one of them makes the negative effects of the other one even worse. The CLLS database, which contains information on nearly 24,000 breeding attempts, is indispensable as we examine this complicated situation from various angles. The huge size of the dataset enables us to identify clear patterns in reproductive success, but what evidence is there that mercury and acid rain are the mechanisms responsible for them?

Mercury and the harmful components of acid rain are released whenever fossil fuels are combusted. Coal-fired power plants are particularly large contributors, but vehicle emissions are also a factor. Mercury floats around in the atmosphere for up to a year before coming back down, so about the same amount of it falls into lakes just about everywhere. On the other hand, acid rain is more directed. Most of the activity that produces acid rain occurs mid-continent, and the results are blown eastward by prevailing westerly winds, making lakes in eastern Canada more acidic than those in the west.

Smaller lakes, simply by virtue of their size, hold lower total numbers of fish than larger lakes. Some smaller lakes receive relatively larger inputs from acid precipitation and hold fewer substances that neutralize acids compared to larger lakes, so that smaller lakes are generally more acidic than larger lakes.

Human-caused emissions of mercury and acid rain increased substantially throughout the past 100 years, but are now decreasing as a result of commendable efforts by Canadian and U.S. governments. However, it looks like we need to reduce emissions further, because deposition is still well above historical levels and those deemed safe for aquatic wildlife.

To summarize: lakes in eastern Canada are more acidic; smaller lakes have less loon food and are typically more acidic; there's just about the same amount of mercury everywhere; and mercury and acid rain are still being deposited in relatively high amounts.

Mercury of the sort found in thermometers is toxic, but does not readily enter food chains. Another form called methyl mercury does. Mercury is converted to methyl mercury by certain types of bacteria and through various chemical pathways, which makes it available to enter food chains. Higher lake acidity helps methyl mercury form and persist, as do higher temperatures. The bacteria

that convert mercury to methyl mercury thrive in the acid from acid rain, and when and where it is warmer. Bacteria produce more methyl mercury in acidic, warmer environments.

As noted above, eastern lakes and smaller lakes are more acidic. Smaller lakes are also warmer, because they tend to be shallower. Thus, eastern lakes have more methyl mercury because they're more acidic, and smaller lakes have more methyl mercury because they're usually more acidic and warmer. This matches the pattern in Common Loon reproductive success – lower in the east, lower in smaller lakes, lower where the acidity of the water is higher, and declining over time (mercury and acid still occur in Canadian lakes well above historical levels).

Methyl mercury makes Common Loons bad parents. Adults with high concentrations of methyl mercury in their bodies incubate their eggs and feed their chicks less often, resulting in fewer chicks fledged. In addition, chicks with high methyl mercury concentrations solicit food and energy-saving rides on their parent's backs less often, resulting in lower survival. The root of the problem is that methyl mercury is a neurotoxin, which causes adults and chicks to be lethargic, putting them at a disadvantage when it comes to surviving in the wild.

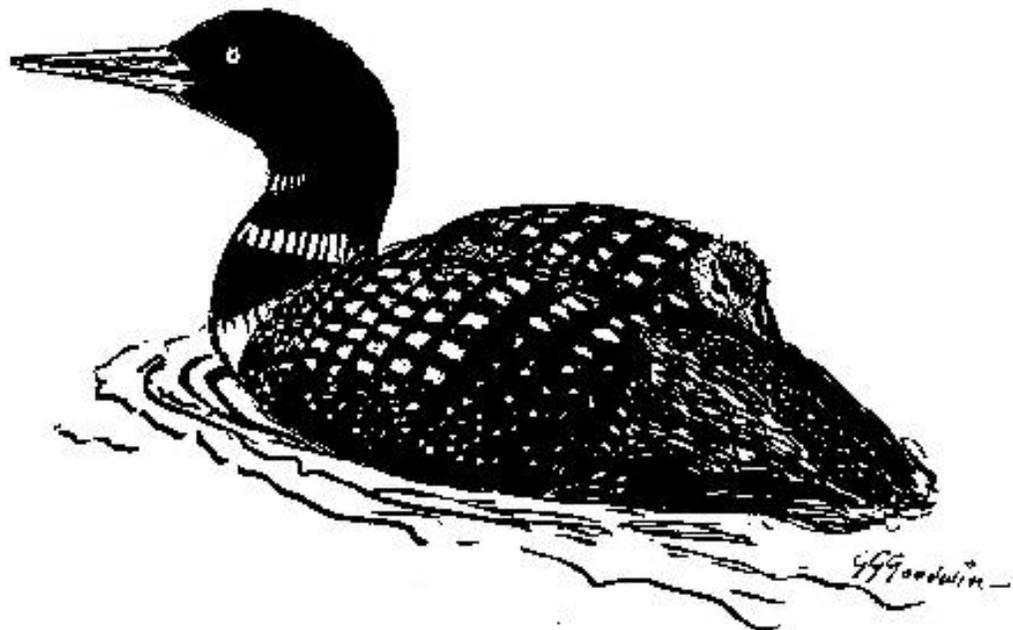
Regardless of methyl mercury production, high lake acidity and small lake size also mean trouble. The acid, as well as the aluminum it mobilizes, causes problems with gill functioning in fish, resulting in death. By virtue of their size, small lakes hold lower total numbers of fish than larger lakes. So, higher acidity and smaller lake size result in smaller populations of forage fish available for

loons, regardless of methyl mercury. Methyl mercury apparently just makes a bad situation even worse.

How much worse? Could patterns in reproductive success be mostly explained by the direct negative effects of acid rain? Or are additional problems caused by acid-induced production of methyl mercury a significant factor?

We found that the rate of decline in reproductive success over the past 20 years has been steeper in western Canada than in eastern Canada. As mentioned above, loons produce more chicks in the west than in the east. However, the number of chicks loons produce in western Canada is declining more quickly than in the east. This suggests that methyl mercury is indeed important for explaining Common Loon reproductive success in Canada. Acid rain deposition is not currently known to be increasing faster in the west than in the east, but methyl mercury production could be. Increasing temperatures and wildfires in the west, which promote conversion of mercury to methyl mercury, may be to blame.

Mercury and acid rain are affecting Common Loon reproductive success and lake health across Canada, and further reductions in mercury and acid rain emissions are needed. What can each of us do individually to make a difference? By choosing to walk or ride a bicycle when possible (rather than driving a car), we can combust fewer fossil fuels. Using less electricity is one way to reduce harmful emissions from coal-fired power plants. And of course, you can participate in the Canadian Lakes Loon Survey (www.birdscanada.org/volunteer/clls) if you have the opportunity.



Common loon with chick, drawn by Geraldine Goodwin

FROM THE ARCHIVES

From TFN #39, November 1943

A trip to the Island on October 31st revealed the presence of hundreds of migrating ducks concentrated in the lagoons, beyond the breakwater at Centre Island, and near the Yacht Club in the bay. But the greatest interest was aroused by the ridiculous antics of a dozen buffleheads behind the breakwater at Centre. The males were chasing each other like a number of small boys showing off. They would shoot along the water, their necks outstretched flat on the surface, making little piping sounds. Like a flash one would spring into the air only to settle at once with a

tremendous splash, its chest puffed out like a pouter pigeon's. The other males would all follow suit. To change the procedure each male would select a female and chase the lady through, over, and under the water until tired out. Was all this just fun? Or do mating antics start this early in the season? As if drawn to see the show a red-throated loon poked its way around the edge of the breakwater for a few moments, but deciding it was none of its business soon disappeared out in the lake again.

From TFN #502, October 2001

GOD BLESS THE BIRDS

*God bless the sparrows that nest in the roof,
That wild creatures share our city they're proof.
In this desert of concrete to life they have clung,
And against all the odds they're raising their young.
And God bless the birds.*

*God bless the geese that dwell by the shore.
Each winter we feed them, each spring there are more.
In the parks they increase to numbers burdensome,
Thus proving the truth: If you build it, they will come.
And God bless the birds.*

*God bless the gulls that forage through trash.
Though some people wish they could settle their hash.
Like demons they squawk, they poop from the air,
For which they've been banished from Nathan Phillips Square.
And God bless the birds.*

*God bless the pigeons that nobody loves,
Though they don't seem so bad if we call them rock doves.
They flourish like weeds, attracting much blame,
But how can we criticize when we do the same?
And God bless the birds.*

Elizabeth Block

Elizabeth sang her song (to the tune of Malvina Reynolds' "God Bless the Grass") at our anniversary show on Oct 4. It was inspired by sparrows living and nesting in the pipes attached to the ceiling of the National Trade Centre.

IN THE NEWS

Environmental Groups Sue Ontario Government

From a news release, 10 Sept, at www.ontarionature.org/

Ecojustice lawyers, acting on behalf of Ontario Nature and Wildlands League, have filed a lawsuit in Divisional Court alleging that the Ontario government acted unlawfully by making a regulation that undermines the province's *Endangered Species Act* (ESA). The new regulatory changes harm species by allowing major industries, including forestry, energy transmission, housing, oil and gas pipelines, mineral exploration and mine development, transit, wastewater management companies, to avoid strict standards intended to protect at-risk species and their habitats. The lawsuit is based on two main grounds: The regulatory exemptions undermine the ESA's purpose "to protect species that are at risk and their habitats, and to promote the recovery of species at risk." The Minister of Natural Resources failed to consider the impacts of the regulations on each of the 155 species listed under the Act before recommending that the regulations be made by Cabinet. Species threatened by the regulation include the American Eel, Blanding's Turtle, Lakeside Daisy, Eastern Hog-nosed Snake, Acadian Flycatcher and the iconic Woodland Caribou.

New Environment Canada study on human-related bird mortality

Extracted from a news release, 1 Oct, at BirdLife International, www.birdlife.org

An Environment Canada study published on October 1 in a special issue of *Avian Conservation and Ecology* has found that human-related activities destroy roughly 269 million birds and 2 million bird nests in Canada each year. Most human-related bird deaths (about 99%) are caused by impacts of feral and pet cats, and collisions with buildings, vehicles, and electricity transmission and distribution lines.

"Because birds are excellent indicators of biodiversity, the newly-released articles from Environment Canada highlight areas where broader biodiversity may be impacted", said Dr George Finney, President of Bird Studies Canada. "These results provide a crucial first step toward understanding the relative importance of bird mortality factors, and will inform future research directions, conservation actions, and policy decisions."



White-throated sparrow.
Watercolour by Eva Davis

Cats appear to kill as many birds as all other sources combined. Feral and pet cats are believed to kill more than 100 million birds per year in Canada. An estimated 60% of those are killed by feral cats. Bird species that nest or feed on or near the ground are especially vulnerable to cat predation. As these findings confirm that huge numbers of Canadian birds are killed by cats annually, further research and conservation efforts are needed.

Collisions with electricity transmission and distribution lines have been identified as the second-largest human-caused source of bird mortality in Canada. Between 10-41 million birds per year are killed by collisions with transmission lines; between 160,000 and 800,000 birds are electrocuted by distribution lines; and about 400,000 nests are destroyed annually due to vegetation clearing under powerlines.

Collisions with residential and commercial buildings are the third-highest of the human-related sectors, killing an estimated 16-42 million birds each year – mostly at houses. Following bird-friendly building guidelines can help individuals and building managers reduce the risk to birds. Using commercial products, special glass, or

homemade solutions to make windows more visible to birds can reduce daytime collisions. Night-time window collisions can be reduced by leaving lights off in low-rise and high-rise buildings.

An estimated 13.8 million birds are killed annually by colliding with **vehicles** on Canada's primary and secondary roads.

There are about 10 billion birds in Canada. The estimated total of 269 million bird deaths per year caused by human-related factors constitutes

less than 5% of the overall population. Bird deaths from other causes (such as natural predation, disease, severe weather, or habitat loss) are not reflected in the estimates.

Avian Conservation and Ecology is an open-access, scientific journal sponsored by Bird Studies Canada (Canadian BirdLife co-partner) and the Society of Canadian Ornithologists. BirdLife International is the world's largest nature conservation partnership with 13 million members and supporters, 7,000 local conservation groups and 7,400 staff.

GRANT REPORT: Adopt-A-Pond Wetland Conservation

The way individuals interact with the environment is rooted in cultural practices and beliefs. Toronto, one of the most multicultural cities in the world, brings together many different ways in which communities think about, and engage in, environmental issues. For this reason it is important to gather information from communities throughout the city to develop conservation programming that reflects different cultural perspectives on the environment, and to improve the overall impact and effectiveness of conservation programmes.

With support from Toronto Field Naturalists and the University of Toronto (Scarborough Campus), the Toronto Zoo's Adopt-A-Pond Wetland Conservation Programme was able to hire a summer intern, Omar Ramcharran, to implement a community based social marketing research project that helped to incorporate cultural perspectives into wetland and water conservation programming for youth. Omar's project specifically targeted Tamil youth between the ages of 14 to 17, as they comprise a large proportion of the population in the immediate vicinity of the Toronto Zoo, a true representation of the immediate local community.

Three focus-group discussions and surveys were conducted to identify the level of interest among youth and the barriers affecting their participation in wetland and water conservation programmes. Data collected were used to develop a situation analysis and a strategy and action plan to overcome barriers and enhance participation in conservation programming. A workshop was hosted at Toronto Zoo in September to engage

culturally and ethnically diverse youth in discussions on employment and volunteer opportunities within the environmental sector, and to provide information on how they can become involved. Thirty-four youth from East Asian, Caucasian, South Asian and mixed ethnicities attended.

Omar assisted Adopt-A-Pond staff in tracking wild Species-at-Risk turtles to determine how they use restored wetland areas, monitoring habitat use and movement patterns in the Rouge River watershed. The data collected will be used to develop recovery plans for Species-at-Risk turtles. He also assisted with a Blanding's turtle headstart project by conducting surveys of nesting turtles and collecting eggs under permit. Twenty-four eggs were collected in 2013. The hatchlings will be raised at Toronto Zoo for two years before they are released into wetland areas in the wild.

The Adopt-A-Pond Programme considered Omar a huge asset to our team, and we congratulate him on his successful fulfillment of the requirements for the Master of Environmental Science Degree at the University of Toronto! He generated valuable community-based discussion with Tamil youth to inform conservation programming, hosted an enriching workshop for multicultural youth to engage students in environmental sector work and volunteer opportunities, and provided valuable support to Species-at-Risk turtle recovery in the GTA.

Adopt-A-Pond Wetland Conservation Programme,
Toronto Zoo



Blanding's turtle hatchlings from the head-start project.

WEATHER (THIS TIME LAST YEAR)

NOVEMBER 2012

A relatively warm and bright period mid-November was offset by chilly and cloudy periods that book-ended the month. It was also a very dry month.

November began with the persistent cloud cover and cool temperatures in the wake of Hurricane Sandy. However, there were no further significant weather systems in the offing. A warm front arrived on the 10th with reports of thundershowers. Mild and mostly sunny weather lasted until the 23rd. Chilly “trough” conditions then arrived for the remainder of the month; some cloud and flurries but

little precipitation resulted. We had our first day of continuous below-freezing temperatures on the 30th.

November was the coolest since 2008 with a mean of 3.5° at Pearson Airport and 4.8° downtown. It was also the driest November on record at Pearson with a total precipitation of 10.2 mm. Sunshine was just a couple of hours above normal at 94.0 hours.

Gavin Miller

COMING EVENTS

If you plan to attend any of these events, we recommend that you contact the organizing group beforehand to confirm time and place.

High Park Walking Tours

1st and 3rd Sundays of each month, 10:30 am to noon. Meet at the benches across the road south of Grenadier Restaurant. Information: 416-392-6916 or walkingtours@highpark.org or www.highpark.org.

- Nov 3. Geological Wonders. Frank Remiz
- Nov 17. Art of the Park. Tyler Clarke Burke

Jim Baillie Memorial Bird Walks – Toronto Ornithological Club

Aimed at the intermediate birder, but beginners also welcome. Free to the public; no advance registration. Information: www.torontobirding.ca

- Sat Nov 30, 8:30 am to afternoon. West Toronto Lakeshore and Beyond - waterfowl and winter birding. Leader: Pat Hodgson. Meet at the parking lot at Humber Bay Park East (located off Park Lawn Rd south of Lake Shore Blvd).

Ontario Science Centre, Omnimax Theatre

Flight of the Butterflies, a short IMAX film about the monarchs' journey, starring and narrated by Gordon Pinsent. Information: <http://www.ontariosciencecentre.ca>

Rouge Park Weekly Guided Nature Walks

Explore Rouge Park's trails with a Hike Ontario certified volunteer leader. Information: visit www.rougepark.com/hike, e-mail hike@rougepark.com or phone 905-713-3184, Monday thru Thursday.

Lost Rivers Walks

Information: www.lostrivers.ca

- Sat Nov 9, 2 pm. Upper Garrison Creek – Trail of the Whip-poor-will. Leader: Ian Wheal. Meet at the northwest corner of St Clair Ave W and Winona Ave. We'll visit former estate of Jessie (Montana) McNab (1866-1921) who was Commander of Toronto Women's Home Guard during World War I.

Harbourfront Centre

Through June 2014. Nine Rivers City. A large-scale outdoor photographic exploration of Toronto's nine rivers. Information: harbourfrontcentre.com/visualarts

Ian Wheal Walk

Sun Nov 3, 11 am. Rev Dr Henry Scadding – Urban Ecology and Heritage Walk. Meet at the southwest corner of Queen St E and River St for a 2-hour walk up the Don River ending at Riverdale Park.

Toronto Field Naturalists
1519 - 2 Carlton St.,
Toronto, Ontario M5B 1J3

Publications Mail
Registration No. 40049590



Fungus at Serena Gundy Park, TFN outing September 28.
Possibly *Flamulina velutipes* but an early date to be seeing it. Photo: Ken Sproule