



Since 1923

# TORONTO FIELD NATURALIST

Number 640 December 2018



Snoozing barred owl. Photo by Lynn Pady, November 2018

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## PRESIDENT'S REPORT

If you follow TFN on social media you'll already be aware that we recently released our very first promotional video! We have the wonderful Lauren Wotherspoon of SpoonFed Films to thank for generously donating the time and resources that made this possible. I can't possibly express our gratitude in only a few words, nor celebrate the dedication, talent and creativity SpoonFed has provided, but as a community perhaps we can. Please take a moment to share the final product with friends and family: <https://youtu.be/gApVxHTzIQo>

On October 24, Bob Kortright, Paula Davies and I attended the City's Biodiversity Strategy Workshop at East York Civic Center. The strategy promotes a variety of principles and actions under the themes of Protect, Design, Engage and Restore. TFN, alongside participants from TRCA, U of T, ProtectNatureTO and various City divisions, spent the day exploring the draft and making suggestions. This feedback will inform the report that is presented to Council early next year. Keep your eyes peeled for updates as there will be opportunities for open public comment before all is said and done. We encourage TFN members to contribute to this process.

While the Biodiversity Strategy is an important initiative in its own right, it becomes all the more meaningful when seen in the greater tapestry of similar initiatives that the City has engaged in over the last few years, such as the Ravine Strategy, Pollinator Protection Strategy and Parkland Strategy. TFN is very encouraged by the City's increased attention to our natural heritage and green spaces, and is grateful we've been invited to participate in so many of these developments.

December 8th will see our Junior Naturalists visit Humber Bay Park to welcome Arctic over-wintering ducks, marking the conclusion of our 2018 program. The program schedule for winter 2019 has already been announced, inviting youth to outings in Crothers Woods and G Ross Lord Park, and featuring a Scientists in School BONE ZONE workshop. Our online program continues to expand as well, offering much to learn and do from the warmth of home. Engaging with youth is one of TFN's most critical mandates. Between the five sponsorships we provided to Ontario Nature's Youth Summit for Biodiversity and Environmental Leadership in September, a recent TFN visit with the Grade 5/6 class at Montrose Junior Public School, and the continual rise in interest in our Junior Naturalist program, we close 2018 with a certain satisfaction that we're doing our part to help connect youth with nature in meaningful ways.

Finally, I'm very pleased to report a major development that should be of great interest to all members: the launch of our new website! Full details have been provided in this month's Connected Naturalist column but here I'd like to extend an enormous thanks to everyone who has contributed to this project over the last several months. Photographers, editors, designers, programmers, board members, walk leaders and so many others in our community have donated time, materials and expertise that helped this initiative along. It simply wouldn't have happened without all of you. An extra-special thanks to Margaret McRae and Lynn Miller, who created and curated our previous site for so many years.

Jason Ramsay-Brown  
president@torontofieldnaturalists.org

## Tax Deductible Donations

TFN is dependent on membership dues and donations, which enable us to help people in Toronto learn about, appreciate and seek to protect our natural heritage.

Donations to the mailed newsletter fund, up to a total of \$10,000, continue to be matched by a generous and anonymous donor. These donations are used to help TFN offer a reduced mailed newsletter surcharge.

Please make your donation today. Visit <https://www.canadahelps.org/en/dn/14828> and choose "Mailed Newsletter Fund" or "General" from the list of fund options. Or you may send a cheque to the TFN office (see page 14).

As a charitable organization we issue receipts for use as deductions on your income tax return.

## TFN OUTINGS

- TFN events are conducted by unpaid volunteers.
  - TFN 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](http://www.ttc.ca) or 416-393-4636).
- Check for any schedule disruptions on weekends and allow extra time if necessary.**
- 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.
  - *Please thoroughly clean your footwear before each outing to avoid spreading invasive seeds.*

*The Toronto Field Naturalists wish to acknowledge this land through which we walk. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca, and most recently, the Mississauga of the Credit River. Today it is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to be on this land.*

**Share your favourite walk photos on social media, hashtag #TFNWalk.**

- Sat  
Dec 1  
10:00 am     **EARL BALES PARK – Trees and Birds**  
**Leader: Rachel Gottesman.** Meet at the north park entrance on Bathurst St one block south of Sheppard Ave W. (#7 Bathurst bus or #84, 984 or 96b bus eastbound from Sheppard West subway station or #84 or 984 westbound from Sheppard subway station). Circular route, mainly flat but partially unpaved. We may see some raptors, historical sites and many trees including some recently planted. Possibility of coffee shop at the end.
- Wed  
Dec 5  
10:00 am     **COLONEL SAMUEL SMITH PARK – Birds**  
**Leader: Doug Paton.** Meet at the southwest corner of Lake Shore Blvd W and Kipling Ave for a circular walk on mostly unpaved surfaces. Bring binoculars.
- Sat  
Dec 8  
10:00 am     **LESLIE STREET SPIT – Nature Walk**  
**Leader: Stephen Kamnitzer** (647-924-0840). Meet at the entrance to the spit at Leslie St and Unwin Ave for a circular walk. We will spend 4-5 hrs exploring the spit, perhaps including the seldom-visited southeast peninsula. There should be some wintering waterfowl. Bring lunch and a drink. You will be able to drop out at any time by walking back along the road. Washrooms at start of hike and about half way.
- Wed  
Dec 12  
10:00am     **BIRCHCLIFF QUARRY LANDS – Plants in Winter, Nature Walk**  
**Leader: Miles Hearn.** Meet at the southeast corner of Victoria Park Ave and Danforth Ave (just south of Victoria Park subway station). Morning only. No washrooms.
- Sat  
Dec 15  
1:30 pm     **WATERFOWL SPOTTING FROM ONTARIO PLACE – Nature Walk**  
**Leader: Sara Macdonald.** Meet at the metal WWII ship-like memorial in Coronation Park that faces the harbour between HMCS York and the Toronto Inukshuk Park. (Bus #121 to Fleet St and Fort York or streetcar #509 or #511 to Fleet St at Bastion.) We'll traverse the William Davis trail and the grounds of Ontario Place. A 4.5 km out-and-back meandering tour over bumpy pavement. Wear warm clothing and be prepared to walk swiftly between stops. Washrooms will be open.
- Sun  
Dec 16  
2:00 pm     **SOLSTICE STORYTELLING WALK – Lost Rivers**  
**Leaders: Jon Johnson, Reno King, Darlene King, Sarena Johnson, Ambika Tennati.** Meet at the Watershed Consciousness Wall, Evergreen Brick Works. Join the Rivers Rising Ambassadors and Jon Johnson of First Story for a special Solstice walk and exploration of Mud Creek at Evergreen, the most beautiful restoration site in Toronto. Come early or stay late to enjoy the festive village. A joint outing with Toronto Green Community.
- Tues  
Dec 18  
10:00 am     **HUMBER BAY PARK EAST – Birds**  
**Leader: Anne Powell.** Meet at the southeast corner of Lake Shore Blvd W and Park Lawn Rd for a circular walk on mostly unpaved surfaces, mainly flat. We will observe winter waterfowl and passerines. Bring binoculars. No washrooms.

	<b>FOR ENJOYMENT OF WINTER OUTINGS</b>		
	Long underwear	Warm hat	TTC Ride Guide
	Layered clothing	Mittens over gloves	Snack
	Waterproof boots	Binoculars	Thermos for hot drink
	Thick socks	Camera	Sunglasses
	Icers to prevent falls		

- Sat  
Dec 22  
10:00 am      **EAST DON PARKLANDS – Nature Walk**  
**Leader: Stephen Kamnitzer.** Meet at Second Cup (1567 Steeles Ave E) just east of Laureleaf Rd. A 2-hr circular walk exploring the ravine and forested area south of the meeting point. Washrooms at start and end of walk.
- Thurs  
Dec 27  
1:30 pm      **GLEN STEWART RAVINE – Reading Nature and Signs in Winter**  
**Leader: Joanne Doucette.** Meet at the southwest corner of Beech Ave and Kingston Rd for a linear walk on mostly unpaved and uneven surfaces with some steep slopes and many stairs. We will look for tracks, nibbled twigs, scat and other signs of mammals and birds along Ames Creek. Walk will end at Queen St E. Newcomers and those with service animals welcome. No pets. Bring binoculars. Cleats or icers may be necessary. Washrooms at end of walk.
- Sat  
Dec 29  
11:15 am      **TORONTO ISLANDS – Nature and Heritage**  
**Leader: Paul Overy.** Meet at the ferry docks at the foot of Bay St in time for the 11:30 ferry to Ward's Island. You can buy your tickets online to save time. A circular route on mostly unpaved surfaces, mainly flat with gentle slopes. We will explore some of the rich natural and human history of Ward's and Algonquin Islands with the added bonus of winter quiet and possibly snow. The duration, length and route of the walk will depend on weather conditions. Boots with a good grip and layered warm clothing are recommended. Bring a snack and water.
- Wed  
Jan 2  
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. No washrooms. Morning only.
- Sat  
Jan 5  
10:00 am      **TODMORDEN MILLS – Nature Walk**  
**Leader: Paul Foster.** Meet at the southwest corner of Broadview Ave and Pottery Rd for a 2.5-hr circular walk. Set in the Don Valley, Todmorden Mills Heritage site was established to explore Toronto's industrial history. However, we will explore its remaining green space. This unique park includes wetlands, meadows and upland forest and is home to the Todmorden Mills Wildflower Preserve, a 9-hectare natural area. We will look for signs of how the flora and fauna survive winter. Dirt trails can be uneven and include some stairs.
- Tues  
Jan 8  
10:00 am      **ASHBRIDGE'S BAY – Birds**  
**Leader: Anne Powell.** Meet at the southwest corner of Coxwell Ave and Lake Shore Blvd E for a circular walk on mostly paved surfaces. Mainly flat, no stairs. No washrooms. Bring binoculars.
- Sat  
Jan 12  
1:30 pm      **WILKET CREEK – Nature and Heritage**  
**Leader: Peter Heinz.** Meet at the bus shelter at the southwest corner of Leslie St and Lawrence Ave E for a circular walk on mostly paved surfaces with some stairs and steep slopes. We will begin at Toronto Botanical Garden and walk through Edwards Gardens to Wilket Creek ravine. We may possibly climb to Sunnybrook Park. Bring camera and binoculars. Winter boots, icers and poles are recommended as the trail could be slippery. No washrooms.
- Wed  
Jan 16  
10:30 am      **UNIVERSITY OF TORONTO GREENHOUSES – Plants**  
**Leader: Bill Cole, Chief Horticulturist for the U of T Growth Facilities.** Meet inside the lobby of the Earth Sciences Bldg, 33 Willcocks St, for a tour of the teaching collection and some of the research greenhouses. Dress for temperate-to-tropical conditions indoors.
- Sat  
Jan 19  
10:00 am      **CROTHERS WOODS – The Forest in Winter**  
**Leader: Stephen Smith.** Meet at the entrance to Crothers Woods at the south side of the parking lot next to Loblaws at 11 Redway Rd. We'll walk north along forest trails ending at a TTC stop near 71 Thorncliffe Park Dr. We'll discuss winter plant identification and forest types. Linear walk. Be prepared for some steep hills and slippery trails.

- Sun  
Jan. 20  
2:00 pm  
**MIDWINTER IN ROSEDALE RAVINE – Lost Rivers**  
**Leaders: Helen Mills and John Wilson.** Meet at Toronto Reference Library at Yonge St and Asquith Ave for a 2-km circular walk. We will explore the ravine lands of Castle Frank Brook along Rosedale Valley Rd and the network of park paths. We will adjust our route for mid-winter conditions and end with a warm drink at the Reference Library. Part of a series of walks on the Core Circle, a blue-green lineal zone around the city's downtown core. A joint outing with Toronto Green Community
- Thurs  
Jan 24  
1:30 pm  
**THE LOST GERRARD PRAIRIE – Nature and Heritage**  
**Leader: Joanne Doucette.** Meet inside the entrance to Greenwood subway station. We will see ancient oak trees, abandoned brickyards and naturalized yards in the Ashbridge's bush, which was a favourite birding and botanizing location in 1890. A moderate-paced circular walk on mostly paved surfaces, mainly flat. Washrooms at end of walk.
- Sat  
Jan 26  
10:00 am  
**LOWER DON – Nature Walk**  
**Leader: Vivienne Denton.** Meet at Broadview subway station. We will walk up the Don River from the footbridge at the south side of Riverdale Park to Pottery Rd; then to the Brick Works where walkers can stop for a warm drink before taking the free shuttlebus back to Broadview subway station. Washrooms at Brick Works.
- Thurs  
Jan 31  
10:00 am  
**RUSSELL CREEK – A Lost River**  
**Leader: Linda McCaffrey.** Meet at Bathurst subway station for a linear walk on mostly paved surfaces, mainly flat, no stairs, no washrooms. Russell Creek was buried around 1876 and only vestigial traces remain. We will explore the richly historic route of the original creek from Bloor and Palmerston to Simcoe and Front Streets where it entered the lake. Delightful green spaces en route include Grange Park and Bellevue Square.

## Nature Images Show

**Saturday, February 16, 2019 from 1:30 to 4 pm**

Auditorium, S Walter Stewart Library

Light refreshments will be served.

Members may display their nature artwork on tables for us to view during the coffee break.

170 Memorial Park Ave at Durant Ave (one block north of Mortimer or one block south of Cosburn, 1 block west of Coxwell).  
Coxwell bus to Mortimer or Cosburn Avenues.



Red squirrel. Photo: Lynn Miller

### Volunteers needed!

We welcome donations of goodies for the refreshment table, as well as help with setup, refreshments and cleanup. Setup begins at 1 pm.

Please let Margaret McRae know if you can help:  
416-429-7821 or  
marg.mcrae@gmail.com

### TFN photographers!

Inspire others with your images of landscapes and biodiversity!

Rules for participating:

- Must be a TFN member.
- Bring up to 25 digital images on a USB Flash Drive or CD.
- Bring large resolution images (minimum 1024 pixels on long edge).
- Focus on Ontario with nature subjects (plants, animals, landscapes).
- Arrive at least 15 minutes early so your images can be transferred for projection.
- Be prepared to introduce your images or provide a scripted introduction that can be read by a volunteer.

## TFN MEETING .....VISITORS WELCOME

Sunday, December 2, 2:30 pm (Social, 2 pm)

### Restoring Rare Tall Grass Prairie Ecosystems to the Rice Lake Plains

**Speaker: Val Deziel**, *Co-ordinator, Conservation Biology, Rice Lake Plains, Nature Conservancy of Canada*  
*will describe stewardship activities used to restore the unique ecosystems of Rice Lake Plains, including seeding, planting, prescribed burns and invasive species management.*

Emmanuel College, Room 001, 75 Queen's Park Cres E. Just south of Museum subway station exit, east side of Queen's Park. Accessible 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.

[Share your thoughts about this lecture on social media, hashtag #TFNTalk](#)

#### Upcoming Lectures, 2019

- Feb 3: *Bats of the GTA – the Real Stars of the Night*  
Toby Thorne, Toronto Zoo bat researcher
- Mar 3: *Moose – Crowned Giant of the Northern Wilderness*  
Mark Raycroft, wilderness photographer and author
- Apr 7: *Evolution of Life in the Urban Jungle*  
Marc Johnson, Assoc. Prof., Dept. of Biology, University of Toronto, Mississauga
- May 5: *The Owl Foundation – A Fly-by-night Organization?*  
Peter Thoem, expert birder, photographer and ambassador for owl rehabilitation

#### TFN ACTION COMMITTEE REPORT

##### Oct 22nd Municipal Election Follow-up:

ProtectNatureTO set up a webpage [Maps page](#), with ward-specific maps pinpointing ESAs, that appeared in the election pamphlet prepared by Dave Barr. This is an excellent resource to enable each of us to learn about and monitor land use and development close to the ESAs in our own ward. It also provides the opportunity for us to approach our newly-elected Councillors regarding the various environmental strategies the city has adopted.

**The Meadoway:** Toronto Field Naturalists has been invited to participate in the Meadoway Community Liaison Committee (CLC) set up by TRCA. The Meadoway <https://trca.ca/news/meadoway-greenspace-connection-downtown-toronto-rouge-park/> will be a 16-

km bike path and pollinator pathway stretching from the Don east to the Rouge River and following the Gatineau Hydro Corridor. The CLC is invited to have input as plans develop for this project. TFN will be represented by Jason Ramsay-Brown with Nancy Dengler as our alternate. Please let them know of any specific concerns you have about this project.

**Biodiversity Draft Strategy:** On October 24th, four TFN members attended the City's public meeting at the East York Civic Centre to contribute input to the Biodiversity Draft Strategy. 'Ecological integrity' was adopted as the guiding principle of the Strategy. Practical actions to implement the strategy were discussed.

Anne Purvis

## MONTHLY MEETING REPORT

### Life underground – Interaction between plants and beneficial fungi

Nov. 4, 2018

Larry Peterson, Professor Emeritus of Botany,  
University of Guelph

Larry Peterson gave a fascinating view into life processes that normally are hidden beneath our feet. His research lab, including many students and other collaborators, has explored the mutually beneficial relationships between fungi and plants called mycorrhizas. Larry's beautifully illustrated talk provided an overview of how these symbioses are established and how both plant and fungal partners benefit.

Mycorrhizas are complex symbiotic relationships between soil fungi and plants in which the plant provides sugars from photosynthesis and, in return, the fungus provides nutrients such as nitrogen and phosphorous. Fungal filaments spread throughout the soil, greatly increasing the absorptive capacity of the plant's root system and increasing the amount of water available to the roots. Fossil evidence shows that the first plants to evolve on land, more than 400 million years ago, were mycorrhizal. Today, a majority of plants in all ecosystems have co-evolved with mycorrhizal fungi.

Mycorrhizas are classified by the group of fungi involved and by the specifics of the interaction. Ectomycorrhizas are found on many trees such as oaks, pines, willows and poplars. In this case, the fungal filaments form a sleeve or mantle over the root tip, and the exchange of materials occurs between adjacent fungal and root cells. Over 6,000 different fungi can form ectomycorrhizal relationships; these groups of fungi are ones that form the familiar gilled and polypore mushrooms above ground (Basidiomycota)

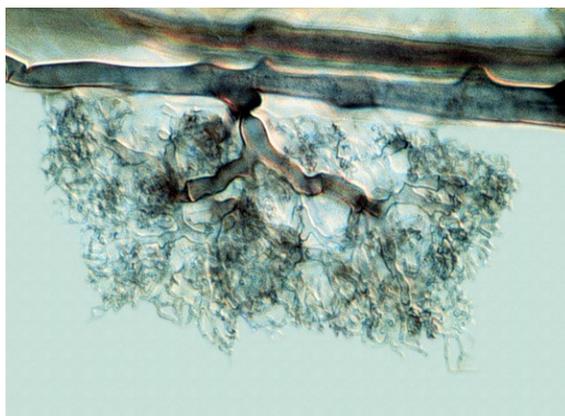
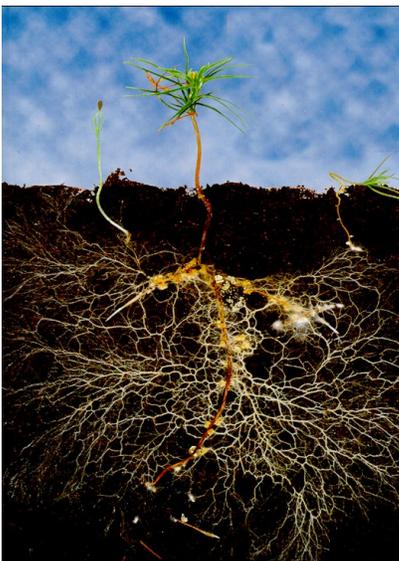
or ones that form truffles underground (some Ascomycota).

Arbuscular mycorrhizas represent the most abundant symbiosis on earth, occurring in over 80% of all plant species. In this interaction the fungal filaments extend inside the root cells where they form tiny branched structures that look like little trees (arbuscules). Some trees such as maples, cedars and cherries are characterized by arbuscular mycorrhizas, as are almost all shrubby and herbaceous plants and major crops such as corn and soybean. Less is known about the fungi forming the arbuscules: they belong to a small number of genera in the Glomeromycota, a group of fungi that reproduces through asexual spores that are formed underground with no known conspicuous reproductive structures.

Orchid mycorrhizas characterize almost all species of this largest family of flowering plants (over 25,000 species). Orchids produce tiny "dust" seeds with a rudimentary embryo and no nutritive tissues. Seeds only germinate when invaded by a saprophytic fungus, one that gets its sugars from the leaf litter and passes it on to the orchid embryo. Later, as the seedling becomes established and begins photosynthesis, it develops a true mycorrhizal relationship in which it provides sugars to its fungal partners.

Some species of orchids and other plants are myco-heterotrophs. These are plants that have lost the ability to photosynthesize over evolutionary time and now get their sugars by robbing a mycorrhizal relationship. For example, Indian pipe receives all of its sugars via an ectomycorrhizal fungus that is in partnership with a pine or fir tree. Thus plants like Indian pipe are "cheaters" in a system which otherwise involves a fair trade deal between the plant species and its fungal partners.

Nancy Dengler



Left: Pine seedling showing roots (brown) and mycorrhizal fungal filaments (white).

Photo: Dave Read.

Centre: Fungal arbuscule inside the cell of a leek root. Photo: Mark Brundrette.

Right: Indian pipe, a myco-heterotroph. Photo: Ken Sproule

## THE CONNECTED NATURALIST: NEW TFN WEBSITE

Things move pretty fast on the Internet. New technologies alter visitor expectations and vice versa in a co-evolution that inspires most websites to undergo a redesign every 3-5 years. As a volunteer-run organization, TFN has not had this luxury. However, recent changes, particularly with regard to mobile devices and access for differently-abled users, meant that we were long overdue for a revamp.

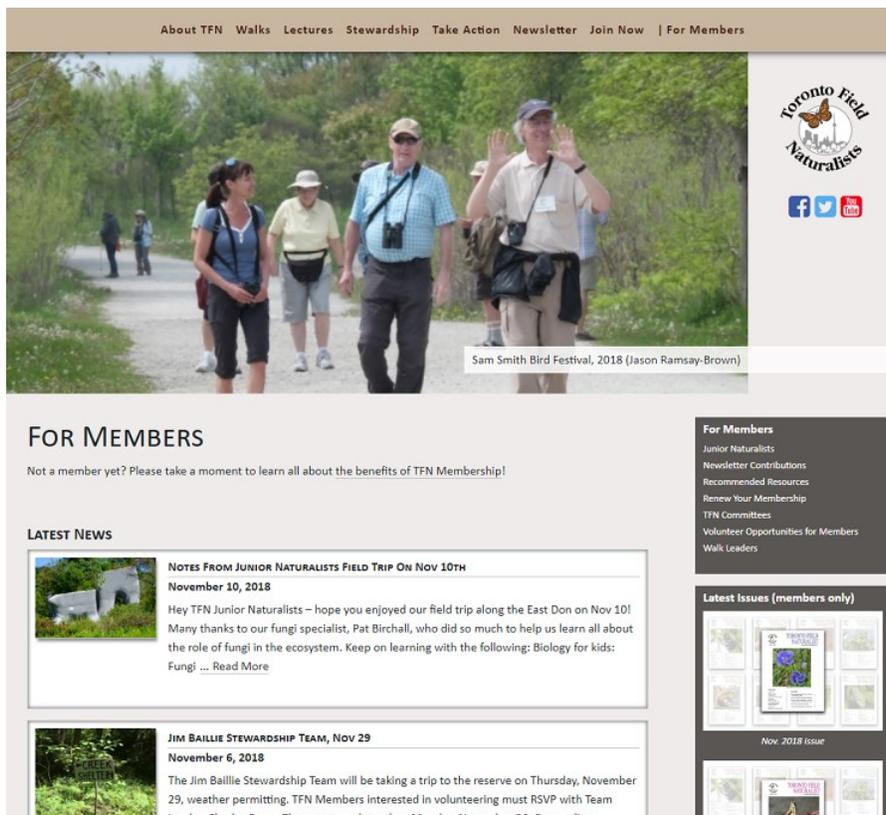
On December 1st we'll be launching a new website! Great care has gone into deciding the best way to approach this, attempting to balance the needs of those people for whom the internet is only an occasional destination with those who live and breathe online. As you might imagine, it wasn't a breeze. We think we've hit the right balance, with something for everyone and no barriers in anyone's way. Here are a few highlights of what you have to look forward to:

An all-new "For Members" area: Here you'll find everything from up-to-the-minute TFN news to a simplified way of renewing your membership, and a wealth of things in-between such as ways to contribute, volunteer opportunities, and info on TFN Committees. Members will now only have one place to look for items meant just for you.

Language that better reflects today's TFN: Long-standing members intimately know what TFN is and does, but this has not been so obvious to new members and the general public. We've reworded some of our core content to make it easier for everyone to understand. For example, "Nature Reserves" now fall under the broader umbrella of "Stewardship", connecting them to things like our Cottonwood Flats Monitoring Project, plantings and citizen science. Similarly our "Environment Committee", and all that it does, has been positioned as an opportunity

to "Take Action", more directly emphasizing the important role TFN plays in protecting and advocating for nature.

Improved search: Browsing for content is some people's preference, but only by a slim majority. We've done much to improve the search capability for everyone. Most noteworthy is the all-new Newsletter Search feature, allowing you to easily locate past issues by keyword. As volunteers continue to scan decades of past issues, this new feature is certain to become increasingly useful.



So much more: Big, bold photographic areas allow us to better display the excellent photographs that members submit. A responsive design means smartphone users will have a greatly improved experience. Careful selection of colours, typography and other layout elements mean that visitors with low vision, colour-blindness or shaky hands should find things easier to use.

Finally, our new website also aims to help us make the most out of our newsletter. You already caught a glimpse of this when our financials were published online instead of in print this year. This saved some costs and freed up space for more engaging content. Similarly, this will be the last Connected Naturalist to appear in the newsletter. As it's a column dealing with naturalists' use of technology, having it live online makes a whole lot of sense.

We hope you'll enjoy the new site and discover new benefits in using it. After exploring it for a bit, if you have questions or comments please feel free to send them along to [webmaster@torontofieldnaturalists.org](mailto:webmaster@torontofieldnaturalists.org).

Jason Ramsay-Brown

## TORONTO'S NATIVE SPRING-BLOOMING PRIMULAS AND RELATIVES

The Primulaceae (primula family) includes about 20 genera and about 900 species. These are mainly herbs occurring in the north temperate region. Toronto has five native species. This article includes one locally uncommon spring-blooming family member, its western relative and an introduced *Primula*.

Our local spring native species is *Trientalis borealis* (starflower), now classified by VASCAN as *Lysimachia borealis*. This is mainly a forest plant blooming in late May or early June. It generally has 1 to 3 white flowers about 10 mm wide on thin stalks above the leaves. The plant illustrated has four flowers. In Toronto this species has been recorded as uncommon from the Humber watershed to the Rouge, in High Park, and on the Scarborough Bluffs (TFN's *Vascular Plants*). It is found across most of Ontario (*ROM Field Guide*). The distribution in Canada is from Manitoba to the Maritimes and in Nunavut (VASCAN). The distribution in the U.S. includes most states from the east coast to the west coast (USDA).

Western broadleaf starflower is considered by the USDA as a subspecies in the genus *Trientalis* (*T. borealis* ssp *latifolia*). However, VASCAN lists it at species rank as *Lysimachia latifolia*. It has broader leaves than *L. borealis* and commonly has pink flowers although it can also be white-flowered.

*Primula veris* (cowslip) is a spring-blooming European species. It represents a genus that makes up about 45% of the primula family. In Toronto I saw this species in a long-abandoned farmyard in the Rouge valley east of the Little Rouge. It was reported from the Rouge Valley in the Second Edition of TFN's *Vascular Plants* list.

Starflower is a species to look for in the spring. Although widespread, it can be difficult to find. A challenge?

Article and photos by Peter Money

### References:

- *Vascular Plants of Metropolitan Toronto*, 2nd ed, Toronto Field Naturalists, 1994
- *The ROM Field Guide to Wildflowers of Ontario*, T.A. Dickinson et al, 2004
- VASCAN: Vascular Plants of Canada database (<http://data.canadensys.net/vascan/search?lang=en>)
- USDA: U.S. Dept. of Agriculture PLANTS database (<https://plants.sc.egov.usda.gov/java/>)

From top: Starflower (*Lysimachia borealis*, formerly *Trientalis borealis*) general and detail;  
Western broadleaf starflower (*L. latifolia*);  
Cowslip (*Primula veris*)



## IN THE NEWS

### Toronto is using a fungus to battle the emerald ash borer beetle

Partnering with a Quebec company, GDG Environmental Ltée, the City has strung fungus traps in Ashbridge's Bay Park and Scarborough's Guild Park, places where ash trees cling to life thanks to larvicide injections in past years. Drawn by the bright-green colour and powerful pheromones of the fungus, the male beetles tumble into a "contamination

chamber," a pouch where powdery fungus clings to them before they escape. For five days, the fungus grows on the emerald ash borers like white fur until it pierces their exoskeletons and they die.

See article in the Mycological Society's newsletter: <https://goo.gl/RTpmW8>



Emerald ash borer  
Photo: Ken Sproule

## TFN JUNIOR NATURALISTS HAWK WATCH EVENT

Thirteen Junior Naturalists and their parents gathered at the Rosetta McClain Gardens Hawk Watch on October 13. Seasoned naturalists Betty McCulloch, Bob Kortright, Rachel Gottesmann and Hugh Reid also joined us. Thanks so much! It was a lovely cool, sunny day with variable cloudiness and a northwest wind, which tends to cause birds of prey to gather at the Bluffs for migration. A huge flock of turkey vultures circled overhead and a flock of blue jays flew across the gardens.

We started our morning by examining wings of turkey vulture, peregrine falcon and great horned owl provided by the ROM. We noted the air foil structure and the flight feathers attached to the bird's fused fingers. We then did a couple of experiments with ping pong balls, cone cups and paper to understand how an air foil generates lift.

At the Bluffs, we sighted many sharp-shinned hawks soaring over the water. Hugh Reid explained the migration of hawks. Unlike our songbirds, they are dependent on

thermals – hot-rising air over land – so cannot cross Lake Ontario, such as falcons or songbirds. They therefore gather on the north shore of Lake Ontario and travel west, then south at Windsor. Hugh provided an excellent handout for recognizing hawk silhouettes.



Turkey vulture. Photo: Ken Sproule

Afterwards we walked east out of the gardens and down to the lake, completing a treasure hunt for Ontario wildflowers, fruits and seeds.

Anne Purvis

### UPCOMING JUNIOR NATURALISTS EVENTS

Dec 8: Humber Bay Park to welcome Arctic over-wintering ducks.

Jan 12: Crothers Woods to learn how over-wintering insects and other creatures survive in winter.

Contact: Anne Purvis ([juniortfn@torontofieldnaturalists.org](mailto:juniortfn@torontofieldnaturalists.org)) to get on the email list for detailed information.

### FOR READING

#### **WHAT MILLY DID : THE REMARKABLE PIONEER OF PLASTICS RECYCLING**

by Elise Moser; Groundwood Books. c. 2016.  
illustrated by Scot Ritchie ISBN 978-1-55498-893-8

This 43-page black and white children's book is a little gem. It gives a brief history of recycling by explaining that when WWII ended, people's habits of saving and reusing items changed. We were glorying in the relief of war being over and new materials being available to us. We didn't think about reusing, reducing, or recycling. Our use of plastics grew exponentially.

Milly Zantow (born on an Oklahoma farm in 1923; died 2014) observed the Japanese practice of recycling when she visited Japan in 1978. She began to think about the issues of too much garbage and landfills becoming full. She learned about all the different types of plastics that are created and the challenges of recycling them. Eventually,

through perseverance and effort, she created the system of identifying what type of plastic each container was made of and imprinting a triangle with a number inside it on the bottom of every container. This identifying number made large-scale plastics recycling possible.

This book presents a lot of information packed into a few pages. It describes how plastic is recycled; how the planet benefits when we recycle; and how one woman worked very hard in the 1980s to make large-scale recycling possible. It also stresses how passion and hard work can drive someone to create great and important change. This small book has a glossary, an index and suggestions for further reading. I suggest it would be appropriate to read aloud to grade 3 to 6 students.

To view an eight-minute film about Milly and the 7 types of plastic, visit <https://www.youtube.com/watch?v=AM6-Nqmqz1I>

Jennifer Smith

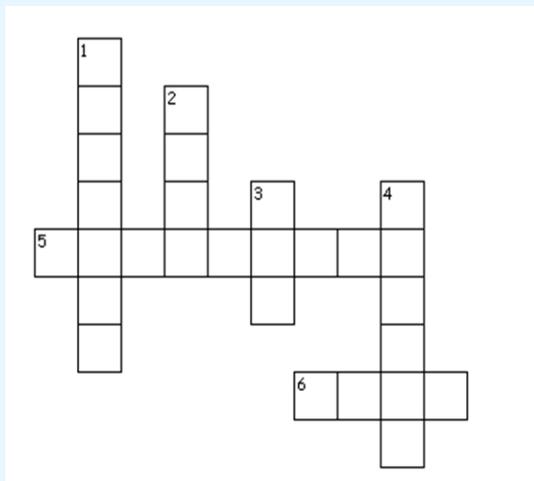
**Attention Junior Naturalists!** Visit TFN online (<http://www.torontofieldnaturalists.org/kids/>) to view fascinating nature videos, download brain teasers, print nature scavenger hunt sheets, and get inspired to explore nature in our city.

## CHILDREN'S CORNER

**The Eastern (or common) Garter Snake**

The Eastern Garter Snake is a very common snake in southern Ontario - you may be lucky enough to see one in your own backyard! Like any reptile, these snakes are cold-blooded. Fun fact: garter snakes are not poisonous and are often shy around humans. Don't forget to log your sightings of these slithery friends at <https://ontarionature.org/programs/citizen-science/reptile-amphibian-atlas/>

Using the clues below, write your answers in the crossword grid.

**Across**

5. During the winter, eastern garter snakes \_\_\_\_\_ in burrows or in rocky formations, often with many other garter snakes, to stay warm and survive.  
6. Eastern garter snakes eat worms, salamanders, small fish and this amphibian that begins life as a tadpole.

**Down**

1. Eastern garter snakes are what type of animal?  
2. True or false: Eastern garter snakes can be found in a lot of different habitats including urban areas.  
3. Eastern garter snakes can grow up to how many meters in length?  
4. Eastern Garter snakes can be a blackish green, white and what other colour?

See answers on page 15

Puzzle by Julia del Monte

Photo: Ken Sproule

**TRCA Winter Bird Count 4 Kids at Tommy Thompson Park**

Saturday January 5th, 11am-1:00pm

Tommy Thompson Park is a winter home to thousands of birds. Come and help us count them for science! We will take a guided walk looking for overwintering songbirds and spectacular waterfowl. All our sightings will be entered into a database along with hundreds of other kids' counts across North America. We will warm up at the end of our count with a well-deserved hot chocolate.



**Black-capped chickadee**  
Photo: Ken Sproule

Meet at the Nature Centre at Tommy Thompson Park (5-minute walk from park entrance, first building on your left).  
Registration and Details: <https://trca.ca/event/winter-bird-count-for-kids/>

## EXTRACTS FROM OUTINGS LEADERS' REPORTS

**Humber Arboretum, Sept 30. Leader: Lynn Short (Humber College).** We enjoyed a fall walk through the ornamental gardens and ponds behind Humber College where many annual beds have been planted and maintained by Humber students. In the maple-beech forest we saw the 'grandmother maple,' estimated to be at least 200 years old. In the nearby meadow we tasted wild grapes and were interested to see a non-native porcelain berry vine (*Ampelopsis brevipedunculata*) which has blue, pink and pale green berries resembling Easter eggs. We saw red osier dogwood and goldenrod and discussed how animals and plants support each other. We saw and heard robins, blue jays and cardinals.

A large compound has been built to protect the plantings from deer browsing. In the enclosure are canker-resistant butternut trees, a pollinator garden research plot and an Indigenous heritage squash. Our last stop was at the Indigenous Medicine Garden, designed and constructed by Indigenous horticultural students and used for ceremonies. The medicinal plants are harvested for use at the Aboriginal Resource Centre at Humber College.

**Davisville Subway to Evergreen Brick Works, Oct 4.**

**Leader: Edward Freeman.** After observing the historical plaque for the Dominion Coal and Wood silos and photographs of the railway track under the first Mount Pleasant bridge, we ambled past labeled trees to the remains of a bridge erected in anticipation of a downtown expressway, thankfully never built. The Moore Park ravine was shady with the beginning of autumn colours – a most pleasant walk. As we entered the former brick works quarry, we discussed the evolutionary history revealed as excavation provided fossil evidence of past environments.

**Don Valley – Green Terrors from another Land, Oct 20.**

**Leader: Jason Ramsay-Brown.** The outing started with an hour-long wander through Cottonwood Flats, discussing the invasives we encountered, including dog-strangling vine, purple loosestrife, Japanese knotweed, tansy and Asian bittersweet. For two hours we worked with City of Toronto staff and EcoSpark removing *Phragmites australis subsp. australis* from the Beechwood Wetland. Attendees were trained in a manual removal protocol pioneered by Lynn Short (Humber College). A fun and productive morning!

**Tree and Fungus ID, Morningside Park, Oct 27.**

**Leader: D. Andrew White.** During our walk, mostly in the forest, we found the following fungi: *Amanita citrina?* (pale yellowish amanita), *Bjerkandera adusta* (smokey polypore), *Calvatia gigantea* (giant puffball), *Chondrostereum purpureum* (silver leaf fungus), *Fomes fomentarius* (tinder polypore), *Galerina autumnalis* (deadly galerina), *Ganoderma applanatum* (artist's conk), *Kretzschmaria deusta* (burnt crust fungus), *Oxyporus populinus*, *Peniophora rufa?*, *Piptoporus betulinus* (birch polypore), *Pholiota* sp, *Trametes pubescens* (hairy trametes), *Trametes versicolor* (turkeytail) and *Trichaptum biforme* (purple tooth). We saw evidence of butternut canker disease on butternuts and emerald ash borer beetles on ash trees. Trees identified included: *Acer negundo* (Manitoba maple), *Acer rubrum* (native red maple), *Acer saccharum* (sugar maple), *Acer tataricum* (Amur maple), *Fraxinus pennsylvanica* (green ash), *Juglans cinerea* (butternut), *Pinus strobus* (eastern white pine), *Prunus serotina* (black cherry), *Quercus macrocarpa* (bur oak), *Quercus* x spp. (hybrid white-bur oak?), *Quercus rubra* (red oak), *Rhamnus cathartica* (buckthorn) and *Thuja occidentalis* (white cedar).



*Chondrostereum purpureum* (silver leaf fungus), Blythwood Ravine Park, October 2015. Photo: Ken Sproule

**Warden Woods Park, Oct 28. Leader: Vivienne**

**Denton.** Even on a wet day in fall, Warden Woods is a lovely oasis among the high-rises, particularly the small areas of old growth forest where beautiful sugar maple, birch, beech and oak trees can be seen. We also visited the community gardens in Prairie Drive Park.

***A Guide to Bats in Ontario***

Learn about Ontario's eight species of bats with Ontario Nature's new online guide featuring photos and species accounts written by expert naturalists Dan Schneider and Peter Pautler.

Visit <https://onnaturemagazine.com/bat-guide.html>

## WEATHER (THIS TIME LAST YEAR)

### December 2017

A warm start was followed by the most intense winter conditions in almost three years. Warm conditions that began in late November lasted for a few days, when temperatures topped out at 10.8° downtown on the 4th and 11.6° at Pearson Airport on the 5th. The first cold front then arrived and dropped temperatures to normal. On the 10th to 11th, a second system brought the first real snow of the season followed by sunny and cold conditions. There was a brief mild period on the 18th to 20th but this was followed by two back-to-back snowfalls and a definitively white Christmas. We had serious cold from Boxing Day to the 28th and then again on New Year's Eve. This included our first -20° weather since February 2015 (and the first such for December since 2004): -20.2° downtown on the 31st; -22.5° and -22.6° on the 28th and 31st at Pearson.

The result was that December was the coldest since 2000 and the coldest month since February 2015. The monthly mean temperature downtown was -3.9° (a full 3.5° below normal given that several recent extravagantly warm Decembers have now skewed the 30-year average). At Pearson Airport, the mean temperature was -5.2° (3.3° below normal).

Snowfall was above normal for the second year running (though slightly lower than 2016). As measured at Pearson Airport, snowfall was 39.1 cm as opposed to the normal 24.3 cm. Snow cover set in on the 12th and persisted from the 22nd. We had 18 days with snow on the ground. Rainfall, however, was sparse and pretty much restricted to the 4th to 5th. Therefore, with the preponderance of dry Arctic air, we had below-normal precipitation. Total precipitation was 37.3 mm downtown and 40.4 mm at Pearson Airport (normal is in the mid-to-upper fifties). It was the driest December since 2010 downtown.

### Annual 2017

The year was the third-warmest globally and would likely have been comparable in Toronto if it were not for December. As it was, the annual mean at Pearson Airport was 9.3°, 0.8° above the normal 8.5°. This was the 8th warmest calendar year on record, and temperatures had receded from the peak in the fall of 2016. Downtown had an annual mean temperature of 9.9°, which was only 0.3° above the 30-year mean. 2012 remains the warmest year on record in Toronto. The winter (of 2016-2017) and the fall were very warm – February was the warmest on record, but this was somewhat offset by cooler conditions in the spring and summer as well as in December.

Total precipitation was actually much less than the impression given by the sensible weather and lake conditions. Rain was conspicuous largely due to

frequency rather than duration or the presence of epic storms as occurred in July 2013. (Some eastern suburbs such as Markham and Ajax did get several storms in June and July that exceeded 50 mm). Almost daily showers occurred in the spring and early summer. But from August on, it was actually on the dry side. The parade of hurricanes (and their remnants) that moved through the tropical Atlantic in 2017 did not pass by Toronto. Total precipitation was 846.0 mm at Pearson Airport, just 71 mm above the long-term average. Downtown had 804.8 mm, barely 10 mm above normal. Lake Ontario did have near-record water levels that flooded Toronto Island from May to early August. This was due less to local weather than to Great Lakes watershed factors (excessive rains upstream that increased flow into Lake Ontario) and downstream flooding on the St. Lawrence that necessitated restricting Lake Ontario's outflow.

### January 2018

Wild temperature swings characterized January. The intense cold of late December continued until January 7th. Temperatures fell below -20° on the 1st (-21.3° at Pearson Airport), 5th (-23.0° at Pearson Airport), 6th (-23.5° at Pearson and -22.3° downtown), and 7th (-20.9° at Pearson). Snow fell as far south as Tallahassee, Florida. A couple of warm fronts then arrived, with a little snow at first, and then drizzle. Temperatures rose to as high as 12.6° on January 11th, breaking a daily record at Pearson. A strong cold front on the 12th brought a return to winter conditions, with a low of -17.3° on the 14th. This cold spell wasn't as intense in the Great Lakes as the earlier one, but did bring another freeze to the Gulf of Mexico. Thereafter, conditions continued to oscillate albeit less extremely. A couple more thaws lasted from the 19th to 23rd and 27th to 28th.

Amid all this changeability, January averaged fairly cold by recent standards. This was due to the intensity of the early cold snap. The monthly mean temperature was -4.4° downtown (1.1° below normal) and -5.7° at Pearson Airport (0.9° below normal). It was the coldest since 2015, but would have been around average for the 1980s.

Total precipitation was almost exactly normal with 59.8 mm downtown and 61.8 mm at Pearson Airport. There was a slight excess of rain and a slight shortfall of snow. At Pearson, rainfall was 41.4 mm and snowfall was 21.0 cm. Snowfall totals downtown aren't available; apparently, the downtown weather station has ceased recording snowfall independent of total melted precipitation. The snow pack was semi-persistent and was measured downtown. We had 24 days of snow cover, with it briefly melting off on the 12th and again on the 23rd. There were no major snow storms.

## COMING EVENTS

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

### High Park Walking Tours ([www.highpark.org](http://www.highpark.org))

1st and 3rd Sundays of each month, 10:30 am to noon. Meet at the benches across the road south of Grenadier Restaurant.

- Dec 2 Architecture in the Park, Mark Ellwood
- Dec 16 Holiday Hike and Brunch, Walking Tours Committee

### Royal Ontario Museum (<https://www.rom.on.ca/en/exhibitions-galleries/exhibitions/wildlife-photographer-of-the-year-0>)

Dec 1 - March 31: Wildlife Photographer of the Year Exhibit

### Ian Wheal Walks

- Sun Dec 16, 12:15 pm. Henry Scadding Indigenous Food Plants of the Lower Don River (1793). Meet at the entrance to Riverdale Farm, Sumach St and Winchester St. A 4-km walk to the Brick Works.
- Sat Jan 26, 1:30 pm. Planning the Perimeter of Riverdale Park (east and west sections). Meet at the entrance to Riverdale Public Library, Broadview Ave and Gerrard St.

## James L. Baillie Memorial Fund for Bird Research and Preservation

Bird Studies Canada is accepting applications to the Baillie Fund for 2019. Priority is given to projects that engage the skills and enthusiasm of amateur naturalists and volunteers to help us understand, appreciate and conserve Canadian birds in their natural environments.

**Information:** visit [www.birdscanada.org/about/funding/jlbmf/](http://www.birdscanada.org/about/funding/jlbmf/) or contact the Baillie Fund Secretary at [acoughlan@birdscanada.org](mailto:acoughlan@birdscanada.org) or 1-866-518-0212.

## ABOUT TFN

TFN is a charitable, non-profit organization.

### MISSION STATEMENT:

Toronto Field Naturalists connects people with nature in the Toronto area. We help people understand, enjoy, and protect Toronto's green spaces and the species that inhabit them.

### BOARD OF DIRECTORS

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**The office is open 9:30 am to noon on Fridays.**

### NEWSLETTER

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### EDITORIAL COMMITTEE

Kathleen Brooks, Jenny Bull, Vivienne Denton, Nancy Fredenburg, Elisabeth Gladstone, Zunaid Khan, Jennifer Smith, Wendy Rothwell (editor).

Printing & mailing: Digital Edge Printing & Media Services

### MEMBERSHIP FEES

Youth (under 26)	Free
Senior Single (65+)	\$30
Single	\$40
Senior Family (2 adults 65+)	\$40
Family	\$50

No HST. All members with email address receive digital newsletters. There is a surcharge of \$15 for those who prefer a printed mailed newsletter.

Tax receipts issued for donations.

*TFN does not give out its membership list.*

## KEEPING IN TOUCH

**A Little-known Crisis**

TFN member, Lynn Pady, has recently been distressed to see many song birds cruelly killed by burdock. As Lynn says, “This heinous plant snags tiny migrating birds. They can’t free themselves and die a gruesome death.” So she has been taking action on behalf of the birds.



Goldcrest kinglet trapped in burdock.  
Photo: Lynn Pady

Shortly after the municipal election, Lynn wrote to Mayor John Tory saying, in part: “Many of Toronto’s wonderful parks are filled with a horrific invasive plant – burdock – that snags small migrating songbirds, whose numbers are already in decline, killing them when they can’t fight

their way free. Ashbridge’s Bay is riddled with burdock all along the edges of the woody areas. There are several plants at Col. Samuel Smith Park as well, to name two parks on the lakeshore where birds tend to migrate as they head south.” She urged that park workers cut down these “killer plants” and burn them to destroy the seeds.

Lynn subsequently praised the wonderful job done at Col. Sam Smith Park where all burdock seed heads have recently been removed. On a visit to Ashbridge’s Bay Park, Lynn took the opportunity to show a dead kinglet to some park workers, making them aware of this serious problem.

Bird Studies Canada is involved in educating people about this issue. See <https://goo.gl/WMZ5cS>

It is good to see what one TFN member is achieving – an inspiration to the rest of us to get involved in activities that protect nature in Toronto.

In mid-October, I made a trip to Carden Plain, hoping to see some late season birds and fall colours. I ended up photographing a moose for 17 minutes (and having a staring contest with her). While she was on the other side of the fence and I was using a long lens, I still kept checking my escape route. [See photo on back cover].

Frank Miles



Ed. We wish to pay tribute to two long-standing members of the Newsletter Committee who, due to health and mobility issues, are no longer able to attend our Editorial Meetings. Toshi Oikawa served since 1987 and Karin Fawthrop since 1998. Their faithful service and valuable contributions to the newsletter are greatly appreciated.

This photo by Jenny Bull was taken at an Editorial meeting in 2008.



TFN is on Twitter and Facebook! Got something interesting to share? We’d love to get your photos and insights on TFN activities, Toronto nature events and interesting nature news.

Email [media@torontofieldnaturalists.org](mailto:media@torontofieldnaturalists.org) and be sure to include what your photo is and where it was taken.

To read posts, go to [www.torontofieldnaturalists.org](http://www.torontofieldnaturalists.org) and click on Twitter

**IT’S YOUR NEWSLETTER!**

We welcome contributions of original writing (between 20 and 500 words) of nature observations, especially in the Toronto area; also reports, reviews, poems, sketches, paintings and digital photos. Please include “Newsletter” in the email subject line or on the envelope. Please re-name digital photos with subject and your name. In the accompanying email include location, date and any interesting information associated with the photo.

**Submissions deadline for February issue: Jan 2**

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**Publications Mail**  
Registration No. 40049590



Moose at Carden Plain. Photo: Frank Miles (see page 15)