



TORONTO FIELD NATURALIST

Number 575, November 2010



Golden-crowned kinglet photographed in Ashbridge's Bay, October 2010 by Lynn Pady

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IT'S YOUR NEWSLETTER!

We welcome contributions of original writing, up to 500 words, of observations on nature in and around Toronto, reviews, poems, sketches, paintings, and photographs of TFN outings (digital or print, include date and place). Include your name, address and phone number so submissions can be acknowledged. Send by mail or email. **Deadline for submissions for December issue:** Nov. 5.

NEWSLETTER COMMITTEE

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

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MEMBERSHIP FEES

\$30 STUDENT, SENIOR SINGLE (65+)
 \$40 SINGLE, SENIOR FAMILY (2 adults, 65+)
 \$50 FAMILY (2 adults – same address, children included)

No GST. 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.*

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Maple and Sassafras by Grenadier Pond photographed by Wendy Rothwell, October 2010

TFN MEETING

Sunday, November 7, 2010 at 2:30 pm

From Prickly Pears to Polar Bears: A Look Behind the Scenes of the ROM's Biodiversity Gallery

Deb Metsger, Assistant Curator, Natural History, Royal Ontario Museum

The ROM's new Life in Crisis: Schad Gallery of Biodiversity explores the world's biodiversity and many factors affecting its conservation and survival. Deb provides the behind-the-scenes story of the research and specimen preparation that went into creating this spectacular and informative gallery.

VISITORS WELCOME!

SOCIAL: 2:00 – 2:30 pm

Room 001, Emmanuel College, University of Toronto, 75 Queen's Park Cres. East

Emmanuel College is just south of the Museum subway station exit (east side of Queen's Park). Enter at south end of building, down a few steps on outside stairwell. **Wheelchair entrance:** Second door south on Queen's Park. Elevator inside to the right. Room 001 is one floor below street level.

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

Upcoming TFN Monthly Meetings

2010-2011 LECTURE SERIES

- | | |
|--------|--|
| Dec. 5 | <i>Spiders of Ontario</i>
Tom Mason, Curator of Invertebrates and Birds, Toronto Zoo |
| Feb. 6 | <i>Beyond Fur, Feathers & Flowers: the Underworld of Fins & Filter Feeders</i>
Shawn Staton, Team Leader, Species at Risk Program, Fisheries & Oceans Canada |
| Mar. 6 | <i>Tallgrass Prairie and Savannah Habitats of Southern Ontario</i>
Gavin Trevelyan, Eastern Coordinator for Tallgrass Ontario |
| Apr. 3 | <i>The Earth on Display: a Toronto View</i>
Ed Freeman, Geologist and TFN member |
| May 1 | <i>Ontario's Far North</i>
Justina Ray, Executive Director, Wildlife Conservation Society Canada |

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.

- Wed
Nov 3
10:00 am
- LAMBTON WOODS – Birds and Plants**
Leader: Miles Hearn
Meet at the southwest corner of Edenbridge Dr (2 blocks south of Eglinton Ave W) and Scarlett Rd. We will explore the Humber River and the nearby mature sugar maple forest. Bring binoculars. A circular walk. Morning only.
- Sat
Nov 6
10:00 am
- ST LAWRENCE MARKET – Nature Arts**
Leader: Nola McConnan
Meet inside 2nd floor Gallery at South St Lawrence Market, 95 Front St E. (Due to elevator refurbishment access may be by stairs.) We will view and discuss the "Brickworks/Artworks" exhibit. Bring your sketching materials or camera for use after lunch in the market area.
If you wish to show artwork in TFN's Exhibition in February, you may bring photos of your work to this outing. See details page 5. Note November 15th deadline.
- Sun
Nov 7
2:30 pm
- LECTURE – From Prickly Pears to Polar Bears: A Look Behind the Scenes of the ROM's Biodiversity Gallery**
Speaker: Deb Metsger
Emmanuel College, 75 Queen's Park Cres E. See page 3.
- Wed
Nov 10
10:00 am
- PORT UNION TRAIL – Nature Walk**
Leader: Karin Fawthrop
Meet at Port Union Rd and Lawrence Ave E (TTC and GO services), returning to the same corner. There is a plaza with coffee shop at that intersection. Bring binoculars. Morning only.
- Sat
Nov 13
10:00 am
- TORONTO ZOO – Mammals**
Leader: Joanne Doucette
Learn about some of the animals we love, but rarely see: lions and tigers and bears, Oh my!
Meet at the main gate to the Toronto Zoo, on Meadowvale Rd (TTC 85B Sheppard East bus from Don Mills subway station). Bring binoculars, lunch and admission money. Washrooms on site. Wheelchair accessible.
- Tue
Nov 16
10:00 am
- ALONG THE LAKESHORE – Nature Walk**
Leader: Ed Freeman
Meet at the entrance to the bridge over the railroad tracks on the south side of Queen/King just west of Roncesvalles Ave. Walk will end at Queen's Quay at York St. We will wander along the lakefront to see what nature reveals and participants can impart. Approximately 2 hours with opportunity for lunch at the Queen's Quay Terminal building if desired.

- Sat
Nov 20
10:00 am **WOODBINE PARK AND ASHBRIDGE'S BAY – Birds and Trees**
Leader: Bob Kortright
Meet at northwest corner of Northern Dancer Blvd and Lake Shore Blvd E. Bring binoculars. Morning only.
- Sun
Nov 21
10:30 am **FALL COLOURS IN LAVENDER CREEK AND BLACK CREEK – Lost Rivers**
Leader: Madeleine McDowell
Meet at Weston Rd and Gunn's Rd (1 block north of St Clair Ave W). We will follow Lavender Creek west to Black Creek and thence west along Black Creek across Jane St through the old Smythe gravel pits to Scarlett Rd and back to Jane St (and a hot drink at Tim Horton's before the bus) about three miles in total.
- Thur
Nov 25
10:30 am **TAYLOR CREEK PARK – Nature Walk**
Leader: Gail Gregory
Meet at southeast corner of Woodbine Ave and Cosburn Ave (bus northbound from Woodbine station) for a circular walk east on Cosburn Ave and through Stan Wadlow Park (parking available there) and into the valley. Bring a snack and binoculars.
- Sat
Nov 27
10:00 am **LESLIE STREET SPIT (Tommy Thompson Park) – Nature Walk**
Leader: Karen McDonald
Meet at park entrance at Leslie St and Unwin Ave. Bring binoculars. Morning only.

EXHIBITION OF ORIGINAL ARTWORK BY TFN MEMBERS

February 2011

A group of Nature Arts participants has volunteered to arrange a small exhibit next February at S. Walter Stewart Library in the Ridout Auditorium (lower level). Nancy Anderson, Anne Byzko, Penny Fairbairn and Gail Gregory invite other TFN artist members to join them. Exhibitors may sell their work, but it cannot be removed until the end of the show. We will need to know the size, number, and value of framed artworks to be displayed, and work will be included as space permits. **The selection deadline is November 15.**

If you would like to participate, please request an Exhibitors' Information sheet from the TFN office, by e-mail, phone or by dropping into the office on a Friday morning. This will provide all instructions, including how to submit photos of your work for consideration.

We hope many TFN members will take this opportunity to share their nature artwork. Artists not participating in the month-long exhibit will be welcome to display their work on a table during the Nature Images photography event.

NATURE IMAGES PHOTOGRAPHY BY TFN MEMBERS

The artwork exhibit will coincide with our annual Nature Images photography event to be held at S. Walter Stewart Library the afternoon of Saturday, February 6. We are pleased that Lynn Miller will once again run the digital projector for the showing. Details for our photographers on how to participate will be supplied in the Winter Issue of the Newsletter.

PRESIDENT'S REPORT

Wendy Rothwell completed her term as President during our Annual General Meeting (AGM) Sunday October 3. On behalf of members of the TFN and particularly of the Board, I would like to repeat the thanks to Wendy I expressed at that time. She has kept us organized, making sure nothing fell between the cracks, setting agendas, chairing board meetings, and not least, writing the last sixteen President's reports, all while co-editing our wonderful newsletter. After joining the board, Wendy let her name stand as Vice President, but was hopeful that someone else would save her from becoming president as she felt it wasn't a role she would enjoy or be good at. How wrong she was!

I would also like to reiterate the thanks expressed by Wendy at the AGM to Barry Mitchell and Pinky Franklin who have completed their terms on the board. Pinky was elected to the board of Ontario Nature this year, and as Past-President was precluded from standing for re-election to the TFN board. She did a great job as President for three years, and continued great work on promotion of the TFN (including our gorgeous new brochure, and organizing our participation in the Canada Blooms, the Green Living Show and many other events) and providing advice to the board over the past two years. Barry has chaired the Audit and Finance committee and led the work of the board and others in generating ideas on what to do with the generous bequest of Arthur Dvorak. He also helped in numerous other areas. I am grateful for all the work Pinky and Barry have devoted to the TFN.

I do not remember what triggered my joining the TFN about ten years ago, but I know that I appreciated the newsletter, especially listings of bird walks. It was on one of those walks in Ashbridge's Bay Park about five years ago that Margaret McRae and Gail Gregory asked me if I would consider leading a walk. Agreeing to do so motivated me to try to be a better field naturalist, not just a birder. Although my eye is still drawn to things that move, I have attempted to learn the plants, especially the trees and shrubs, the most important components of the plant communities on which the rest of the terrestrial biosphere depends. I have also participated in butterfly counts, the odonate survey in the Rouge this summer, and look forward to more learning opportunities on many future walks.

When Pinky Franklin asked me to join the TFN board four years ago, I hesitated because I had just agreed to join the board of the Toronto Ornithological Club (TOC). But I anticipated retiring (which I did last year), so I took the plunge and have been on both boards until resigning from the TOC board this year in anticipation of taking on the role of TFN President. I decided to focus on the TFN, despite my background as a bird guy, because I appreciate the broader focus and more inclusive nature of the TFN. I continue to participate on the TOC's conservation committee, where both organizations can benefit by working closely together.

On the board my focus has been mainly on conservation issues and our relationships with other groups, especially Ontario Nature. A particular interest of mine has been issues related to electricity and climate change, stemming from more than 33 years with Ontario Hydro and its successor, Ontario Power Generation (OPG), first in nuclear waste management and subsequently in corporate finance working on accounting, project evaluation and financial systems.

Besides electricity, another area in which many decisions affecting Toronto are made at the provincial level is development. Although Toronto city planning can influence developments through the official plan, zoning, and bylaws, all planning in Ontario is subject to the Planning Act and the Provincial Policy Statement (PPS) – all municipal plans and planning decisions must be consistent with the PPS. I attended a meeting in August organized by a coalition of environmental organizations, co-led by Ontario Nature, to coordinate input to the current review of the PPS (required every 5 years), with the aim of strengthening its provisions to make it more likely that future development will be more sustainable than that of the past. We are fortunate to have Ontario Nature working hard for us on this and other provincial issues.

With our core of dedicated board members and other volunteers I am hopeful that we will be able to enjoy our natural spaces and the pleasure of learning from each other for many years to come. If you have any questions or comments, please send me an email or give me a call (see contact information on page 2).

Bob Kortright

MONTHLY MEETING REPORT

Thinking Big about Ecosystems, Evolution and Life

Sunday, October 3. John and Mary Theberge, renowned wildlife ecologists and authors

For over thirty years, the Theberges have been conducting field research in Canada, the USA and overseas. Now retired in British Columbia, with the opportunity to reflect on what they have observed, they have written *The Ptarmigan's Dilemma* to tackle the big question "How does life work?"

John believes that the deepest connection to nature is through science. Using beautiful photographs and examples from their fieldwork, he provided an overview of the processes that convey order in life. He started with a brief close-up on life in its essential forms and built up to more complex structures of individuals, populations and whole ecosystems.

The first processes to order life are atomic and molecular bonding and the laws of physics and cycles. Life on our spinning planet has persisted for four billion years, providing evidence of self-regulatory ability. Five times over, the earth has been a snowball with ice from pole to pole. How did life persist? In the last 580 million years, the earth has undergone five major extinctions with a sixth underway. After each extinction, life rebounded with greater diversity. Today we are living in one of the most diverse of all times.

John moved on to individuals and highlighted natural selection, genetic variation, time and the little understood "order for free" theory, using the example of the drake wood duck's beautiful plumage. With populations, he described how negative feedback can affect the frighteningly large reproductive capacity of



Wood duck photographed by Anne Byzko



Photo of ptarmigan from John and Mary Theberge

any species. To highlight the complex orders of magnitude in ecosystems, John talked about redundancies and energy and nutrient transfer efficiencies. Life's resilience is demonstrated through all the interacting structures and processes of ecosystems – a comforting thought.

The stunning photographs continued as Mary picked up the story and, in a lovely narrative, described the tenuousness of life. With examples of monarch butterflies in Mexico, sandhill cranes on the Platte River and seabirds of the Bering Sea, she illustrated how mankind is violating the conditions required for massed superabundance. Mary described each species as a thread in a tapestry, a fabric that we are ripping. She called on us to be stewards and save the natural world for the evolution of future species, as we are still in the "morning of creation".

John and Mary's book, a combination of science and story-telling, is *The Ptarmigan's Dilemma: An Exploration into How Life Organizes and Supports Itself*, published by McClelland & Stewart. It has been nominated for the 2010 Writers' Trust Literary Award. The authors are donating royalty earnings to the Nature Conservancy of Canada and the World Wildlife Fund – Canada.

Corinne McDonald

NEW PURPLE MARTIN HOUSE IN HIGH PARK

Extracted from a report by High Park Nature (www.highparknature.org); and York University Research News (research.news.yorku.ca), presenting quotes from Bridget Stutchbury from the *Toronto Star*, June 7; and Now Magazine (nowtoronto.com)



The new martin house. Photo: Wendy Rothwell

After an absence of eight years, the purple martin has returned to High Park. North America's largest swallow used to be a regular visitor to the park, breeding at a nesting house on the east shore of Grenadier Pond erected by Toronto Field Naturalists in the 1960s.

In May 2002 many purple martins died following a sudden cold spell that killed off the flying insects they feed on. In addition, the nesting house became hemmed in by trees and was taken over by house sparrows.

In spring 2007, as part of a shoreline restoration project, Toronto and Region Conservation erected a new house in a less obstructed spot on the south shore of the pond. No purple martins nested there until this May when two pairs established nests.

Like many aerial insectivores, purple martins have been declining in Ontario. Historically they nested in boulders, cliffs and old woodpecker holes, but now rely almost entirely on people for their housing. Bridget Stutchbury (see book review TFN 573), says it's rare for the species to move into a new colony house because they usually return to one where they've previously nested. The social nature of the bird could mean that more pairs will move into High Park. Stutchbury describes them as flying machines, able to make the 7,000-kilometre annual migration from the Amazon River to the northern U.S. and Canada in three weeks.

In an article in *Now Magazine* in the spring of 2009, Gregor Beck, co-editor of *The Atlas of The Breeding Birds of Ontario*, describes male purple martins arriving from Latin America in early April to take up residence in his martin house in the Long Point area. After their long migration, the martins were forced to fight off several starlings for occupancy of the house. Then they had to survive a freezing cold snowstorm during which feeding conditions for these insectivores would have been "abysmal." If they had delayed their return to avoid the bad weather, they would have lost out to the starlings.

From TFN # 212, April 1965.

Martin House in High Park — Club members will want to keep an eye on the martin house which was erected last year by the TFNC with the cooperation of the City Parks Department, on the east slope of Grenadier Pond, near the bandstand. There was some use made of this house last year and we hope that about May 1st we will see a return of these attractive birds.

The 1965 martin house
Photo: Wendy Rothwell



EXTRACTS FROM OUTINGS LEADERS' REPORTS

Nature Arts, Wards Island, 4 Sept. Leader: Nancy Anderson. The winds were very strong at times which made for wonderful wave formations on Lake Ontario – good for seascapes. An afternoon walk with Mary Taylor revealed gentians, gerardia, wild mint, boneset, ladies tresses, and purple loosestrife. The pink and purple wildflowers made a gorgeous sea of colour in the field.

Bluffers Park, 5 Sept. Leader: Bob Kortright. We had a good look at a hummingbird driving a crow away. As hoped, the west wind pushed migrating raptors and monarch butterflies toward the edge of the lake, although it kept small birds mostly hidden in the vegetation. The meadows above Bluffers Park had many kinds of goldenrod and asters recently opened, and wild indigo duskywing feeding on crown vetch. Large numbers of autumn olive, a relative of Russian olive, have colonized the top of the bluffs. Autumn olive has the ability to spread as readily as its cousin and buckthorns, but not buckthorn's ability to prosper in shade. In Midland Park Ravine we noted large areas of zigzag goldenrod and a couple of American redstarts.

Humber Arboretum, 8 Sept. Leader: Carol Sellers. We saw a baby snapping turtle, and monarchs clustering in the trees.

Urban Forestry in Queen's Park, 18 Sept. Leader: Melanie Adamson. We identified certain trees and discussed tree stresses in urban forestry. We then walked along Bloor St. to learn about the new technology, Silva Cells, being used for street trees.

Humber Bay East, 22 Sept. Leader: Miles Hearn. Four species of aster, butterfly weed, willowherb, fruiting autumn olive and sea-buckthorn. Rusty blackbird*, northern mockingbird, palm warbler, pied-billed grebe, great egret, American wigeon, northern shoveler.

G Ross Lord Park, 25 Sept. Leader: Alexander

Cappell. The walk started with 2 turkey vultures circling low over us. We looked at the storm sewer reconstruction where Finch Ave collapsed a few years ago. Here, where Garthdale Creek flows north into the reservoir, we saw a great blue heron and a kingfisher. An apple tree in fruit may be a survivor of a farm orchard. On the West Don, just downstream of the dam was a fisherman who had caught a fish. One participant found a brown snake. From the top of the dam and from the Finch hydro corridor, which is here an upland meadow, we got a panoramic view of a layer of grey clouds from horizon to horizon. We descended north into the valley; here Fisherville Creek flows into the West Don. We followed Fisherville Creek valley north to where it comes out of a sewer at Fisherville Rd. The trail was littered with buckthorn fruit. We stopped at the crabapple tree on Black Hawkway – it was covered with crabapples except for a few (grafted?) branches with big, supermarket-type apples.

* Extracted from an article in *BirdWatch Canada*, spring 2010, no. 51, published by Bird Studies Canada: Named for the rusty tips in its fall plumage, the rusty blackbird is a medium-sized songbird with yellow eyes. Seventy percent of its population breeds in Canada. The Breeding Bird Survey and the Christmas Bird Count, both citizen science programs, show that they have declined by 5 to 10% per year since the mid-1960s. In 2006, rusty blackbird was designated a "Species of Special Concern" by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and in 2009 was listed under the federal Species at Risk Act. It is believed that the population across Canada has dropped to 1.4 million from 13 million 40 years ago. Habitat loss and alteration and blackbird control programs are probably factors in its decline (blackbirds are considered agricultural pests).

WORK PARTY AT JIM BAILLIE NATURE RESERVE

Ten members participated in a work party at the reserve on September 30th. We had beautiful sunny but cool weather for working. Several members cleared debris from a trail while others cut down invasive common buckthorn and Scotch pine and removed dog strangling vine from the area near the picnic shelter. We planted 3 donated tiny white spruce. We found many mushrooms which Richard Aaron identified for us when we met for lunch at the picnic shelter. Interesting plants included orange fruited horse gentian and thimbleweed.

We decided that two of the outhouses were beyond repair and will be proposing to the board that we purchase and install two prefabricated portable toilets. This will result in another work party, hopefully in November. **If you would like to participate**, please contact Margaret McRae at [REDACTED] or [REDACTED]. We will post information on our website when the date is known.

FOR READING

Gathering Moss: A Natural and Cultural History of Mosses

by Robin Wall Kimmerer, published by Oregon State University Press. 168 pages

This is my third John Burroughs Medal winner, and I'm beginning to see a pattern: each author exhibits a contagious enthusiasm for his/her subject, and co-opts us on a journey, physical and spiritual.

Robin Wall Kimmerer is both an academic (associate professor at the State University of New York College of Environmental Science and Forestry) and of Native Indian descent. This book won't help you identify mosses: it is, rather, a series of personal, insightful essays about them, each centred around one or more journeys. It is this aspect that is both fascinating and, ultimately, frustrating.

In her preface, the author tells us "Learning to see mosses mingles with my first memory of a snowflake. Just at the limits of ordinary perception lies another level in the hierarchy of beauty, of leaves as tiny and perfectly ordered as a snowflake, of unseen lives, complex and beautiful." Too bad, then, that the book includes only drawings of a few of the 22,000 mosses known to exist, and no photographs. I wanted to see more. But perhaps I will, on my next trip, with my own magnifying glass!

We learn that mosses inhabit every ecosystem on earth, that they are the amphibians of the plant world, halfway between algae and higher land plants. They exploit the "boundary layer" where airflow is minimal, conditions are warmer and wetter, and carbon dioxide levels higher. Mosses are small because they lack any support system. They can't conduct water from the soil, so they have evolved to absorb water through electrical attraction (tree leaves are designed to dispel water). Moss is so responsive to water that it can exist in a dehydrated state for decades, yet spring to full life within 20 minutes of wetting.

Rare mosses described include one that lives in caves, where it sparkles when hit by the sun (this is the plant's way of capturing every scarce scrap of light), one that is black (to protect itself from the sun), and

If you would like to learn about identifying mosses, the TFN's 1985 publication *A Graphic Guide to Ontario Mosses* by Robert Muma is still available.

another that lives only on the July droppings of white-tailed deer. Spaghnum moss gets its own special write-up. Only one cell in 20 is alive, but these cells hold water and help modify the environment to reduce competition from other plants.

Although we mostly associate them with deciduous forests, mosses can't survive on the forest floor – the wet leaves would smother them – so they tend to live elevated on logs, rocks or tree bark. The author describes how important moss is to the temperate rain forest. Very little rain falls directly on the forest floor; instead, it runs down the tree trunks. Clumps of moss slow the torrent, hold onto it, and slowly release it back into the atmosphere. They also capture mist.

Moss mats serve as nurseries for infant trees, and increase the vigour of larger trees through a symbiotic relationship between the tree, moss and mycorrhizae. Moss also shelters a surprising host of characters – algae forests, other epiphytes, protozoa, tardigrades, springtails, rotifers, nematodes, mites, insect larvae, pseudoscorpions, beetles and slugs, among others.

The author warns how moss harvesting for the floral trade is devastating the old-growth forests of the Oregon coastal range. Not just the trees are affected: so too is the marbled murrelet, a sea-bird which feeds on marine life, but nests here miles from the ocean, attracted by one specific moss.

A section on city mosses shows just how adaptable and stress-tolerant they are. In fact, some species are more abundant in cities than in the wild: buildings, statues, fountains, pavements and gravestones all provide homes.

The author describes historical uses of moss, including staunching of wounds in World War I (due to its absorbent and antimicrobial properties).

And, finally, not all 'mosses' are moss: Reindeer moss is a lichen, sea moss is an alga and club moss is a leucophyte.

Overall, I found this little book a fascinating read, but I wished for more, that the chapters were more structured, and the index more helpful. If you choose to read it, you can find this book in the Toronto Public Library.

Mary Lieberman

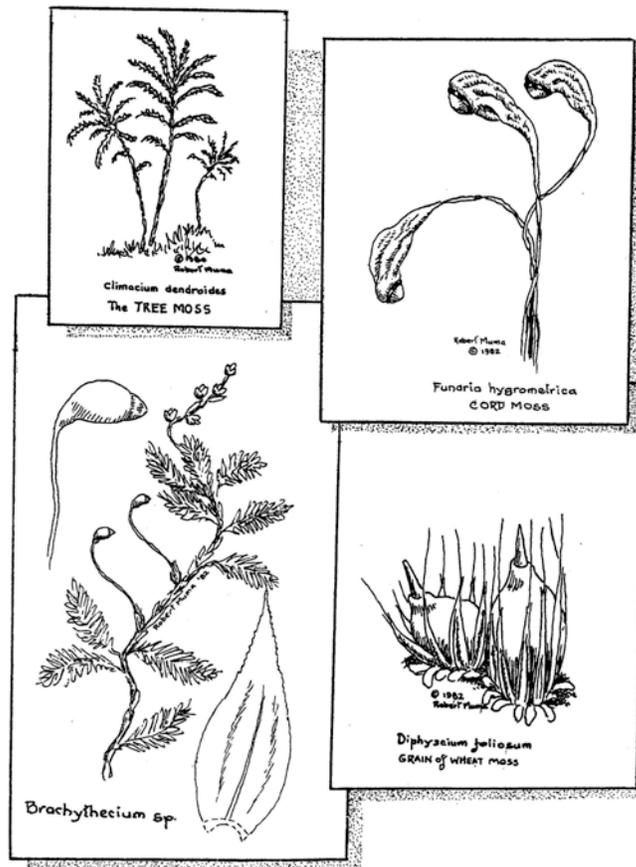
FOUR ONTARIO MOSSES

Article and illustrations by Robert Muma, from TFN newsletter #353, February 1983

All four mosses shown [here] may be encountered in our area.

Top left is *Climacium dendroides* or TREE MOSS (*dendroides* means “tree-shaped”). It stands 4-6 cm in height and grows as separate plants, spreading underground by primary rhizome-like stems as well as by spores. The sporophytes, when they occur, extend vertically in groups from the top of the plant like a fountain above a fountain. You will find this moss growing in small scattered groups in swampy woodland soil. It occurs intermittently along the trails of the Jim Baillie Nature Reserve.

Lower left is an example of the *pleurocarpous* mosses which are recumbent on the substrate. (*Pleuro* = “side.”) Some of them grow a new layer each year to form mats. One of the largest and commonest groups of this form is the *Brachythecium* which grow in our backyards on soil, wood and stone, or in the woods or swamps or along streams. They are often difficult to distinguish as species, even with a microscope. So this drawing is devised as a common denominator of the genus by which you may be able to say, “Ah, this is a *Brachythecium!*” Note the irregularly to subpinnately branched growth; the typical leaf showing *costa* (midrib), serrate edges in upper half, the *plicate* (folded), spoon-shaped surface, sometimes decurrencies (wings) embracing the stem. The short, stubby, horizontal, non-symmetric capsule is also characteristic.



Upper right is *Funaria hygrometrica* or CORD MOSS. *Funaria* means “rope-like” and refers to the twisting habit of the *setae* which bear exquisitely sculptured spore cases (shown here about five times natural size). “*Hygrometrica*” refers to this moss’s sensitivity to humidity changes which cause the *setae* (stalks of the spore-cases) to twist and untwist. This is a very common moss which often grows in profusion around old campfire sites.

Lower right is *Diphyzium foliosum*, sometimes called GRAIN OF WHEAT MOSS. This is not a common moss anywhere but is scattered throughout Ontario and is one of the thrills of discovery we keep hoping for. The spore-cases shown here are scarcely larger than a grain of wheat and are light green in colour with bright green strap-shaped leaves around the base. The long leaves tapering to long, bristle-like tips are called “*perichaetal* leaves” and are brown and beige in colour. I found this strange moss once in Nova Scotia where it was growing in clusters forming crusty

scabs on an otherwise bare woodland mound. It seems to thrive especially in trampled areas.

Note: Except for the *Brachythecium*, these mosses are all growing as individual upright plants and are called *acrocarpous*. (*Acros* = “high”; *carpos* = “fruit.”)

The best months for studying mosses in our area are April, May, June, September and October.

BIRD OF THE MONTH – AMERICAN CROW

One of the very pleasant surprises of last summer was once again hearing crows calling on my street. Since West Nile virus wiped out most American crows from Toronto several years ago, they have been making a slow recovery. The peak of the West Nile outbreak in this area was around 2003 but even then crows remained abundant elsewhere in the province.

As a fairly common, conspicuous, plain black bird, it is often taken for granted and in some areas viewed as a nuisance, especially by farmers and by people living near huge winter roosts. The American crow, the only crow in our area, belongs to the corvid family which also includes jays, ravens and magpies, all of which tend to be noisy, aggressive and highly social.

American crows are very intelligent birds with a complex social system and fascinating behaviour. Crows and other corvids figure in mythologies world-wide, evidence of our endless fascination with these creatures.

Their loud caws easily draw attention to themselves and it's often worthwhile to watch what they're doing and how they interact among themselves and with other species. In his *Field Guide to Birds of Eastern North America* David Sibley explains that "a particularly excited-sounding caw announces the presence of" a hawk or owl and summons more birds to join in mobbing the predator until it is encouraged to leave the area. For us this can be an opportunity to observe not only the team work of the crows, but the flight of their harassed enemy.

Crows live in a family group with the young of past years helping to raise the current batch. The family defends a fairly large territory. Studies mentioned in the *Atlas of the Breeding Birds of Ontario 2001-2005* showed that urban crows in New York had average territories of 8.7 hectares while in open areas of Manitoba territories averaged an amazing 260 hectares. It was pointed out in the Atlas "that, although crows may be abundant in a given area, perhaps only a small proportion are territory-holding breeding pairs."

In the December 2002 issue of *Ontario Birds*, journal of the Ontario Field Ornithologists, Mark Peck reported an unsuccessful attempt by American crows to nest on a ledge of the Royal Ontario Museum. Two days after that nest was found to have been damaged, crows were observed trying to place twigs "in various locations on the rooftop . . . of the Legislative Building at nearby Queen's Park". Ultimately young were raised nearby in a more typical location, a white pine. Mark went on to discuss crows' "versatility in nest site selection." Crow "nests are usually well hidden in coniferous and deciduous trees and occasionally in bushes," rarely on buildings, but he also cited reports of their nesting "in dead trees, on top of dead stubs,

and in a cliff face crevice" as well as "on the ground, ...in tules [bulrushes] over water, in hollow stubs, on telephone poles, ...on the chimneys of an abandoned house" and even on a ledge of a Rideau Canal lock gate.

Crows are omnivorous and opportunistic feeders. In the August 1999 issue of *Ontario Birds* George Fairfield recounted *An Example of Crow Intelligence*. Crows had never visited George's bird feeders until a heavy

November snowfall in 1997 apparently covered their usual food supply. The crows were too big to access the feeders themselves but immediately figured out a strategy to get peanuts by using blue jays as "gofers," "waiting for the arrival of the blue jays, and following them in to the feeder to get the spilled peanuts before the squirrels could get them... The crows quickly recognized that the arrival of the blue jays signalled that food would soon be available, and took advantage of the situation." It was an opportunistic strategy, adopted in the face of an urgent situation, and a tactic which George never saw repeated.

In the fall and winter crows gather in huge roosts numbering in the hundreds, thousands, even tens of thousands. Such enormous roosts occur mainly in the U.S. but south-western Ontario, notably the city of Chatham, has also experienced this phenomenon.



American Crow drawn by Diana Banville

Continued on page 17

KEEPING IN TOUCH

Congratulations to long-time TFN member and outings leader Madeleine McDowell who was presented with Heritage Toronto's Special Achievement Award on October 5th at Koerner Hall.

Madeleine is an artist, educator and storyteller who has spent a lifetime advocating for the preservation of the natural and human heritage of the Humber River and shows no signs of slowing down. She was instrumental in getting the Humber declared a Canadian Heritage River.

We are fortunate to have such a talented and determined individual amongst our members.

Margaret McRae



Photo from Heritage Toronto

In September I saw my first ever tufted titmouse. It was at my bird feeder six inches from the window along with similarly-coloured chickadees and white-breasted nuthatches. Although in different families, Sibley *Field Guide to Birds* shows all three on a "comparison" page.

I mentioned this sighting to Marilyn Murphy who said she believed that tufted titmice had been seen on the

western fringes of the GTA but were not yet well established here. A couple of weeks later she forwarded a report from the latest edition of *Toronto Birds* of a sighting of six tufted titmice – two adults and four young – in Mississauga in July, with the note: "Although breeding in the GTA has been suspected for some years now, this will be the first confirmed breeding record, if accepted by Toronto Birds Records Committee." *Toronto Birds* is published by the Toronto Ornithological Club to document bird sightings.

Jenny Bull

On October 2nd this group of TFNers attended the opening reception of Gail Gregory's "Barnyard Bliss" art exhibit. Gail has done delightful imaginative renditions in watercolor and coloured pencil of domestic animals, mostly at Riverdale Farm.

The exhibit continues until October 30th (see September newsletter for details).



Photo by Wendy Rothwell

TORONTO WILDFLOWERS: FLOURISHING WITHOUT PHOTOSYNTHESIS

Chlorophyll, which colours most plants green, provides the energy required for photosynthesis by absorbing light. There are, however, species that survive and, indeed, flourish without this pigment. In Toronto these include a species belonging to the Orobanchaceae (broom-rape family) and two species belonging to the Ericaceae (heath family).

The local Ericaceae species are *Monotropa uniflora* (Indian pipe) and *M. hypopitys* (known as pinesap in North America, yellow bird's nest in the UK). *Monotropa* comes from the Greek *monos*, meaning single, and *tropos*, meaning turn, and refers to the solitary flower of *M. uniflora* which turns as it matures. The Greek *hypo*, means beneath or under. *Pityis*, in Greek mythology, was the name of a nymph who fled to escape the god Pan and was transformed into a pine tree. *Hypopitys* accordingly means "under pine trees", which is where this species is found. "Pinesap" is related to where *M. hypopitys* occurs and its colour, somewhat like pine resin. The UK term "yellow bird's nest" comes from a resemblance to the saprophytic European "bird's nest orchid", *Neoltia nidis-avis*.

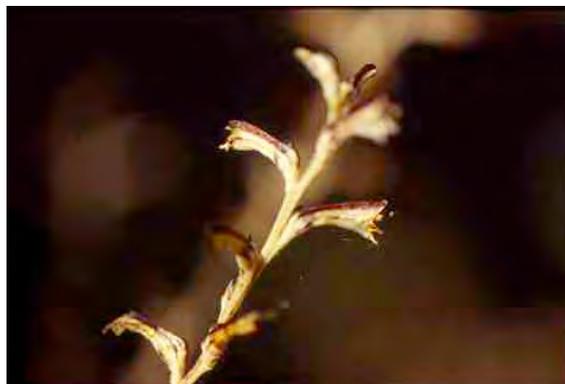
Until recently these two species were considered to be saprophytes, plants that live on decaying vegetation. However, as reported in *The ROM Field Guide to Wildflowers of Ontario*, *M. uniflora* has been found to be totally dependent for all its nutrients on soil fungi, which in turn obtain their nutrients through a symbiotic (mycorrhizal) relationship with tree roots [see article next page]. It is indirectly a tree parasite. The association of *M. hypopitys* with pine trees results from

a similar parasitic relationship, this via a fungus (*Tricholoma*) that specializes in a mycorrhizal relationship with pine trees.

Indian pipe (*M. uniflora*) in Ontario occurs as far north as the James Bay ecoregion. It ranges widely in North America, from Newfoundland to Alaska and south to northern California and across to Florida. It does not occur in Eurasia. It has solitary white, bell-shaped flowers about 2 cm across on white stems up to about 22 cm. As it matures it turns black. Its alternate leaves are reduced to scales less than 1 cm long. Uncommon in Toronto, the TFN reports it in High Park, the Wilket Creek area, Morningside Park (Highland Creek), and the Rouge Valley. It may bloom at any time from June to September.

Pinesap (*M. hypopitys*) occurs, in North America, from Newfoundland to British Columbia and south to central California, northeast Texas, and Florida. It also has a European and Asian range. It differs from *M. uniflora* in having small clusters of flowers instead of a solitary flower and in being yellow, brown, or pink. It is extremely rare in Toronto, being omitted from the TFN's *Vascular Plants*.... My photo is from a low pine-covered ridge in the Rouge Valley, a ridge surrounded by a lower area of damp shrubby thickets. Here *M. hypopitys* was in bloom when I saw it in late July.

Epifagus virginia (beech-drops) is an Orobanchaceae species. *Epifagus* comes from the Greek *epi*, meaning on, and *fagus*, Latin for beech. To find *E. virginia* look under beech (*Fagus*) trees as it is parasitic on beech



Far left: Indian pipe
Left: Pinesap

Above: Beechdrops

Photos: Peter Money *continued on next page*

continued from previous page.

roots. In Ontario it is reported to occur in the Carolinian zone and the southern part of the mixed (Great Lakes-St. Lawrence) forest. It ranges throughout most of eastern North America. Although its branching stems are up to about 45 cm tall it is a plant likely to go unnoticed unless you look specifically for it; its stems are brown and thin and look like dead twigs even when it is in flower. "Beechdrops" produces two kinds of flowers, upper sterile flowers (illustrated) consisting of a two-lipped tabular corolla about 1 cm long, and lower self-pollinating flowers that remain closed. The leaves, not used for photosynthesis, have become scale-like and are only about 2 to 4 mm long. Although uncommon in Toronto

according to the TFN's *Vascular Plants of Metropolitan Toronto*, it is widespread, having been recorded from areas in the Humber, Don, Highland Creek, and Rouge drainages. This is a late summer/fall-blooming species which may still flower until the first frosts.

On nature walks check under beech trees for beechdrops, particularly in the fall. Indian pipe is an easier target – the plant is unmistakable. Pinesap, in Toronto, is a major challenge. If found please report it to the TFN.

Peter Money

MYCORRHIZAL ASSOCIATIONS

Many kinds of fungi grow around and even penetrate the roots of plants, forming an association that provides benefits to both. This association is called a mycorrhiza (meaning fungus-root). The main body of the fungus, called a mycelium, is a network of thread-like hyphae that grow not only in and around a plant's roots but also out into a wide area of soil. Here, the fungus absorbs water and minerals that the tree needs, especially phosphorus, and in return, the fungus receives sugars that the plant makes through photosynthesis. It is thought that these mutualistic mycorrhizal associations developed very early in the evolution of plants and that more than 90% of plants and several thousand kinds of fungi form these associations.

You don't usually see mycorrhizae because they are below ground. In some, it's hard to see the fungus part even if you dig them up because they are microscopic. However, the kind of mycorrhizal fungi that associate mostly with trees (including all members of the pine family) grow a thick visible mantle around the tree's roots. Most also send their fruiting bodies above ground in order to disperse their spores – these are some of our

familiar mushrooms and other kinds of fleshy fungi. The mushrooms often form part of a large circle around a tree and the underground fungal network may actually connect many trees together.



Russula drawn by
D. Andrew White

In 1960 it was discovered that species of *Monotropa* take advantage of mycorrhizal associations between fungi and trees, effectively stealing energy from the trees without giving anything back – hence they have a parasitic association with mycorrhizae. Later, it was hypothesized that the host tree species could not develop defences against the parasitic plant through natural selection because it would then be selecting against its own mutualistic mycorrhizal fungus.

Various studies of *Monotropa uniflora* around the world found that all of the mycorrhizal fungi that *Monotropa uniflora* is associated with were members of one family, the Russulaceae. A study of *Monotropa uniflora* in Massachusetts showed that most of the fungi were in one genus, *Russula*. A further study found that seedlings of *M. uniflora* developed better when the same fungus species found with the mother plant was present with the seedlings.

Jenny Bull

References:

Kendrick, B. *The Fifth Kingdom*, 2nd ed. 1992

Yang, S. and D.H. Pfister. *Monotropa uniflora* plants of eastern Massachusetts form mycorrhizae with a diversity of russulacean fungi. *Mycologia*, 98(4), 2006, pp. 535-540.

IN THE NEWS

Environmental Commissioner's Report

In his 2009/2010 Annual Report released Sept. 22 (see www.eco.on.ca), Environmental Commissioner Gord Miller points to a number of cases where bureaucratic or political inaction has ended up threatening the environment and undermining the government's stated environmental policies. The report found:

- The Ministry of the Environment (MOE) has failed to keep an up-to-date inventory of closed landfills that could be polluting nearby groundwater.
- Municipal wastewater discharges are worsening the pollution of our Great Lakes because the MOE's discharge rules fail to factor in the rapidly increasing population of southern Ontario.
- Ontario's air quality standards are not airtight, allowing the government to exempt whole sectors of industry from tougher provincial rules.
- One billion more trees need to be planted in southern Ontario - far more than the government's target of 50 million trees by 2020 - to conserve biodiversity and respond to the challenges of climate change.
- Legislation has been introduced to protect half the boreal forest in the Far North, but ineffective oversight by the Ministry of Northern Development, Mines and Forestry has allowed mining service companies to set up illegal camps and landing strips.
- The government made a commitment to protect the dwindling number of caribou in the province. But the Ministry of Natural Resources has not protected their habitat from mining or forestry to prevent their likely disappearance from Ontario.

The Environmental Commissioner also says Ontarians need to develop a new approach to conservation, or face the significant consequences of climate change and biodiversity loss.

Construction Begins on West Don Lands' First Park

For the full announcement and illustrations see news.waterfrontoronto.ca/2010/09/construction-begins-on-west-don-lands-first-park/

In September, Waterfront Toronto officially broke ground on the new 7.3-hectare (18 acre) Don River Park, which is expected to open in late 2011/early 2012. Stretching from King Street south to the rail corridor in the land west of the Don River and GO/CN railroad lines, Don River Park is the first park in the West Don Lands to begin construction. The park will transform an abandoned post-industrial site into a re-naturalized public park, with a variety of programming and a multi-functional pavilion.

The 32 hectare (80 acre) West Don Lands is a challenging brownfield site in the flood plain of the Don River and development of the area is contingent on it first being remediated and flood proofed. Construction of the area's flood protection landform, which is designed to protect a 99 hectare (245 acre) area that includes not only the West Don Lands but also Toronto's financial district, is nearing completion. Don River Park is being built on top of the flood protection landform. Park features are integrated into the contours and elevation provided by the landform and there will be open sightlines to the Toronto skyline, the Don River and Lake Ontario.

The side of the park adjacent to the Don River will be a 3.2 hectare (7.9 acre) urban prairie that will include an upland meadow and a lowland wet meadow which will be part of a park-wide ecological stormwater management system. Meandering walking trails, multi-use bike paths, and a boardwalk will also allow visitors to explore the unique urban landscape.

The 3.6 hectare (8.9 acre) western side of the flood protection landform includes a hilltop playground; a solar powered pavilion that houses the park's washrooms; a youth athletic field for a variety of organized sports; and a series of open lawns.

Honeybees at the COC

The Canadian Opera Company reported in May that it has had two hives of honeybees installed on the roof of the Four Seasons Centre for the Performing Arts. You can follow the honeybees' progress at their blog at www.coc.ca/AboutTheCOC/FourSeasonsCentre/HoneybeesAtTheFourSeasonsCentre.aspx?EntryID=8626 (pictures at [EntryID=8634](http://www.coc.ca/AboutTheCOC/FourSeasonsCentre/HoneybeesAtTheFourSeasonsCentre.aspx?EntryID=8634)). Beekeeper Fred Davis approached the COC about placing the hives, explaining that it was a perfect spot for urban bees, close to the flowering plants at City Hall, Osgoode Hall and the University Avenue median. Also, downtown there are no pesticides that would affect the bees. With the Toronto Beekeepers Co-operative Davis has worked with beehives at the Brickworks and the Royal York Hotel (which has six hives on its roof). Two of Davis's own hives live at Casa Loma. The new COC hives are visible to ticket-holders from a glass door on Ring 4, which looks out to the rooftop. At their summer peak, they are expected to attract some 120,000 bees and to generate about 50 pounds of honey annually, reported Michael Posner in the May 19 *Globe and Mail*.

FROM THE ARCHIVES

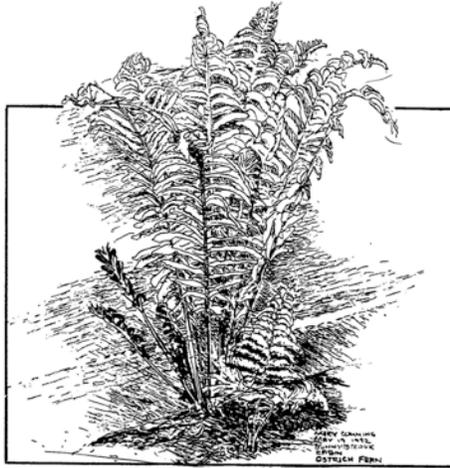
From the TFN Newsletter 271, December 1972.

BOTANY OUTING, Sunday, October 15, 1972 by Erna Lewis

In spite of the damp and penetrating cold some fifteen to twenty would-be botanists met at Albion Hills at 10 am on October 15.

After driving through a few snowflakes in Toronto, we were not too surprised to see snow filling the more sheltered parts of the conservation area.

Few flowers had survived the killing frost of the week before, so we concentrated on other things. We compared the stubby suede buds of the butternut with those of the bitternut, slender, yellow and aromatic; the showy red berries of the Japanese silverleaf (*Elaeagnus umbellata*) [also known as autumn olive], planted to give more forest "edge" for wildlife with the porcelain-blue berries of the native silky dogwood (*Cornus amomum*); the frost-killed sensitive fern (*Onoclea sensibilis*) and ostrich fern (*Pteris pensylvanica* [now known as *Matteucia struthiopteris* var. *pensylvanica*]) with the evergreen marginal shield



Ostrich fern, *Matteucia struthiopteris*,
drawn by Mary Cumming

fern (*Dryopteris marginalis*) and spinulose shield fern (*D. spinulosa* var. *intermedia*).

Many of us have seen the leaves of the wild leek (*Allium tricoccum*) early in spring, some of us the flowers that appear later on when the leaves have gone.

This was the first time most of us had seen its fruit - an umbel of small shiny black spheres, each set in a frilly beige cup.

We also experienced the excitement of coming upon two species that are far from common in this region. One was the glade fern, better known as narrow-leaved spleenwort (*Athyrium pycnocarpon*). Drained of colour though the fronds were, the herringbone pattern of brown sori was plainly visible on the back of the fertile ones. The other was the sweet coltsfoot (*Petasites palmatus*) with its large and handsome leaves.

A bonus was the splendid view of rolling hills and fall colours spread before us whenever a trail passed over high open ground. All in all, the expedition was well worthwhile in spite of rain, chill winds and frostbitten plants.

BIRD OF THE MONTH *continued from page 12*

Most crows from northern territories move south for the winter, but in our area a few historically over-wintered. During the late 1980s and the 1990s, however, increasing numbers turned up on the Christmas Bird Count with a record high of 1467 American crows tallied on the 1998 count. Following the West Nile outbreak, the 2004 count dropped to just 26. The last few years have shown a slow increase: 52 in 2007, 99 in 2008 and 165 in 2009.

An interesting article, *West Nile Virus Disrupts the Family Lives of Crows* by Pat Leonard, appeared in *Birdscope*, the Cornell Lab of Ornithology's newsletter,

Autumn 2007. Researchers found many changes in behavioural patterns where high mortality in two consecutive years decimated crow families and left previously occupied territories empty. Crows have long memories and know their neighbours. Survivors initially seemed hesitant to move into the vacated territories. A new outbreak of West Nile may yet occur, but meanwhile in our area it seems territories are being repopulated and we can again enjoy increasing opportunities to observe these fascinating birds year round.

Marilynn Murphy

Note: Christmas Bird Count figures from across North America and for the count's entire 110 year history can be found on the National Audubon Society's website: birds.audubon.org/christmas-bird-count. Pat Leonard's article can be read in full on Cornell's website: www.birds.cornell.edu/Publications/Birdscope/Autumn2007/virus_disrupts

COMING EVENTS

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

Toronto Entomologists' Association (TEA)

Sat Nov 27, 1:15 pm. Insect Life Cycles and How They Deal With Winter. Speaker: James Kamstra. Room 206 Victoria College. Information: www.ontarioinsects.org

Mycological Society of Toronto

Mon Nov 15, 7:45 pm. Uncommon and/or Unusual Fleshy Fungi in Ontario. Speaker: Walter Sturgeon, Mycologist from Ohio
Information: www.myctor.org

High Park Walking Tours

2nd and 4th Sundays of each month, 10:30 am – noon. Meet at the benches across the road south of Grenadier Restaurant. Donations welcomed. Information: 416-392-1748 ext. 5 or walkingtours@highpark.org or www.highpark.org

- Nov 14. High Park Through the Ages. Leader: Dave Berndorff
- Nov 28. Man-made Marvels. Leaders: Sophie and Mark Ellwood

Rouge Valley Naturalists' Guided Nature Walks

Sun, Nov 28, 1:30 – 3:30 pm. Meet at the east end of the parking lot at Rouge Beach Marsh, 195 Rouge Hills Dr at Lawrence Ave E. Information: www.rougevalleynaturalists.com

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

Science on Sundays

Royal Canadian Institute, J.J.R. MacLeod Auditorium, Medical Sciences Bldg., University of Toronto, 1 King's College Circle. Free. Information: www.royalcanadianinstitute.org or 416-977-2983.

- Nov 7, 3 pm. Does Autoimmunity Drive Obesity?, Hans-Michael Dosch, M.D. PhD
- Nov 14, 3 pm. Adventures in Animal Behavior, Suzanne E. MacDonald, PhD
- Nov 21, 3 pm. The Importance of Sleep: A Wake-up Call, Michael J. Sole, M.D. FRCP(C)
- Nov 28, 2:30 pm. Special event for kids of ages 6-12, Russell Zeid

The Market Gallery

Until Feb. 26, 2011. South St Lawrence Market, 2nd floor, 95 Front St E. Free. Brickworks/Artworks documenting an urban environment along The Don, featuring the work of artists from the Don Valley Art Club. Note: Gallery is closed Sundays, Mondays and holidays. Information: www.toronto.ca/culture/the_market_gallery.htm or 416-392-7604

Toronto and Region Conservation Authority (TRCA)

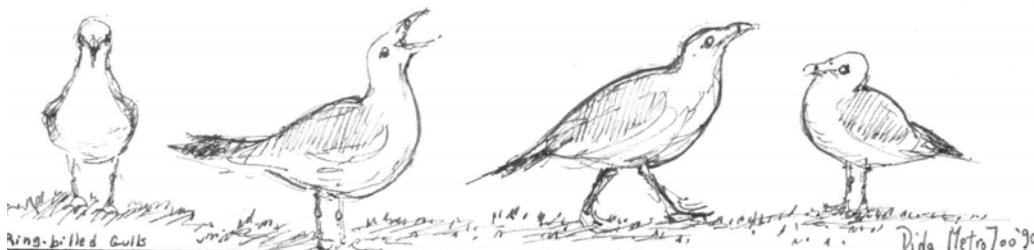
Every Sunday until Nov 7, 8 am – 11 am. Bird Walk and Bird Banding Demonstration at Tommy Thompson Park. Meet at park entrance, Unwin Ave at foot of Leslie St

Harbourfront Centre – Beyond Imaginings

Until June 2011. An outdoor display. Eight artists encounter Ontario's Greenbelt. Free

Ian Wheal Walk

Sun Nov 14, 2 pm. Trethewey Airfield and Model Farm (Centenary 2010). Meet at southeast corner of Ray Ave and Weston Rd



Ring-billed gulls drawn by Diana Banville at Toronto Zoo, 1990.

SHORELINE CLEANUP SUCCESS!



Photo by Pinky Franklin

It was a gorgeous autumn day for the TFN members and volunteers who came out to help with the Great Canadian Shoreline Cleanup on Sept 25th. Our site was at Taylor Creek Park, west of Don Mills Road. This is a well used section of the ravine and was full of cyclists, runners and people just enjoying a walk by a stream, surrounded by trees.

We set up a table at the start of the cleanup area to hold the garbage bags, gloves, clipboards and other items necessary for the effort. It turned out that this was a magnet for people going by to stop and learn more about the cleanup effort and the TFN. One person even joined in on the spot to help out, wanting to give back to the park that she enjoys so much. Others will be looking for the cleanup next year.

We set out in teams of three, with one person as a scribe to record what was picked up. The goal of the cleanup isn't just to remove trash, but to record what types of garbage are clogging our waterways. In our section, the five worse offenders were: 146 plastic bags, 60 poop & scoop bags, 49 food wrappers, 34 Handi Wipes/dryer sheets, 31 plastic bottles.

We were surprised by the number of Handi Wipes that we found. And personally I was surprised that half the garbage I picked up was from trees and bushes, a couple of feet off the ground. It seems that flooding washes even more garbage into our waterways. All told, we removed over 48 pounds of garbage and recyclables in a couple of hours.

Next year we'll pick a different site to spread the cleanup effort around and get it advertised in the newsletter so more people can attend. We look forward to seeing you then!

Lynn Miller

WEATHER (THIS TIME LAST YEAR)

November 2009

After a chilly October, November turned out mild, tranquil, sunny, and uneventful. Perhaps these conditions were related to the burgeoning El Niño. In any case, monthly mean temperatures ran about 2° above normal, precipitation was half or less the normal amount with not even a trace of snow; and sunshine at 121.5 hours was close to 40 hours more than the average.

The monthly mean temperature of 6.0° at Pearson was the highest since 2001 and the fifth highest on record since 1938. Clearer than normal skies meant that the mean maximum was 10.3°, the third highest on record.

Temperatures peaked at 19.1° on the 9th, during a long dry spell (no precipitation fell from the 6th to 18th). This is far from record warmth, but it never got cold this month either, with the lowest being -3.0° on the 29th.

The sunshine total of 121.5 hours is perhaps the most remarkable statistic. Sunshine records date back to 1882, and 2009 ranked fifth: after 1903 (131.6 hours), 1986 (125.2), 1917 (124.9), and 1981 (123.4).

Gavin Miller

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The last rose of summer, Leslie Street Spit, September 2010, photo by Lynn Pady