TORONTO FIELD NATURALIST

Number 615 November 2015

Red-tailed hawk with dinner, photographed by Lynn Pady from her car window on Commissioner St at 7 pm on August 29, 2015

REGULARS

Children`s Corner	13
Coming Events	19
Extracts from Outings Reports	14
For Reading	10
From the Archives	18
In the News	17
Keeping in Touch	12
Monthly Meetings Notice	3
Monthly Meeting Report	7
President's Report	6
TFN Outings	4
Weather – This Time Last Year	18

FEATURES

TFN Volunteers Needed	2
The "Nut Man" of Islington	5
Todmorden Mills Wildflower Preserve	8
Toronto Wildflowers: Genus *Sanicula*	11
Remembering Billie Bridgman	11
TFN Grant Report: Wildflower Specimen Garden at Lambton House	16

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, Nov. 2

NEWSLETTER COMMITTEE

Jenny Bull (co-editor), Vivienne Denton, Karin Fawthrop, Nancy Fredenburg, Elisabeth Gladstone, Judy Marshall, Lynn Miller, Toshi Oikawa, Jennifer Smith,Wendy Rothwell (co-editor).

Printing and mailing: Perkins Services Inc.

BOARD OF DIRECTORS

President & Monthly Lectures	Nancy Dengler	[redacted]
Past-President & Outings	Margaret McRae	[redacted]
Vice-President, Nature Reserves & Outings	Charles Bruce-Thompson	[redacted]
Secretary-Treasurer	Charles Crawford	[redacted]
Communications	Alexander Cappell	[redacted]
Newsletter & Membership	Vivienne Denton	[redacted]
Volunteer Coordinator	Joanne Doucette	[redacted]
Outreach	Stephen Kamnitzer	[redacted]
Webmaster & Newsletter	Lynn Miller	[redacted]
Monthly Lectures & Grants	Lavinia Mohr	[redacted]
Audit & Finance	Anne Powell	[redacted]
Newsletter	Jennifer Smith	[redacted]

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

Note: The TFN office is open on Fridays from 9:30 am to noon.

VOLUNTEERS NEEDED

Volunteering is a wonderful way to make a difference as well as to meet like-minded people. We are a completely volunteer organization and our volunteers do a wide variety of things to make the TFN run. Right now we are looking for volunteers to:

- *help rebuild boardwalks in the Jim Baillie Nature Reserve*
- *take minutes at our monthly board meetings*
- *serve on our Environmental Committee*
- *take notes at TFN's monthly lecture and write report for the Newsletter*

If you are interested in any of these opportunities, or have questions, please contact Joanne Doucette, TFN Volunteer Coordinator, 416-593-2656 or office@torontofieldnaturalists.org

TFN MEETING

Sunday, November 1, 2015

2:30 pm

Participatory Research: Roads, Citizen Science and the War on Science

Dave Ireland, Ontario Road Ecology Group and Managing Director, Centre of Discovery in Biodiversity, Royal Ontario Museum, will explain how road design can help conserve biodiversity.

VISITORS WELCOME!

SOCIAL: 2:00 – 2:30 pm

Due to high cost, TFN has stopped providing beverages. You are welcome to bring your own and to take them into the lecture room.

Room 003, Northrop Frye Hall,

73 Queen's Park Cres East

Immediately southeast of Emmanuel College, south of the Museum subway station exit on the east side of Queen's Park. Enter on 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 Lectures

Dec 6	Biomimicry: Learning from Nature's Designs Richard Aaron, nature educator
Feb 7	Historic Changes to the Flora of the Toronto Area Gavin Miller, Toronto Region Conservation Authority Biologist
Mar 6	Ontario's Environmental Bill of Rights: A Citizen's Toolkit for Change Ellen Schwartzel, Deputy Commissioner, Environmental Commissioner of Ontario
Apr 3	Ontario's Badgers Josh Sayers, Ontario Badger Project
May 1	Ontario's Orchids: Perpetual Beauty Worth All Costs Tom Shields, Southern Ontario Orchid Society

BOOK SALE & ART AUCTION

At our Monthly Meeting on December 6th, there will be a sale of used nature books and silent auction of an art print *Winter Meadow* by Brian Darcy.

Please bring books for donation to the November 1 lecture or to the TFN office on a Friday morning.

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.

Sun
Nov 1
2:30 pm

CHANGE CLOCKS BACK!

LECTURE: **Participatory Research: Roads, Citizen Science and the War on Science**
Speaker: Dave Ireland, Ontario Road Ecology Group and Royal Ontario Museum.
Northrop Frye Hall, 73 Queen's Park Cres E. See page 3 for details.

Tue
Nov 3
9:45 am

TORONTO ISLAND – Birds
Leader: Anne Powell
Meet at the ferry terminal south of Queen's Quay at Bay St. Fare $7.25 adults; $4.75 seniors. Arrive in time to buy ticket and find the group. We will take the 10 am ferry to Ward's Island and return on the 11:45 ferry. Washrooms at mainland ferry terminal. Bring binoculars. Flat surface, mostly paved but some off-path. Not wheelchair accessible. About 2 km.

Sat
Nov 7
10:00 am

ECHO VALLEY – Nut Trees and History
Leaders: Dr. James Eckenwalder, Brian Yawnee and Denise Harris
Meet at the southwest corner of Kipling Ave and Wingrove Hill (north of Burnhamthorpe Rd). We will visit the remains of the unique nut tree farm established by George Corson in the early 1900s. See article next page.
Mostly flat surface with paved and dirt trails. No washrooms. Morning only.

Thurs
Nov 12
1:30 pm

TORONTO'S LANDSCAPE AND BUILT HERITAGE
Leader: Ed Freeman
Meet at the northeast corner of Eglinton Ave W and Bathurst St. We will look at some hills and valleys and an ancient escarpment to learn how they came to be and what has been built. We will end at Dupont subway station. Sidewalks, some hills, one set of stairs (Baldwin Steps). No washrooms.

Sat
Nov 14
10:00 am

TORONTO'S LOST COAST: FISHERMAN'S ISLAND
Leader: Joanne Doucette
Meet at the southwest corner of Munitions St and Villiers St. We will walk along Cherry St to Clarke Beach, along walking trails to Lake Shore Blvd E and Leslie St, and along the Martin Goodman Trail to Coxwell Ave and Queen St E. Total length about 7 km. We will explore the plants, birds and animals along Cherry Beach and the base of the Leslie Street Spit, as well as the history of Fisherman's Island and Woodbine beach, once the south shore of Ashbridge's Bay. There may be muddy areas but the route is easy with gentle slopes and no stairs. Bring binoculars, lunch and a drink.

Sun
Nov 15
2:00 pm

THE GREEN LINE, WESTERLY CONNECTION – Lost Rivers Walk
Leader: Richard Anderson
Meet at Davenport Rd and Caledonia Park Rd (near Lansdowne Ave). The Green Line is an under-utilized open space and natural linkage of hydro and rail corridors, parklands and allotment gardens between the Don, Central and Humber watersheds. We will explore the interfluve between Garrison and Lavender creeks, ending near St Clair Ave W and Old Weston Rd. A joint outing with Toronto Green Community.

Wed Nov 18 10:00 am
LYNDE SHORES AND CRANBERRY MARSH, WHITBY – Waterfowl
Leader: Stephen Kamnitzer
Meet at Lynde Shores Conservation Area parking lot, 1285 Victoria St W, Whitby. By car, take Hwy 401 east to Salem Rd (exit #404), drive south 1 km to Bayly St (regional road 22), east (left) on Bayly St for 3 km to the conservation area. For those without a car, a GO train leaves Union Station at 8:43 am with intermediate stops arriving at Ajax GO station at 9:26 am. Contact Stephen, [redacted] or [redacted] if you need a ride from Ajax GO station. A 3- to 4-hour circular walk of about 8 km on flat, unpaved and uneven surfaces. Washrooms available. Bring lunch, binoculars and coins for parking; also rain jacket, warm clothing and gloves. Visit www.cloca.ca/con_areas/CAlyndeshores.php for more information.

Sat Nov 21 10:00 am
LESLIE STREET SPIT – Nature Walk and Waterfowl
Leader: Stephen Kamnitzer
Meet at the entrance to the Spit at the foot of Leslie St for a circular walk. We will spend about 5 hours exploring the Spit including the somewhat remote southeast corner. Bring lunch and dress warmly. Early dropout possible. Washrooms available. Fairly flat surface, partly paved and partly rough.

Wed Nov 25 10:00 am
HUMBER BAY PARK EAST – Birds
Leader: Doug Paton
Meet at the southwest corner of Lake Shore Blvd W and Park Lawn Rd for a circular walk. Morning only. Fairly flat surface. No washrooms. We may have lunch at Edon Restaurant.

Sat Nov 28 10:00 am
ASHBRIDGE`S BAY – Birds and Plants
Leader: Bob Kortright
Meet at the northwest corner of Lake Shore Blvd E and Northern Dancer Blvd (across from Woodbine bus loop at the southeast corner of Woodbine Park) for a circular walk. Bring binoculars. Morning only. No washrooms. Fairly flat terrain, partly paved.

GEORGE HEBDEN CORSAN: THE "NUT MAN" OF ISLINGTON

George Hebden Corsan was born in 1867, likely in Hamilton, Ontario. He left home at 14 and worked as a farm hand for six years. During this time, he became a vegetarian, believing that the healthiest diet consisted of fresh fruit, vegetables and nuts. While studying to become a doctor in St. Louis, he was bitten by a copperhead snake, and after being deathly ill for months, he was unable to continue his education.

George returned to Toronto and earned a living peddling fruit from a cart at Yonge and Temperance Streets while expounding the health benefits of fruit and vegetables. He also took up swimming and, over time, became an athlete of some renown. He was soon teaching swimming and lifesaving, and lecturing all across North America on a healthy, vegetarian lifestyle. In 1911, George purchased 12 acres of bottom land and hillside in the Mimico Creek Valley, just north of Burnhamthorpe Rd and west of Kipling Ave. Friends picked the name "Echo Valley" for his new farm, which he expanded to 25 acres by 1925.

George joined the Northern Nut Growers Association (NNGA) and, in 1912, planted 15 different kinds of nut trees including walnuts, filberts, butternuts and hickories. Eventually over 400 different varieties were represented on his farm, many resulting from his own experiments in breeding hybrids to produce bigger, tastier nuts for a Canadian climate. In 1928 the NNGA held their convention in Toronto and were amazed at the variety of nut trees thriving there that had previously been thought not hardy enough for Canada: Chinese walnuts, Japanese heart nuts, European filberts, almonds, pecans, sweet chestnuts and rare Turkish tree hazelnuts. People began referring to George as the "Nut Man of Islington," a sobriquet he encouraged.

In addition to growing trees, George had a great interest in birds, and part of his property was set aside as a bird sanctuary and breeding ground. Snow geese, blue geese, pigeons and pheasants were particular favourites of his. He built ponds and filled them with water lilies. In the 1920s George had a regular column in the *Toronto Star* called "Wild Life on the Humber." Then in 1927, Corn Flakes inventor W.K. Kellogg invited George to Michigan to design and build his 850 acre Kellogg Bird Sanctuary. George lived there for several years to oversee its construction and manage the facility.

In 1940, George bought 18 acres in Kendall, Florida, where he grew avocados, coconuts, bananas, and macadamia nuts. Working with the US Department of Agriculture and the NNGA, he opened a tropical nut experimental station on his property. In 1952, he was hit by a car in Miami and died.

Echo Valley was purchased by Metropolitan Toronto in 1959 and turned into a park. **Join us for an outing at Echo Valley on November 7 as we explore what remains of Corsan's nut farm and bird sanctuary (see previous page for details).**

Denise Harris

PRESIDENT'S REPORT

I have just returned from a walk in Todmorden Mills Wildflower Preserve. Along the Oxbow Trail, crimson leaves of Virginia creeper and burgundy ones of white ash lent fall colour to the floodplain forest, and staghorn sumach formed a brilliant margin around the meadow. American goldfinches were feeding in the dry seed heads of the cup plant, and I encountered a young raccoon in a small hawthorn. I was newly impressed by this beautiful restoration of the forests, wetlands and open meadows at Todmorden Mills, all due to the efforts of a very dedicated Volunteer Stewardship Team (see page 8). This jewel-like wildflower preserve is a pre-eminent example of what can be done to re-create and preserve natural habitats. Over this past year I have been thinking that TFN should help raise the public profile of efforts to protect Toronto's natural heritage, and therefore nominated the Todmorden Mills Wildflower Preserve for a Heritage Toronto Award in the Community Heritage category.

During my walk in the Preserve, I visited the white oak planted in the fall of 2013 to commemorate the 90th anniversary of the founding of Toronto Field Naturalists. The TFN white oak was part of the 2013 planting activities in the reserve, funded by TD Friends of the Environment Foundation.

This past year TFN has expressed concerns about the impact of airport runways on wildlife and natural habitats for the Pickering and Billy Bishop Toronto City (Island) airports. The Pickering Airport is of special concern because of its proximity to the new Rouge Urban National Park. In mid-August, Joanne Doucette, Anne Powell and I submitted a letter to Transport Canada about the impact of the proposed Pickering Airport Wildlife Hazard Zone on the new park. This zone, where measures are taken to scare or trap wildlife, is very close to the park, and obviously these activities are incompatible with the purposes of a national park. We asked Transport Canada what steps would be taken to protect park wildlife; also for information about projected airport-generated noise levels and impacts on public enjoyment. We were promised an answer by mid-November. For more information about Rouge Urban National Park and the lands that connect it with the Oak Ridges Moraine, go to www.pc.gc.ca/eng/progs/np-pn/cnpn-cnnp/rouge/index/aspx.

Todmorden Mills Wildflower Preserve.
Raccoon in hawthorn and leaves of the white oak planted to commemorate TFN's 90th anniversary.
Photos: Nancy Dengler, October 2015

Last spring I reported on the meetings of the Stakeholders Advisory Committee for establishing the scope of the Environmental Assessment for the proposed runway extension at Billy Bishop Airport. The design of the Final Environmental Assessment and the Peer Review Report are now complete and both are available at www.bbtcarunwayandjetsea.org. The environmental assessment addresses issues such as air and water quality, noise, public health and the natural environment. The good news is that the geographical scope for assessment of terrestrial habitats and species has been expanded greatly, while aquatic habitats will be assessed in the vicinity of the land mass extension for the proposed runway (200 m at each end).

This past month I've enjoyed a number of TFN outings. It is always a pleasure to meet new (to me) members on these walks, and I am struck by how often they mention the newsletter as a major reason for joining. Even though I've been a member for quite a few years, I always look forward to each issue and especially enjoy the nature photography and contributions from members, including Peter Money's series on Toronto's wildflowers, Harvey Medland's fungal photos, Lynn Miller's *In the News* page, and *Keeping in Touch*. I am very grateful to the co-editors Jenny Bull and Wendy Rothwell and other members of the Newsletter Committee (Vivienne Denton, Karin Fawthrop, Nancy Fredenburg, Elisabeth Gladstone, Judy Marshall, Toshi Oikawa and Jennifer Smith) for providing the glue that holds us together as TFN members – that and our shared love of nature and concern for its protection.

Nancy Dengler

[redacted]

MONTHLY MEETING REPORT

Ashbridge's Bay: The Natural and Human History of a Wetland
October 4, Joanne Doucette, TFN member, naturalist, historian and author

Joanne opened her talk by asking "What did Ashbridge's Bay look like at the start of the 19th century?" An 1802 map by William Chewett shows a continuous sand bar that stretched from Gibralter Point at the west end of what is now Toronto Island to Woodbine Avenue in the east. The combination of habitats – from windswept beaches along the sandbar to open water to marshlands with emergent sedges and floating aquatics – was home to a rich biodiversity of plant and animal life. Open meadows and woodlands along the shore added to the diversity of habitats. Perhaps today's appearance of smaller marshes such as Cranberry Marsh in Pickering or Rattray Marsh in Mississauga give us the best idea of what Ashbridge's Bay looked like at the start of European settlement.

Ashbridge's Bay. Looking n.w. to Toronto skyline in background. Watercolour painting by John Willson, 1900. Collection of Toronto Public Library.

Under natural conditions, Ashbridges Bay teemed with plant life, waterfowl and fish. Wild rice grew in shallow waters and was harvested by native peoples. Piping plovers nested on the beach bar. Corey's bitterns (a rare colour morph of the least bittern) hunted among the emergent sedges and cattails. Atlantic salmon, pike, bass and muskellunge filled the bay. Migratory ducks formed huge rafts on the open water and filled the air in flight on their migratory journeys in spring and fall.

Joanne provided first-hand accounts of the plenty provided by Ashbridge's Bay in the mid-19th century, bringing the time when nature seemed limitless and "there for the taking" vividly alive. Bountiful fish seemed to jump onto a simple hook baited with worms, so many that one fisherman could keep fishing all day without moving from his spot on the shore. Whitefish were harvested commercially, packed in barrels and shipped to England. Turtles were so plentiful that a single person could harvest over 100 turtles in a day, collecting them in a burlap bag to take to market for use in turtle soup. Muskrats were shot or trapped by the thousands in a single spring.

Joanne reminded us that, throughout most of the 19th century, naturalists were hunters too. Ernest Thompson Seton, a well-known naturalist who spent his youth and young adulthood here in Toronto (and was a speaker for TFN in 1928 when his nephew Stuart Thomas was TFN president), loved to hunt in Ashbridge's Bay. His stories, often told from the perspective of the animals involved, influenced readers to look at nature more sympathetically. Other developments, such as the availability of adjustable binoculars in 1894, the Kodak Brownie in 1900, and the first Peterson Field Guide to Birds in the 1930s, made it possible to study nature without having to kill it first.

The 19th century perspective that nature was boundless made it easy to misuse it. Asbridge's Bay was not only over-used for fishing and hunting, but also became a dumping ground for waste of all kinds. One of the biggest polluters was Gooderham and Worts Distillery. In the 1880s, the distillery used mash, a by-product of alcohol production, to feed cattle. The cow byres were adjacent to the lower Don River, and liquid and solid waste was pumped directly into Ashbridge's Bay. Human sewage was a major problem too and the typhoid epidemic of 1909 provided the impetus for Toronto to finally build a sewage plant just south of Eastern Avenue; its effluent finally reached the bay as well. Overuse and misuse finally had made Ashbridge's Bay unsalvageable. The fish and birds were gone and what was left was unsanitary. The formation of the Toronto Harbour Commission in 1911 with a mandate to fill in the Bay and develop the port lands seemed like a positive solution to the pollution for many people in Toronto.

Now one hundred years after Ashbridges Bay was filled in, our perspective on the natural world has changed entirely. We no longer see nature as bountiful and limitless, with endless resources there for the taking. In Joanne's words, there has been a major paradigm shift toward seeing a "blue marble world" where nature is very finite, fragile and in need of our stewardship.

Continued on page 17

TODMORDEN MILLS WILDFLOWER PRESERVE WINS AWARD!

Since 1991, the Todmorden Mills Wildflower Preserve (TMWP) Stewardship Team and other volunteers have restored 10 hectares of degraded habitat to a more healthy natural condition. The TMWP has just received a Community Heritage award from Heritage Toronto for its achievements in preserving natural heritage, along with special recognition for its city-wide significance. Paula Davies accepted on behalf of members of the TMWP Volunteer Stewardship Team. The following is extracted from the nomination submitted to Heritage Toronto by the TFN The following is extracted from the nomination made by TFN to Heritage Toronto for its Community Heritage Award.

The idea for a wildflower preserve at Todmorden Mills came from two visionaries, well-known conservationist Charles Sauriol and past-president of the Ontario Horticultural Association David Money. They were interested in bringing back native wildflowers such as white trillium, jack-in-the-pulpit and bloodroot. Todmorden Mills is a special site because it has a variety of habitats representative of the landscape that would have been part of the day-to-day existence for indigenous people and, later, early settlers.

The TMWP Committee was established in 1991 with the primary goal to change an impoverished site, lacking species diversity and dominated by invasive species, to a more diverse healthy community with many native species holding their own. The site was degraded with illegal dumping of garbage, plants and garden waste, stones and debris from construction projects, and weed trees such as Norway maples and hybrid willows with few native trees or other plants.

It has taken hard work and a regular commitment of time by TMWP stewards to make a difference after 300 years of neglect. Hundreds of volunteers have worked to remove garbage, plant native species, restore native habitats, improve trails, control invasive weeds, monitor wildlife and provide guided walks of the Preserve. In 1996, a pond was created to provide wetland habitat, now a breeding spot for dragonflies, green frogs and several varieties of fish. The seepage from the springs on the slopes feeds the pond and the oxbow into which it now flows.

Photo: Paula Davies

Photo: Margaret McRae

In 2000, with sponsorship from business and government, the group created the Oxbow Trail, a 0.5 km loop trail with bridges, boardwalks and plantings. It winds through the Preserve near a remnant reach of the Don River that was historically part of the river in pre-settlement times. Use by wildlife has increased and there is now a multitude of both resident and visiting species: yellow warblers, gray catbirds, great egrets, black-crowned night-herons, great blue herons, blue-gray gnatcatchers, groundhogs, rabbits, deer, white footed mice, milk snakes, little brown snakes, garter snakes, and insects including many butterfly species.

The TMWP Committee has exhibited high standards for restoration work. Plants are sourced from nurseries

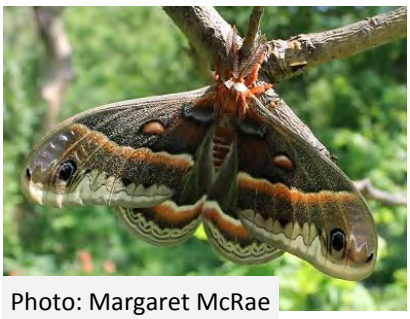


Photo: Margaret McRae


Photo: Margaret McRae

specializing in native plants and plant selection is guided by provincial and regional plant lists that indicate species that would have been found historically in Toronto. The Stewardship Team carries out field experiments and applies current restoration knowledge as much as possible.

A major challenge for restoring natural heritage in the Preserve is invasive plant control. The Stewardship Team has developed methods of invasive plant control and field work that have been shared with other stewardship groups and land managers in the city, such as the High Park Volunteer Stewardship Team. One example is the Black Locust Experimental Area where invasive garlic mustard was removed, the soil amended, and aggressive native species such as may-apple, Virginia waterleaf, Canada anemone and violets planted.

A second example has been to control giant reed grass (*Phragmites*) in the pond area. The first phase involved cutting giant reed back over a whole season; the second covering it with landscape fabric. Tools have been repurposed to cut back giant reed underwater, the most difficult area to control. In another location, a large area of giant reed has been cut back, and York University Environmental Studies students have replanted it with aggressive native white cedars that will shade out the *Phragmites*. Monitoring and maintenance will be needed for several years while the plants establish. Information gained from this project will be shared with the Ontario Invasive Plant Council and the *Phragmites* Working Group.


Photo: Paula Davies

Visitors gain an appreciation of Toronto's natural heritage right on their doorstep. The TMWP trails are easy to find and walk on one's own, but numerous guided walks help to showcase the importance of keeping wild and natural places in the city**.** A trail brochure points out the many habitats in the Preserve: floodplain forest, pond, forested wetland, upland forest, the Don River oxbow and sunny meadows along the way. The Stewardship Team provides an opportunity for school groups, scout troops, community groups, families and the general public to experience stewardship of our natural heritage first-hand by planting native wildflowers, trees and shrubs.

TMWP maintains a website that includes field checklists of commonly encountered plants and animals, as well as information on the restoration and the natural heritage of the Don Valley. Find out more about TMWP at www.hopscotch.ca/tmwp

Clockwise from bottom left:

Charles Sauriol and David Money; bridge on Oxbow Trail; marsh marigolds; volunteers from York University planting native white cedar in an area where invasive phragmites had been cut back; Paula Davies, TFN member and TMWP Committee chair, beside TFN's 90th anniversary commemorative white oak; deer; cecropia moth.


Photo: Margaret McRae


Photo: Margaret McRae

FOR READING

Dam Builders, The Natural History of Beavers and their Ponds

By Michael Runtz
298pp, Fitzhenry & Whiteside, 2015

Michael Runtz is an instructor at Carleton University and a highly respected naturalist, nature photographer, and author of books on moose, wolves, birds, flowers, and Algonquin.

Michael's photography skills are much in evidence in this beautiful and comprehensive book. Although the principal focus is on our national symbol, there is also considerable detail on the Eurasian beaver. A fascinating introduction explains beavers' evolutionary history, which included giants and some much smaller than today's, and some that used their teeth for burrowing rather than for woodcarving.

The industrious, peaceable beaver is a natural emblem of Canada and Canadians. It is central to our history (the fur trade) and culture (our nickel, the first animal on a Canadian stamp, Grey Owl's pets, official emblems of Parks Canada, Roots, and the Hudson Bay Company). It is also known for flooding roads and destroying trees. However, we cannot put the blame on beavers for doing what they evolved to do. We should remember that they will always feed on willows or poplar/ cottonwood/aspen when they are available, and all of these members of the willow family will grow back from stumps. As for flooding roads, we just have to influence the beavers to build dams where roads will not be flooded or design the roads accordingly. Beavers will not generally attempt to live where there is not an ample supply of willow, and will attempt to dam any place where they can hear water running, if it might also be a good place to live. Speakers playing the sound of running water have been used to dragoon beavers to do their dam-building to serve our purposes and theirs.

This is not just a pretty book – it contains a lot of detail on beaver life history and its importance to hydrology (flood control, water filtration, raising the water table…) and ecology (feeding wolves, providing habitat for muskrat, mink, moose, water plants, birds, reptiles, frogs and salamanders…). Even trees killed by flooding are invaluable for woodpeckers and other cavity-nesting birds, and for heron nesting colonies. Highly recommended for beaver enthusiasts, which we as Canadians should all be.

Bob Kortright

Beaver drawn by Eva Davis

Trees Up Close: The Beauty of Their Bark, Leaves, Flowers, and Seeds

By Nancy Ross Hugo (author), Robert Llewellyn (photographer). Paperback (2014)

This is a charming book, particularly for anyone who likes trees. Lots of information is beautifully explained and illustrated. Most species are within our range. This book should inspire anyone who reads it to look at trees much more carefully, and throughout the year.

Helen Juhola

Todmorden Mills, A Human and Natural History

by Louise Herzberg and Helen Juhola
1987, TFN, Ravine Study series

As Todmordon Mills Stewardship Team is being nominated for a Heritage Award by TFN (see pp 8-9), members may be interested to read TFN's study of Todmorden Mills from 1987, part of the ravine series.

The authors met at a "valley rally" of the Friends of the Valley, an organization formed by citizens concerned about the proposed development of the Don Valley Brick Works adjacent to Todmorden Mills. In the introduction the authors say: "Unlike other areas chosen…for study, this area is not a very "natural" one. Other reports have described valley lands which have remained more or less isolated from the urbanizing influence of the surrounding city. This area has not!"

As well as providing a history of the area, there are annotated lists of the plants and animals of Todmorden Mills in 1986 that provide a baseline record. Another list documents TFN activities at the site that year including events to raise awareness, gather information, and clear up the site which was degraded by dumping.

Author Louise Herzberg died recently. We will be "Remembering…" her in the next newsletter.

The study is available from TFN office.

TORONTO WILDFLOWERS: GENUS *SANICULA*

The genus *Sanicula* (sanicle or snakeroot) is part of the Apiaceae, older name Umbelliferae (carrot family). This huge family, of about 400 to 450 genera and 3600 species, is of economic/agricultural importance not only for carrots and parsnips but for such foods as celery and angelica, and for spices and herbs including caraway, cumin, anise, dill, chervil, and fennel.

The two *Sanicula* species native to Toronto are *S. marilandica* (black snakeroot or common sanicle) and *S. odorata* (clustered snakeroot). The latter was listed as *S. gregaria* in the TFN's *Vascular Plants of Metropolitan Toronto* (2nd ed., 1994). The name snakeroot has been applied in North America to these two species and two unrelated species, one (white snakeroot, *Ageratina altissima*, formerly *Eupatorium rugosum*) in the aster family and the other (Seneca snakeroot, *Polygala senega*) in the milkwort family. Roots of all, except perhaps highly poisonous white snakeroot, were used as antidotes to snakebite. *Sanicula* (and the name sanicle for a European *Sanicula* species) come from s*anare,* Greek for "to heal." In the Middle Ages in Europe, sanicle was synonymous with healing. J. E. Stevens, in *Discovering Wild Plant Names* (1973), quoted an English country saying, "He who keeps sanicle laughs at the doctor."

S. marilandica grows up to 1 m tall and has greenish white flowers in compound umbels. It was seen in flower in the Rouge in late June. The TFN reported it as uncommon and present in Lambton Woods (Humber), Wilket Creek (Don), the Rouge Valley and High Park. The locally rare yellow-flowered S. *odorata* was reported only in the Don drainage at Wilket and Taylor Creeks. Apart from flower colour it is very similar to *S. marilandica.*

The range of *S. marilandica* includes all Canadian provinces and all of the U.S. except south-central and southwest states. *S. odorata* is confined to eastern North America, in Canada from Ontario to Nova Scotia, and in the eastern half of the U.S.

I found these species both challenging to find and to identify. Should you find the rarer species, or new locations for either, please report them to the TFN.

Article and photos by Peter Money

Left: Black snakeroot or common sanicle, *Sanicula marilandica*; below: clustered snakeroot, *S. odorata*

Remembering Billie Bridgman

TFN member Billie Bridgman served on the Board from 1983 to 1985, was the Program Convenor for a year, and led many outings in Rowntree Mills Park where she "shared her love of the natural world with others." She died in September.

Her parents were naturalists interested in all aspects of nature. TFN's fascinating study *Humber Forks at Thistletown* by Joan O'Donnell relates how an unusual fossil, a large clam described by a ROM curator in the *Journal of Paleontology,* had been collected by Billie's mother on their property at Thistletown.

With parents who were naturalists and many nature-loving friends visiting their home, Billie grew up "feeling at home in the natural world." She wrote an introductory piece in the *Humber Forks* study called "Growing Up by the River – in the 1920s", and about her "beginnings" as a naturalist for the TFN newsletter. See From the Archives, p 18.

KEEPING IN TOUCH

Memories of George Fairfield

When the Jim Baillie Nature Reserve was purchased by the TFN in 1970, George Fairfield was an employee of Ontario Hydro, whose job involved labour relations, but earlier in his career he had been a surveyor for them. He borrowed surveying equipment from Ontario Hydro and, with the help of a few volunteers, surveyed the perimeter of the property. I took a picture of George in hip waders carrying a transit through the middle of Uxbridge Brook, and donated it to the TFN photo collection.

The first time I attended a TFN outing at Toronto Island, the instructions said "lunch optional" so I stupidly took no lunch. At noon the outing was not over and I wanted to continue into the afternoon but I had no lunch. The leaders were George Fairfield and his wife. They took pity on me and each contributed one of their sandwiches so that I would not starve.

Jack Gingrich

Ed. We have found two photos in the Slide Collection of George surveying at JBNR, taken by Jack in 1970. Thanks for the reminder!

In September, this migrating flicker showed up on our patio, which offered a few tasty insects, and then made his way to the lawn to enjoy a full meal of ants. He was too busy eating to give us a "front" view, but he was still a beauty.

We were on a September bird walk sponsored by the Toronto Ornithological Club in Lambton Woods, Etobicoke when we saw these two beautiful long-billed dowitchers. I'd never seen these birds before – serene and elegant in the early morning light.

Carole Giangrande

.....

We planted a pollinator garden this year: lots of velvet Queen Sunflower, heirloom sweet peas, fragant and colourful, bunches of zinnias and beds of calendula. Full sun, lots of watering but few winged insects appeared. The bees were sluggish and the few that visited seemed almost disabled, motionless on the flower heads. Even fewer ants, moths, butterflies or flies. Our garden is at College and Spadina with lots of construction nearby all summer. Perplexed. Comments anyone?

Gail Geltner

Ed: One possibility, reported last spring, is that many garden centres were selling plants that had been treated with "neonics", a relatively new class of pesticides lethal to many insects.

Continued on next page

CHILDREN'S CORNER: Winter's Coming!

Which One? - "What Animals Do In Winter"

There are three main ways that wildlife can make it through the cold months:

(A) adapt – by changing their bodies, storing food in fall, or other actions

Garter snake. Photo: Peter Heinz

(H) hibernate – by going into a long, deep sleep with a lower body temperature and slower breathing

(M) migrate – by moving to a warmer climate or one with more food available

Which survival method do you think is being described?

1) By November, a group of garter snakes is sound asleep in its den. ( )
2) Squirrels dig through the snow to find the nuts they have buried. ( )
3) Big brown bats slumber all winter in caves. ( )
4) Monarch butterflies fly to Mexico in the fall. ( )
5) A chickadee lowers its body temperature during cold nights to save energy. ( )
6) Long-tailed ducks from the Arctic arrive here in the fall. ( )
7) A turtle lies dormant at the bottom of a pond. ( )
8) Cedar waxwings fly south to spend the winter. ( )
9) Snowshoe hares are brown in summer, but grow white fur to help them hide in the snow. ( )

Answers page 19

What's the Difference… *between a frog and a toad?*

Though **toads** are classified in the same order as **frogs** (Anuran, or "tail-less amphibians"), there are several differences between them:

Frogs have moist skin and narrow bodies.
Toads have dry, bumpy skin and wider bodies.

Frogs take long, high jumps.
Toads… not so much; they walk or take short hops.

Frogs need to live near water.
Toads often travel away to gardens and yards.

Frogs can be food for many predators.
Not many animals want to eat **toads** because their skin has a bitter taste and can be toxic. (*But just in case you're wondering... **Toads will not give you warts!**)*

Overwintering…
Frogs spend the cold months at the bottom of ponds, beneath the ice.
Toads bury themselves on land by digging into sandy soil until they are beneath the frost line.
***Exception…* Wood frogs** stay in sheltered spots on land. If their bodies freeze, they produce special sugars that protect their cells from damage.

Judy Marshall

American toad

Green frog

Photos by Margaret McRae

KEEPING IN TOUCH, *continued*

Fred and Norah Urquhart

A new article "Where Do You Go, My Lovelies" about Fred and Norah Urquhart was published in the online fall issue of University of Toronto magazine at **magazine.utoronto.ca/blogs/**

It was a year ago September 30th that the Urquhart Memorial Garden was opened at the University of Toronto Scarborough (photo caption says Fred Urquhart Memorial Garden). The Urquhart Butterfly Garden is located near Dundas, Ontario.

I planted milkweeds in this memorial garden last fall, along with Interim Principal Dr Bruce Kidd (soon to be invested as the 10th principal at U of T Scarborough).

Not sure I said everything the article says I said!

Don Davis

EXTRACTS FROM OUTINGS REPORTS

Pollinators, Todmorden Mills and Brick Works, Aug 9. Leaders: Dave and Norma Barr. The weather was prime for pollinators: a high of 24°C, moderate humidity and a light breeze. We started at the wonderful wildflower garden at Todmorden Mills. There, many bumble bees were foraging on a magnificent stand of native cup plants. We also saw Canada goldenrod in bloom, as well as lots of Queen Anne's lace and common milkweed, but no monarch eggs, caterpillars or chrysalids. Two small stands of pearly everlasting were still faring well. Just a few weeks before, these plants had yielded numerous caterpillars of the American painted lady butterfly. Going south to the Brick Works, we saw bouncing-bet, grass-leaved goldenrod and wild grapes as well as a couple of species of skipper butterflies. The wildflower garden was filled with bee balm, Oswego tea and other pollinator favourites. This garden also attracted bumble bees, along with honey bees, a great golden digger wasp and many smaller workers of the invasive European paper wasp. At our last stop, beside a clump of cup plants, a monarch butterfly glided

by. This is one of the few adults seen in Toronto this summer. During a quick demonstration of insect photography using a digital camera, Dave was lucky to capture this vision of a bumble bee launching itself into flight, backwards off the cup plant blossom upon which it had been foraging.

Wilket Creek Park, Aug 12. Leader: Tom Atkinson. The lower 500m of Wilket Creek Park is undergoing significant man-made change intended to improve and stabilize the creek flow in the park. Scouring of the stream bed has resulted in at least a 1.5m lowering over the past 25 years. So the creek is being widened and large boulders are being added on bank sides and stream bed. Upstream this work has been done and the short-term results have been beneficial. Another human-caused change to the park is the vast set of off-road (pedal) bike trails, with concomitant erosion having started. This problem was reported to Councillor Jaye Robinson who forwarded the email to a municipal civil servant who has never gotten back with any solution. There are many - and I mean MANY - dead or dying ash trees. The city has marked both living and dead ones with a red paint circle. Such trees will be culled. It makes no sense to take live ones out as some may well have resistance to the emerald ash borer.

Heritage and Trees, Glendon Campus, Aug 15. Leader: Nancy Dengler. We looked at about 40 tree species growing on the tablelands of the Campus, including the living fossils ginkgo and dawn redwood. Although now we regard both as being from Asia, they were both native to Canada in the past. We looked at photos of ginkgo leaf fossils from B.C. dating to the Eocene and dawn redwood fossils from Axel Heiberg Island dating to the Paleocene. We also looked at the small woodlot Lawrence's Bush, a remnant of the pioneer farm era, trees planted during the 1950s when Glendon was a short-lived U of T Botanical Garden, and plantings during the last 50 years while the property has been part of York University.

Lost Rivers, Foxwell Allotment Gardens, "Toronto Carrying Place," Smythe Park, Aug 16. Leaders: Helen Mills, Madeleine McDowell, Carmen Miloslavich, Brian Maclean. We introduced the Rivers Rising project and the ways the project will connect people, food, water, nature and heritage. We began with a stroll through the United Nations of food plants that can be found at the Jane Woolner allotment gardens: okra, pigeon peas, bitter melon, yams, yard long beans, callaloo, grapes, raspberries, strawberries and more. Carmen introduced the York Community Garden and the plants they are growing: corn, beans, potatoes, peppers, tomatoes, herbs, sunflowers, various brassicas, cucumbers, herbs and native butterfly plants. Helen introduced the landscape, the Humber sandbar, the creeks that flowed from here through High Park, Black Creek and Lavender Creek to the north of the sandbar. Madeleine introduced the site through 11,000 years: the arrowheads found by Foxwell when he ploughed the fields, the Carrying Place Trail, then later the story of the sand quarry, the spring-fed ponds in Conn Smythe Park, and the story of Simcoe having lunch by Black Creek on his first trip north with the Mississauga. Brian introduced First Story and the First Story app, and talked a bit about indigenous agriculture on the Humber. We saw tremendous trees: black walnut, black and other oaks, sugar maples; a huge stand of skunk cabbage in the woods behind the ponds; a great blue heron; and a turtle (probably snapping).

Rouge Park, Aug 22. Leader: Jonathan Harris. A stop at the viewing platform on the Vista trail resulted in finding some narrow-leaved mountain mint (*Pycnanthemum tenuifolium*), an unusual species for Ontario, at the top of the Little Rouge River bluff. We made our way through meadow dominated with goldenrod before entering a large swath of deciduous forest of sugar maple and other hardwoods. An

eastern wood-pewee was heard singing and came close for a good visual before heading further into the forest. It was recently designated Of Special Concern under the Endangered Species Act, 2007. Other birds included gray catbird, American goldfinch, and cedar waxwing. At Twyn Rivers Drive, we ventured onto the Orchard trail passing though coniferous forest, swamp and meadow marsh and eventually back into deciduous forest. Around the man-made wetland off the old Beare Road Landfill access, wildlife activity was limited except for a few turtles basking. We did come across a small patch of restored prairie containing big bluestem, Indian grass and dense blazing star (*Liatris spicata*).

High Park, Sept 12. Leaders: Joanne Doucette and Michelle Dileo, President, Society for Conservation Biology, Toronto. Michelle is a PhD student in the Dept. of Ecology & Evolutionary Biology at the University of Toronto whose research examines how fragmented landscapes shape gene flow & connectivity in calcareous grasslands in Europe. Michelle and I covered the history of High Park's oak woodlands and oak savannah as a remnant of the prairie peninsula that occupied a much larger area of southern Ontario when the climate was hotter and drier. We discussed the impact of fragmentation (shrinkage of the total area of the ecosystem dividing the remnant into smaller areas): the isolation of species through lack of corridors between areas of oak savannah and the impact on species, including the extirpation of such species as the Karner blue and frosted elfin butterflies. High Park is an excellent example of how human settlement and use divides an already fragmented and diminishing ecosystem into smaller and smaller fragments through running roads through the park and the establishment of unofficial foot paths crisscrossing the park. The implications of fragmentation are easy to see in the increase of the edge effect and the reduction of available habitat, as well as the increase of invasive species like dog strangling vine.

The four indicator species we dealt with mostly were the "big four" grasses: big bluestem, Indian grass, switch grass and little bluestem. We saw these at their peak in the Area of Scientific and Natural Interest at the northeast corner of High Park. We were also lucky to find an active coyote den. The sharp-shinned hawks were flying in low and in good numbers; warblers were moving through the trees; and the grey-headed coneflowers, goldenrods and asters were blooming in profusion. We talked about the rare and uncommon plants. Nancy and Ron Dengler, Roger Powley, Mary Taylor, Karen Yukich (High Park Nature), and others contributed greatly, bearing witness to the fact that, not only is the oak savannah a community of complex and wonderful individuals, but so is the community of naturalists! We defined oak savannah, talked about the decline in black oaks, and the restoration efforts at work in High Park, including the use of fire, planting of native vegetation, control of invasive plant species, and improving the habitat for terrestrial wildlife. In keeping with the goal of minimizing the damage created by trail use, participants were strongly encouraged to stay on the trail itself. In places where the group was strung out in a long linear chain and it was impossible to hear the leaders from the back or even middle of the group, we encouraged the naturalists in the group to share information where they were rather than spread out and trample native species (many of which are rare and at risk).

Humber Botanical Garden and Arboretum, Sept 19. Leader: Rachel Gottesman. The lovely plantings of annual flowers such as nicotiana, lantana, coneflowers and various purple flowers attracted numerous monarch butterflies, cabbage whites, and a couple of clouded sulphurs. Also noted were magnolias, gingko, larch/tamarack, English oak, tricolored beech, cherry, Turkish hazel, catalpa and white ash. Leaving the garden, we headed through the remnant of old growth forest, where some trees were labelled or had QR codes linked to a page on the website of ACER* which provides details on that tree. Reaching the bottom of the ravine, we walked east along the Humber River where we saw or heard chickadees, goldfinches, blue jays and mallards. Taking a bit of a detour to a small wetland we saw meadow-hawks and twelve-spotted skimmer dragonflies. Along the river were some new plantings and some opportunistic trees, such as sumac, bitternut hickory, poplar, spruce, hawthorn, mountain ash and silver maple. Climbing back up the hill, we passed fir, cedar, sweet gum and buckeye, as well as numerous apple trees and some chokecherry.

The “Big Four” grasses drawn by Steve Varga.
Left: Indian grass, little blue-stem (from “Plant Communities of High Park,” TFN 338, 1981)
Right: big blue-stem and switchgrass (from *Toronto Islands: Plant Communities...,* TFN 1987)

TFN GRANT REPORT:
Wildflower Specimen Garden at Lambton House

Historic Lambton House, by the Humber River, is now home to a Wildflower Specimen Garden based on the 1866 drawings of wildflowers from the Dundas and Humber area by Agnes Moodie Fitzgibbon. These drawings were published in the first book of its type produced entirely in Canada, *Canadian Wildflowers*, with text by Catherine Parr Traill.* It contains 10 plates featuring 30 species.

This Heritage York project was made possible by a grant from TFN, without which participation from City of Toronto Parks and the Community Gardens Program would not have taken place. Parks and local volunteers prepared the ground. A sturdy cedar 'post and paddle' fence resembling that of a sheep paddock was designed and installed. With the help of Solomon Boye, Black Creek Pioneer Village supplied cedar logs to demark the paths, and volunteers set them in and placed wood chips to form pathways. Volunteers also installed edging between the lawn and the garden, which is watered by an in-ground watering system.

The garden was designed by Master Gardener Peggy Mooney. Plant specimens were sourced for spring planting by Gaspar Horvath of Black Creek Project. Community volunteers planted the garden and have been weeding and caring for the garden over the summer, even in the extreme heat. At the end of September, the harebells (*Campanula rotundifolia*) and black-eyed Susans (*Rudbeckia hirta*) continue to bloom. The early wild rose (*Rosa blanda*) is spreading, as is the purple flowering raspberry (*Rubus odoratus*), which produced a lot of fruit. Five of the rarer specimens were unavailable for spring planting – we hope they will arrive for the fall. Native shrubs or small trees will be planted along the outside of the fence to provide moderate shade.

The garden has generated a lot of local interest. In late June there was an article in the Toronto Star. The baby paper birch in the garden will be 'cached' by ACER (www.acer-acre.ca/treecaching) in time for the 400th anniversary of Etienne Brule's journey down the Toronto Carrying Place. An educational brochure on Aggie's Wildflower Garden will be the next step, and all will be welcomed to see the garden at next year's annual Aggie's Wildflower Walk on Mothers' Day.

Madeleine McDowell

Above: Madeleine McDowell with black-eyed Susans and the "paddock" fence. Photo: Jenny Bull

Below: Harebells still blooming in September. Photo: Wendy Rothwell

* Ed: An excellent book about Catherine Parr Traill and her sister Susanna Moodie, Agnes Fitzgibbons' mother, is *Sisters in the Wilderness* by Charlotte Gray. It includes a section on the production of *Canadian Wild Flowers*. To see some of Agnes' colour plates online, search on Canadian Wildflowers Agnes Fitzgibbon and click on Images.

IN THE NEWS

Rocky Mountain Bees Adapting

A recent study of bees in the Rocky Mountains has shown that the tongues of two species have become shorter over the last 40 years, enabling them to get nectar from a wider variety of flowers. This adaptation has occurred because the deep-nectar flowers are in short supply due to warmer, drier weather caused by climate change. The change could be measured because area bees were archived 40 years ago and that allowed for the comparison with today's bees. Although this is positive news in that it shows that the bees are adapting relatively quickly to environmental changes, it also is problematic in that it puts even more stress on the deep-nectar plants which don't get pollinized.

For more information see www.nature.com/news/bee-tongues-tell-a-tale-of-climate-change-1.18430

Southern Ocean Has Doubled its Intake of Greenhouse Gases

The Southern Ocean has always been an important carbon sink, soaking up billions of tons of carbon dioxide annually. In the 1980s and 1990s the ocean's ability to uptake carbon was decreasing and it was predicted that this decline would continue. A recent study in *Science* that used millions of field observations to get a more comprehensive view has found that the Southern Ocean has increased the amount it is absorbing by almost double that of the last decade. This is good news since greenhouse gases are the most significant driver of climate change. However, the study also noted that the ocean's ability to absorb carbon shouldn't be taken for granted as it can change again.

Disposables Increasing Amount of Garbage

Statistics Canada's latest data show that the amount of trash we are producing is growing despite improvements to recycling and composting programs. The culprit appears to be disposable products that are appearing on store shelves in ever increasing numbers.

Disposable coffee pods have received the most criticism (and for good reason) but many other single-use products are filling up our landfills or ending up in the environment. Disposable cleaning wipes have been found in large numbers along the Don River during Great Canadian Shoreline clean-ups. Single-serve food is often wrapped in non-recyclable throw-away plastic.

Unfortunately disposable products are even worse when you consider the amount of energy required and pollution produced in manufacturing compared to making something reusable. The best thing to do is not to purchase single-use or disposable products.

LED City Street Lighting

Cities are starting to switch their street lighting over to LEDs now that barriers have been overcome by technological improvements. Trials have shown energy savings of 50-70% with LED street lighting. Los Angeles, which started installing 140,000 LED street lights in 2013, has already reported energy savings of 63%.

LEDs provide more directed light than traditional street-lights, so could reduce light pollution if used properly. But if installed so that their light goes up (directly or by reflection) then they increase light pollution as they emit more blue and green light than high-pressure sodium lights. They don't emit ultraviolet light, which makes them less attractive to nocturnal insects. They are also more environmentally friendly when disposed of or damaged, as they don't contain mercury, lead or poisonous gases.

Mississauga has replaced over 40,000 streetlights with LEDs and Grimsby upgraded more than 2,600 lights to LEDs. Toronto doesn't own its streetlights. It sold them to Toronto Hydro in 2006 and rents them back. The current agreement between Toronto Hydro and the City will be re-negotiated in 2016, which gives the City an opportunity to look into upgrading our streetlights to LEDs.

Lynn Miller

MONTHTHLY MEETING REPORT, *continued from page 7*

The world of the great marshes at the mouth of the Don River are gone, but small marshes and their denizens live on at locations on the Toronto Islands and Leslie Street Spit. Joanne encouraged us to learn more about the wetlands that we have now, starting with the TFN publication *Toronto Island: Plant Communities and Noteworthy Species* by Steve Varga (1987). Because of the ever-changing nature of wetlands, she challenged TFN to update this publication to reflect current conditions.

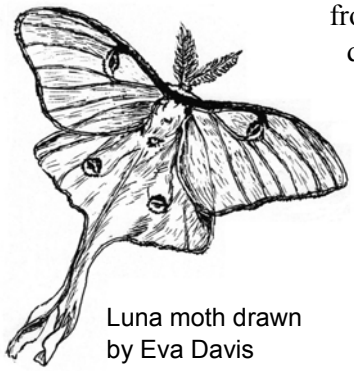
More information about the human and natural history of Ashbridge's Bay can be found in Joanne's book *Pigs, Flowers and Bricks* (available at Toronto Public Library) and on her website leslievillehistory.com.

Nancy Dengler

FROM THE ARCHIVES

Extracted from "Beginnings" by Billie Bridgman
(see Remembering…, p 11)
Beginnings was a series of articles in the newsletter about how members became involved with nature.
From TFN 411, April 1990

...We finally settled down in Thistletown on the west branch of the Humber River; and from age six I became engrossed in the wonders of nature. Each spring I kept track of the birds in the area. Following the same route each day I observed their habits and habitat, learned their songs, and watched their nest-building and child-rearing. I actually saw a catbird's nest with a scrap of newspaper woven into it which said "House for Rent". I agonized with the yellow warbler pair when they found a gross cowbird's egg in their dainty nest; and was relieved at their clever solution to the problem - to build a false floor over the offending egg.



Luna moth drawn by Eva Davis

For a few years their world was my world. And all interesting details were reported to Angus, a bright young man who had been crippled and blind since the age of eight. In good weather he lay...under the maple tree near the community pump, and everyone stopped to talk. He liked to have everything described in great detail – the feeling of holding a fluffy new sandpiper chick; how silly the parent killdeer looked, pretending to have a broken wing in order to lure me away from her four unprotected eggs placed among the stones by the river; the vivid colours of the oriole that came to pull off the coloured yarn from our clothesline for its hanging nest…

Some of my outdoor experiences became speeches given at the School Fair… No helpful notes were needed; my talks were inspired by daily experience. And were delivered with youthful passion in the autumn sunshine…

During the long, barefoot summers I collected – for the school fair – pressed weeds, weed seeds, insects, butterflies and moths. This activity may be frowned upon today, but at that time it was an early learning experience…

There are scores of vivid memories of that interesting childhood. Once, in the northern woods, we happened upon a huge ichneumon fly drilling with coiled ovipositor into a fallen log – an astounding sight highlighted by a shaft of sunlight. One sparkling, golden spring morning we visited our favourite ox-bow marsh on the very day when the grotesque dragonfly nymphs were climbing the cattails from the bottom of the pond, and splitting down their backs to release the shimmering dragonflies which sat drying their wings in the sunshine, then sailed off on the breeze - not one, not two, but dozens of them! What a miracle to place a female luna moth on the inside of the screen door at night and find a male luna on the outside the next morning! And such a wonder to a child to listen to and feel the life stirring within a cocoon, and soon afterwards watch the emerged wet mass quiver and grow into a huge and beautiful moth! Once I lay on the forest floor and watched a bee force itself into a bottle gentian flower in order to pollinate; and later used the incident as a theme for a childish and dramatic composition concerning a bee which found itself trapped therein. I had to prove to my skeptical teacher that there actually was such a flower!

… During those early years, many people helped to create in me a perpetual sense of wonder and excitement concerning the natural world around me, and indeed daily life itself. They gave me a gift to cherish. I'll always be grateful to them. I never walk in the woods, fields, or along the streams without a strong sense that there will be something exciting around the next bend, and very often there is!

WEATHER (THIS TIME LAST YEAR)

November 2014

November was a cold month; if anything, winter began even earlier than last year. The monthly mean temperature of 2.8° downtown and 1.9° at Pearson Airport was about 2° or slightly more below the long-term normal and the coldest since 1996. Precipitation was slightly below normal but snowfall somewhat above normal. Downtown had 10.0 cm of snow as opposed to the average of 7.4 cm, while Pearson had 14.5 cm (average 7.8 cm). These were the highest totals since 2002.

There was a long cold period from November 12 -28, with briefer mild spells. It was remarkable that winter conditions actually arrived before the Santa Claus Parade (which was on the 16th and was accompanied by accumulating snow). There were six days where the temperature stayed below freezing all day at Pearson Airport, including a continuous period from November 18-21. There was snow on the ground from November 17-22.

Brief warm spells brought temperatures into the mid or upper teens several times during the month. Downtown rose to 16.0° on the 11th, while Pearson reached 18.3° on the 24th.

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.

Jim Baillie Memorial Bird Walks – Toronto Ornithological Club

Aimed at the intermediate birder, but beginners also welcome. Free to the public. Information: www.torontobirding.ca

- Sat, Nov 28, 9 am to afternoon. West Toronto Lakeshore and Beyond - waterfowl and winter birding. Leader: John Carley. Meet at the parking lot at Humber Bay Park East (located off Park Lawn Rd south of Lake Shore Blvd W).

High Park Walking Tours

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

- Nov 1. Geological Wonders and Origins. Geologist Frank Remiz unearths secrets of the park's topography and geological history.
- Nov 15. Art in the Park. A trek around the many sculpture sites in the park with art teacher Grace Petrucci.

Beneficial Biodiversity Symposium – Toronto Botanical Garden

Fri Nov 6, 8:30 am to 4:30 pm. A forum on ideas and practices supporting links among biodiversity, pollinators, thriving eco-systems and human health, with emphasis on urban settings. Registration: $75 (members $65), including lunch. Information: torontobotanicalgarden.ca/learn/adult/biodiversity-symposium/

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 for the Advancement of Science (RCI) - Lectures

Sundays at 2 pm (doors open at 1:15), Macleod Auditorium, Medical Sciences Bldg, University of Toronto, 1 King's College Circle. Information: www royalcanadianinstitute.org

- Nov 1. hitchBOT – A Cultural Robotics Projects. Speakers: Frauke Zeller, PhD Ryerson U and David Harris Smith, PhD McMaster U
- Nov 8. Feeding the World by Boosting Crop Health . Speaker: Charles Despres, PhD Brock U
- Nov 22. Revolution in Robotics: Will the Next Robot Be for You? Speaker: Angela Schoellig, MSc, PhD, Head of Dynamic Systems Lab, Institute for Aerospace Studies (UTIAS), U of Toronto
- Nov 29. Are Fish Populations in Hot Water Because of Climate Change? Speaker: Sapna Sharma, PhD, Dept of Biology, York U

Crothers Woods Fall Leaf Rake

Sat Nov 14th,10am -1pm
Help maintain Crothers Woods trails by clearing them before winter. Meet at the trailhead at the south end of the Loblaws parking lot, 11 Redway Rd. Information: Phone 311 or email greentoronto@toronto.ca.

Toronto Reference Library

- Until Nov 29. Exhibit featuring 30 spectacular plates from John J. Audubon's *Birds of America.* TD Gallery

The Market Gallery

Oct. 31 to Jan 30, 2016. "Framing Toronto" City of Toronto art acquisitions 2010 to 2015: a display of art and artefacts featuring 50 new works in the City's collections. South St Lawrence Market, 2nd floor, 95 Front St E. Free. Gallery closed Sun, Mon and holidays. Information: Toronto.ca/marketgallery.

Lost Rivers Walks

Information: www.lostrivers.ca. Walking tours limited to 20 participants. Pre-registration is not required but, to ensure a spot on the tour, please email in advance to info@labspacestudio.com.

- Sat Nov 7, 1:30 pm. Canadian Pacific Railway's Water Aqueduct, Black Creek to North Toronto (1886). Leader: Ian Wheal. Meet on the west side of Weston Rd a Humber Blvd N. An 8 km walk.

Long-tailed duck in Toronto in the winter. Photo: Margaret McRae

Answers from page 13
Which Is It?

1) H	4) M	7) H
2) A	5) A	8) M
3) H	6) M	9) A

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

Publications Mail
Registration No. 40049590

Fruit of Jack-in-the-pulpit photographed by Barry Singh in Backus Woods