



Since 1923

# TORONTO FIELD NATURALIST

Number 641 February 2019



Red Squirrel. Photo: Theresa Moore. See page 6 re her photo book to be auctioned.

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## PRESIDENT'S REPORT

In the 1970s, TFN purchased 170+ hectares of nature reserves in an effort to tangibly protect vital habitats in our province. The creation of the Greenbelt in 2005 gave us over a decade to contemplate whether our continued stewardship of these properties was still as vital to the protection of nature as it once was. The recent elimination of Ontario's independent Environmental Commissioner\* and the emergence of Bill 66\* both serve as reminders that complacency is never an option.

Few members would contest that our programs of walks and lectures are the most obvious benefits of TFN membership, and are likely the reason many joined the organization. Yet these two pillars of our community are only part of a larger whole, albeit vital and extremely enjoyable ones to be sure. Environmental advocacy and stewardship are equally long-standing TFN traditions, ones that circumstance seems to be invigorating with enthusiasm.

The new "Take Action" section of our website was built with this in mind. It offers members many simple ways to lend support or voice concerns on a broad range of issues, recently ranging from the proposed double-crested cormorant cull\* to the TRCA's upcoming Trail Strategy. Our Action Committee is the driving force here, and TFN members are encouraged to email [action@torontofieldnaturalists.org](mailto:action@torontofieldnaturalists.org) regarding any issue they feel needs our community's support.

It is our Action Committee that also facilitates TFN's participation on advisory councils, community

associations and stakeholder groups. In the December newsletter I mentioned our ongoing work on the City's Biodiversity Strategy. This is only one such example. Over the last couple of months TFN has joined the TRCA's Meadoway Community Liaison Committee, partnered with Nature Canada on the "Keep Cats Safe and Save Bird Lives" campaign, and endorsed Ontario Nature's Protected Places Declaration, all while continuing our important commitments to groups like ProtectNatureTO, the Tommy Thompson User Group and others. If you are interested in joining our Action Committee, please send an email to the above address. Special thanks to all the members already contributing their time and efforts to these initiatives!

Finally, on a somewhat parallel note, see page six for the update on "Toronto Nature Now," our weekly segment on CJRU 1280AM which premiered on December 4th. Many thanks to Charles Bruce-Thompson for all his hard work organizing our participation and to all of the TFNers who have recorded segments to date. Since first hearing Bruce make raven and crow calls over the airwaves, tuning in has become a Tuesday morning ritual in my house. I hope it will be for all of you as well.

See postings about these issues on our website:  
<https://torontofieldnaturalists.org/take-action/>

Jason Ramsay-Brown  
[president@torontofieldnaturalists.org](mailto:president@torontofieldnaturalists.org)

### WHAT'S NEW ON TFN'S WEBSITE

Discover all this and more at  
<https://torontofieldnaturalists.org/for-members/>

- So What If We Lose the Environmental Commissioner? by Ellen Schwartzel
- The Connected Naturalist: Geocaching (the world's largest treasure hunt) by Jason Ramsay-Brown
- Kanopy pick for December – Birders: The Central Park Effect
- Kanopy pick for January – The Last Reef
- Opportunities to Take Action to protect nature

### TFN Board Nominations Invited

TFN is looking for people with initiative who are willing to devote time to working as members of the Board of Directors.

Please send your suggestions to the Chair of the Nominating Committee, c/o the TFN office (see contact info on page 14).

The Committee's report will be published in the May newsletter.

## 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 Feb 2 10:00 am **ALLAN GARDENS – Nature Walk**  
**Leader: a staff member.** Meet at the main entrance to the conservatory for a circular walk in the greenhouses. Learn about some of the tropical plant collections including orchids, bromeliads, bananas, succulents and cacti. Washrooms available.
- Wed Feb 6 10:00 am **ROUGE VALLEY – Nature Walk**  
**Leader: Stephen Kamnitzer.** Meet at the Rouge Valley Conservation Centre on Zoo Rd, east off Meadowvale Ave north of Sheppard Ave E just opposite the zoo. TTC bus #85 from Don Mills subway station or Rouge Hill GO station. A 4-hr walk to explore the area around the conservation centre and north up Little Rouge Creek. Bring lunch.
- Sat Feb 9 10:00 am **EAST DON TRAIL – Nature Walk**  
**Leader: Stephen Smith.** Meet at the bus stop at Craigmont Dr and Cummer Ave (Bus #42 from Finch subway station). We'll walk south along the Don Trail seeing vegetation in winter conditions and several restoration projects. Mostly flat with some moderate hills. Be prepared for slippery trails. Walk will end at Finch Ave E and Alamosa Dr.
- Tues Feb 12 1:30 pm **RIVERDALE RAMBLE – Nature and Heritage**  
**Leader: Ed Freeman.** Meet at the corner of Morse St and Queen St E for a tour of workers' homes, former waterfront and lost industry. A linear walk on city streets ending at King St E and River St.
- Sun Feb 17 2:00 pm **DAVENPORT RD AND TOLLKEEPER'S COTTAGE – Lost Rivers**  
**Leaders: Helen Mills and John Wilson.** Meet at Dupont St and Davenport Rd for a 2-km linear walk on level pavement ending with a warm welcome at Tollkeeper's Cottage (the restored heritage building from the 1830's at Bathurst St and Davenport Rd). The route traces the shoreline of glacial Lake Iroquois below Casa Loma. Part of a series of walks in the Core Circle, a blue-green lineal zone around the city's downtown core. A joint outing with Toronto Green Community.

	<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		

- Thurs  
Feb 21  
1:30 pm
- URBAN FORESTS AND WILDLIFE -- Nature and Heritage**  
**Leader: Joanne Doucette.** Meet at Gerrard Ashdale Library (Ashdale Ave and Gerrard St E) for a circular walk on mostly paved surfaces with some steep slopes. Explore Williamson Ravine, Small's Creek, a vanished vineyard, etc. Moderate pace. Washrooms at beginning of walk.
- Sat  
Feb 23  
10:00 am
- ASHBRIDGE'S BAY – Winter Birds**  
**Leader: Bob Kortright.** Meet at the southwest corner of Coxwell Ave and Lake Shore Blvd E for a circular walk on fairly flat and mostly paved surfaces. Look for Arctic gulls and waterfowl forced south to Lake Ontario by lack of open water to the north. See the remnant of Ashbridge's Bay and learn of changes planned for the harbour and sewage treatment plant. Bring binoculars.
- Wed  
Feb 27  
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 paved surfaces, flat with some gentle slopes. Bring binoculars. Should have good waterfowl sightings. No washrooms.

## TFN MEETING .....VISITORS WELCOME

Sunday, February 3, 2:30 pm (Social, 2 pm)

### Bats of the GTA – The Real Stars of the Night

**Speaker: Toby Thorne, Toronto Zoo bat biologist and researcher,**  
*will explore current work on bat ecology and migration using acoustic surveys  
and echolocation call identification.*

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**

Next Lecture: March 3: Moose – Crowned Giant of the Northern Wilderness  
Mark Raycroft, wilderness photographer and author



### Great Backyard Bird Count February 15-18, 2019

The GBBC is an annual four-day event that engages birdwatchers of all ages across North America in counting birds to create a real-time snapshot of where the birds are. Anyone can participate, from beginners to experts. You can count for as little as 15 minutes on a single day, or for as long as you like each day of the event. It's free, fun and easy, and it helps the birds! See [www.birdcount.org](http://www.birdcount.org)

Female northern cardinal. Photo by Ken Sproule

## MONTHLY MEETING REPORT

### Restoring Rare Tall Grass Prairie Ecosystems on the Rice Lake Plains.

December 2, 2018

Val Deziel, Co-ordinator, Conservation Biology, Rice Lake Plains, Nature Conservancy of Canada

Val Deziel provided an interesting insight into the stewardship activities of her team working on the restoration of tall grass prairie ecosystems on the Rice Lake Plains. These are located 90 minutes east of Toronto, 30 minutes north of Lake Ontario, and run along the Oak Ridges Moraine. They contain the largest unprotected oak savannah and tall grass prairie remnants in the Great Lakes region, representing less than 3% of the 70,000 hectares of tall grass prairie once found in Ontario.

Stewardship activities include removal of non-native woody and herbaceous species, prescribed burning, native planting, seeding and thinning. Their work is not just about plants and plant communities but also about species affected by habitat loss, habitat degradation and ecological succession including eastern bluebird, savannah sparrow, eastern meadowlark and grasshopper sparrow.

Their largest nature reserve is named after Hazel Bird, a local naturalist who installed and monitored 400 blue bird boxes with the aid of volunteers. These efforts were successful with thousands of broods raised in her nest boxes, to the point where the eastern bluebird was taken off the Species at Risk list. Another of the team's projects is removal of Scotch pine and restoring habitats for Species at Risk such as the eastern hognose snake.

Prescribed burns are a key component of their work. Val described the planning involved for these and their impact on the ecosystem. Black oaks are tolerant of the low intensity fires, allowing them to thrive in the tall grass prairie and oak savannah ecosystems. The periodic burns

prepare land for natural regrowth by promoting fire-tolerant grasses and prairie plants such as big bluestem and cylindrical blazing star, and shrubs like the fragrant sumac.

Val described their native planting efforts: collect, grow, plant and seed, then repeat the process. They hold four-day volunteer events in the summer at both their Salt Creek and Hazel Bird nature reserves. In 2018 they planted over 5,100 tall prairie grasses.

The Hazel Bird Reserve is one of the last documented sites of a healthy wild blue lupine population, which is food for the Karner blue butterfly. Conservation partners hope to restore wild lupine so that the property will

become a key site for reintroduction of this butterfly which is no longer found in Ontario but still exists in areas of the eastern United States.

Val shared data on their efforts over the last five years. They have removed 102 hectares of Scotch pine, planted 68,000 plugs, grown 2,100 potted plants, accumulated 548 kg of seed and dispersed 259 kg directly on the ground, and performed prescribed burns on 155 hectares.

They have set up a photo monitoring system in order to track the progress of their conservation work. According to Val, it takes about four years to see the results.

In addition to these visual data, they are looking for a numerical way to record changes to the different nature reserves. They are developing a method of capturing changes to the condition of individual tall grass communities over time and ranking one relative to another. The Nature Conservancy of Canada has been working to develop this scoring system, which is in the early stages of testing. It includes standardized ranking of ecological processes utilized in stewardship activities, including prescribed burns, cutting, spraying, planting and seeding as well as measuring the presence of indicator species and the relative cover of native and invasive species. They hoped to have a final draft by the end of 2018.

Zunaid Khan



See Rice Lake Plains Partnership website  
<http://www.ricelakeplains.ca/>

## SHARE YOUR LOVE OF NATURE ON THE RADIO!



Ryerson University's new campus and community multi-media hub, CJRU 1280AM, is broadcasting short (about five minutes) talks given by TFN members every Tuesday morning on a variety of nature-related subjects. The first segment was broadcast on December 4.

This is how it works: You provide four or five questions for the presenter on your chosen subject. The presenter calls you at a pre-arranged time and goes through the questions. Voilà tout! The recorded segments are then edited for broadcasting later.

As the segments are short, an encyclopedic knowledge is not necessary. But enthusiasm for the subject – and perhaps a bit of research – make for a more engaging talk.

Subjects recorded to date include: The Nut Man of Echo Valley, Japanese Knotweed, The Christmas Bird Count and Toronto Ravens, among many others.

TFN members Ellen Schwartzel, Jason Ramsay-Brown, Bob Kortright and Charles Bruce-Thompson have participated already, but we need more contributors to ensure that this becomes a permanent fixture on the airwaves (and in the Cloud). So we would very much like members to contact me (cbthomps@gmail.com) to tell me about your favourite nature subject so you can share it with a wider audience. Don't be shy!

To listen to previously broadcast segments go to: <https://bit.ly/2Cl2IJF>

You can listen to new segments every Tuesday morning at 9 am by tuning to 1280AM, or by going to "Listen Live" at <https://www.thescopeatryerson.ca>

Charles Bruce-Thompson

## Nature Images Show

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

Auditorium, S Walter Stewart Library, 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.

Light refreshments will be served. Donations of goodies welcomed.

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

There will be a **Silent Auction** including:

- a new book *Fauna, Photographs by Theresa Moore*
- Jason Ramsay-Brown's book *Toronto's Ravines and Urban Forests*
- a numbered wood block print, *Black Bird* from Lynn Pady

Note: Please bring cash or cheque (credit/debit cards not accepted)

Rules for presenters:

- 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 script that can be read by a volunteer.



Monarch butterfly  
Photo: Ken Sproule

## Raising Butterflies

TFN is registered with the Ministry of Natural Resources and Forestry so our members who register are allowed to raise monarch and swallowtail butterflies. This year six members raised 359 monarchs. Those who kept track of gender raised 175 females and 142 males. We tagged 169. Terry Whittam tagged 2,100 monarchs at Rosetta McClain Gardens.

We have to register again this year. If you want to join us in this project, please give me your contact info by March 15 so I can include you on the list. Email me at [marg.mcrae@gmail.com](mailto:marg.mcrae@gmail.com) or call 416-429-7821. Also please let me know if you want your name removed from our list.

## TREE OF THE MONTH: PINES (*PINUS* SPP), PART I

In the midst of winter it seems appropriate to highlight an evergreen conifer to enliven the barren landscape of the season. Several kinds of conifers could take on this role, but one genus demands particular attention. Pines are among our most familiar trees, common in cultivation and in natural areas throughout the city. There are five abundant pine species in Toronto, two native (eastern white pine, *Pinus strobus*, and red pine, *P. resinosa*), and three introduced from Europe (black [a.k.a. Austrian] pine, *P. nigra*, Scots [a.k.a. “Scotch”] pine, *P. sylvestris*, and shrubby mugo pine, *P. mugo*). Several additional native and introduced species are sporadic here, all immediately recognizable as pines and some scarcely distinguishable from the common five. Beneath the familiarity, however, lurks a generally unrecognized, though undisguised, secret: they are profoundly weird in their structural organization of both foliage and reproductive organs.

I will discuss reproductive structures next time, but now it’s about the leaves and shoots. Obviously, the outstanding feature of pine foliage is the presence of long, slender needle-leaves attached to the twigs in tight, brush-like bundles (called fascicles) of 2, 3 or 5 (in our species), unlike the shorter single needles of spruces, firs or hemlock. Even the many-needled tufts of larches and true cedars have leaves obviously individually attached to a stubby shoot, albeit packed together very closely. At first blush, the arrangement in pines is peculiar and unexpected, since vegetative organization in green land plants in general has shoots with leaves attached singly at a node (point of leaf attachment), with two leaves across the stem from each other or in whorls of three or more around the stem.

A closer look at a pine shoot helps explain the discrepancy because it reveals that the needles aren’t the only leaves attached to the stem. The whole shoot is clothed from top to bottom with spirally arranged, inconspicuous, small (only a few millimetres long), thin, white-to-brown scale leaves. These are in an expected position, one at a node, including right at each fascicle (needle bundle). In addition, the fascicles themselves are sheathed tightly at the base (at least initially) by a few larger scale leaves. These fascicle sheath scales are one of the clearest distinctions between the two major subgenera of pines: hard pines (like red, black and Scots) and soft pines (like white). In almost all hard pines (most of which have fascicles with 2-3 needles), the scales persist and remain tight around the fascicle right up until the whole bundle is shed. In most soft pines (mostly with 5 needles), the sheath scales loosen and are shed individually as the needles mature. This often leaves soft pine fascicles looser than in hard pines, especially when, as in eastern white pine, the needles themselves are thinner and more flexible than those of hard pines.

The fascicles are thus extremely reduced side branches (short shoots) growing in the axils of the scale leaves on the main (long) shoots. The long shoots, which may themselves be either axillary or terminal, persist and contribute to the permanent branch architecture of the tree. In pines, the long shoots emerge from a cluster of winter buds at the tips of the previous year’s growth, the terminal bud and a ring of 1-8 lateral buds.



Black pine showing fascicles with their sheath scales intact, scale leaves on the main shoot and persistent scales from the terminal winter bud. Photo: Ron Dengler



Eastern white pine, showing fascicles of five needles with the sheath scales having been shed. Photo: Ken Sproule



Scots pine showing pseudo-whorl of buds surrounding terminal bud. Photo: Ron Dengler

## SAVING TORONTO'S NATIVE TREES

If you wanted to save the planet, or even just Toronto, you might start by rethinking your front lawn.

On a hot October afternoon, sticky as taffy, I met with two young men who were sweating over what looked like a giant sandbox on their front yard. In Tom Sawyer style, various neighbours had already pitched in to help Eric Davies, a U of T forest ecologist, and Robbie Brar, a wood up-cycler, to create their dream project – a tree nursery. Davies' landlord gave permission for the nursery, others contributed carpentry skills or just strong arms, and a friend covered the \$400 cost of the soil.

Davies wanted to re-wild the city long before it became “managed” by urban forestry. He is now doing a PhD at the University of Toronto studying biodiversity between native and non-native trees. He said, “I’ve found there’s a lot of insects and birds in native trees, which you’d expect.”

Urban forestry planted Norway maples and honey locusts, and the poor old ash trees. We know what happened to them! Other introduced species have started to take over: Manitoba maple, tree of heaven (also known as “stink tree”) and black locust. “When you look at the canopy of Toronto, native trees are plummeting in both abundance and diversity. And 25% of all the trees in downtown Toronto are Norway maple; that’s invasive, toxic to insects and kills the fungi in the soil,” Davies said. “Local trees are good for biodiversity and they’re adapted for the climate. But you can’t buy them. If you go to a



White oak. Pencil drawing  
by Joanne Doucette.

nursery and ask for a red oak, it can come from Ohio.” His front-lawn nursery is hyperlocal, which also makes it something of an art installation. The beautiful uneven planed lengths of cottonwood are sourced from east end Toronto. A giant trunk of 100-year-old red oak (“the bench”) was sourced from Cherry Beach. (Trees taken down by the City of Toronto are sent to a property in the Port Lands and chipped. Brar is salvaging these trees for up-cycling.)

The box held, not sand, but rather deep rich Triple Mix, black as dark matter. The two men were wrestling with the carpentry of this magic box, which would ultimately hold 1,000 to 1,500 acorns of white oak (*Quercus alba*). “White oaks only produce acorns every five to 15 years. That’s 10 to 15 times a century. This is a bumper year,” Davies said.

In large bowls on his balcony, which is covered in duck decoys, Davies picked up acorn after acorn, pointing out, “This one is from the white oak on the grounds of the ROM. This one is from Queen’s Park. This one is from the Nordheimer Ravine.” They ranged in shape from long and pendant to cute and round, cartoon-like. In tall bottles filled with water, acorns were sprouting white tails that would become roots.

White oak can grow to over 35 metres tall and live for several hundred years. Davies is playing the long game, and will ultimately give away the trees.

Susan Grimbley

Ed. For Eric Davies' study of Toronto Ravines, see <https://bit.ly/2Rjyn8v>. See also news item below.

## IN THE NEWS

### Toronto Ravines

While Toronto may be referred to as a “City within a Park,” our ravine system, comprising about 17% of Toronto's area, is currently heading towards ecological collapse, according to the authors of a multi-decade study out of the Forestry Department of the University of Toronto, released last November. See CBC news report: <https://bit.ly/2TC6d5n>.

Toronto could look to the successes of New York's MillionTreesNYC, and their army of citizen volunteers who took part in the plantings and the city street tree census, as a means to aid in Toronto's Ravine Strategy that was adopted by Council in 2017. See Toronto Star article: <https://bit.ly/2TFjLNp> and the Ravine Strategy: <https://bit.ly/2M7IZBP>

Vanessa McMain

### Why we need birds (far more than they need us)

This fascinating article from BirdLife International <https://bit.ly/2QPknOS> describes seven ways in which birds benefit us. I knew that birds pollinate, control pests, spread seeds and inspire us, but not that they are vital for coral reefs, that loss of vultures caused almost 50,000 deaths from rabies due to the increase in dogs in India or that US saltmarshes would turn into mudflats if shorebirds didn't control the snails that eat the marsh plants – food for thought!

Bob Kortright

## TORONTO'S SUMMER-BLOOMING PRIMULAS

Toronto's four native summer-blooming species of the primrose family (Primulaceae) are all members of the genus *Lysimachia* (loosestrifes). Three of these were recorded in the TFN's *Vascular Plants of Metropolitan Toronto* (1994, 2nd ed.) as locally uncommon and one as common. All can flower at any time from June to August. *Lysimachia*, according to *The ROM Field Guide to Wildflowers of Ontario* (2004), comes from King (self-named) Lysimachos of ancient Thrace. This name means "ending strife." Loosestrife has the same meaning (and is also applied to "purple loosestrife," an unrelated species in a different family).

*L. ciliata* (fringed loosestrife) is common across Toronto in open or shady moist areas. As tall as 1.3 m, it has solitary flowers, up to 25 mm wide, with 5 corolla lobes. According to the *ROM Field Guide*, it is found across southern Ontario and in parts of northern Ontario. Its full range includes all Canadian provinces except Newfoundland and Labrador and almost all of the U.S. except the southwest.

*L. quadrifolia* (whorled loosestrife) has been reported in the TFN's *Vascular Plants* as in High Park and possibly in the Rouge watershed. It is a species of woods and thickets, up to about 80 cm tall. Its 15 mm flowers are held on thin stalks, and flowers and leaves occur in a whorled pattern.

Its range includes southeast to southcentral Ontario, Quebec, New Brunswick and most of the eastern U.S. (U.S. Dept. of Agriculture database).

*L. terrestris* (swamp candles), a wetland species, was reported in High Park and the Rouge. Up to about 80 cm tall, it has flowers about 10 mm forming a tight raceme about 20 cm long. It occurs from Manitoba to the Maritimes and in the eastern half of the U.S. The USDA lists a disjunct native population in B.C. and the northwest U.S. However, the *Vascular Plants of Canada* database (VASCAN) reported that the B.C. occurrences were introduced. The picture is not clear!

I do not have any images of *L. thyrsifolia* (tufted loosestrife), reported in the TFN's *Vascular Plants* as in the Rouge watershed, High Park and on the Toronto Islands. This is a species of swamps and marshes that should occur in similar habitats to *L. terrestris*. Its flowers form globular clusters and identification should not be difficult.

If you choose to venture out in Toronto during the summer, in moist to wet environments, look for the three uncommon species. Any new occurrences should be recorded and reported to the TFN.

Article and photos by Peter Money



Fringed loosestrife (*Lysimachia ciliata*)



Whorled loosestrife (*L. quadrifolia*)



Swamp candles (*L. terrestris*)

## FOR READING

Helen Juhola highly recommends the following books:

*The World in a Grain*, Vince Beiser, 2018. The gripping story of the most important overlooked commodity in the world – sand – and the crucial role it plays in our lives.

*Sea Sick* by Alanna Mitchell, 2009. The first book to explain how the global ocean – 99 per cent of the planet's living space – is undergoing vast chemical changes at the hand of man and why that matters.

## JUNIOR NATURALISTS OUTINGS REPORTS

The temperature hovered around zero as eight Junior Naturalists and parents arrived at **Cullen Bryant Park on November 10**. We started with a winter bird game. Each participant had the name of a winter bird taped to their back and carried a chart with pictures of twelve winter birds. (Thanks, Ken Sproule!) Working in pairs, we had to ask questions that could only be answered with Yes or No, and guess the bird name in three tries. This was hard, but we were awesome!

Pat Burchell shared her knowledge of fungi, and we studied samples of fruiting jelly fungi (orange jelly fungus and witch's butter); sac fungi (dead man's fingers, lemon drops and blue stain fungus); bracket fungi (turkey tail and lovely *Ganoderma lucidum*). We learned about the two functions of fungi in the ecosystem, as mycorrhizal partners of plants and as decomposers. It is the latter that we see fruiting at this time of year. With all the plastic accumulating around us, we noted that nature does things differently and there are ways that everything nature produces is recycled.

We hiked down to Taylor Creek and up the east side of the East Don through the woods where we saw many fungi. When we arrived at the river, we talked about the history of salmon in Lake Ontario and the rivers of Toronto, going back to the arrival of Atlantic salmon after the last Ice Age.

The TFN Juniors gathered at **Humber Bay Park East on December 8th** to celebrate the migratory ducks that over-winter in the open water of Lake Ontario. We had fun doing a skit of a dialogue between a goldeneye "Goldie" and a bufflehead "Buff." We learned lots about their secret lives as youngsters in the Canadian boreal forest and their hopes of raising their own broods in the Arctic this summer.

Anne Powell and Bob Kortright took us on a lovely winter walk among the lagoons and bridges of the park. We saw 18 bird species including lots of hooded mergansers and a red-tailed hawk that swooped down and landed in a tree right in front of us.

Anne Purvis

## NEXT JUNIOR NATURALISTS OUTING

**February 9:** The Scientists in School BONE ZONE workshop will help improve your ID skills for those bones you find in the wild! Join us at the Church of the Resurrection, 1100 Woodbine Ave. We will study mammal skulls and dissect owl pellets.

### TREE OF THE MONTH *continued from page 7*

In contrast to an ordinary side branch, the shoot apex of the fascicle dies after the sheath scales and needles are initiated and no other needles or scale leaves are ever produced. This whole arrangement in pines is the most exaggerated form of a long shoot/short shoot organization found in a few other conifers and hardwoods. In all of these other cases, the short shoots are more obviously axillary side branches on the long shoots.

While all fascicles are shed over time, their longevity varies widely among different pine species. Those of white pine are shortest lived, the fascicle needles turning yellow en masse and falling in the autumn of their second or third year, making white pine our only pine species with definite fall colour. In our other pines, the needles typically last for three to five years and senesce unevenly, so that they are gradually lost from the oldest annual shoot increment.

Although understanding the botanical interpretation of pine needle fascicles may seem a puzzlement, using these bundles to help in pine identification is easy. The number of needles in a fascicle, their length, colour, stiffness,

twistedness, and the number and position of thin white lines of stomates all help, whether or not seed cones are present.

James Eckenwalder



Eastern white pine showing fall colour. Photo: Ron Dengler

## CHILDREN'S CORNER

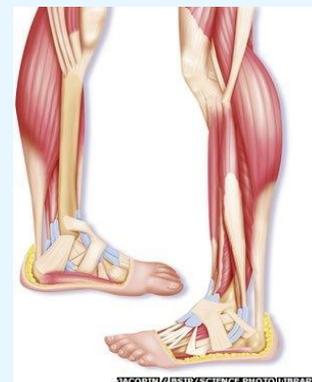
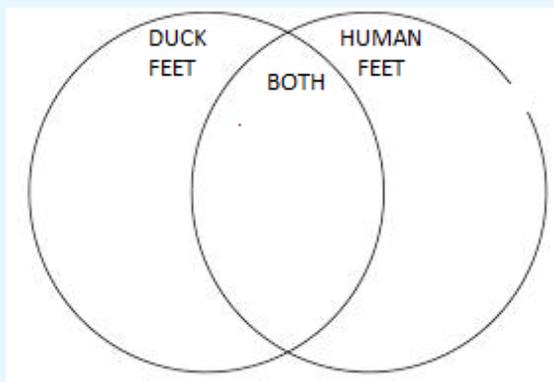
### Do Ducks Get Frostbite?

In early December the TFN Juniors were on an outing at Humber Bay Park. We saw lots of beautiful ducks, some visiting from the Arctic. Some of the ducks were trotting around on the ice. See: <https://youtu.be/OjUeiJBZoZs>. It looked like so much fun but, for some reason, no one suggested we take off our boots and join them!

In some ways, ducks' feet and legs are the same as or different from ours. See if you can do this Venn diagram. Put things that only duck feet have in the circle on the left. Put things that only human feet have in the circle on the right. If both kinds of feet have that characteristic, put it in the middle where the circles overlap.

#### DUCK FEET AND HUMAN FEET

hairy skin, bones, tendons, nerves, veins, arteries, scaly skin, toenails, muscles



What is missing from duck feet? \_\_\_\_\_

This means they can be reduced to a temperature just above freezing and still get enough oxygen and nutrients from the blood to keep going. That is part of the answer about frostbite.

However, a duck would soon run out of heat if it let the temperature in its feet fall to 1° from its core temperature of 38°. Ducks have a clever system, called the counter current exchange, to stop heat from being lost to the water. As hot arterial blood approaches the legs, it transfers its heat to closely aligned veins, full of cold blood that is leaving the feet. It is always the arterial blood cooled in this way that enters the feet. The feet are kept just above freezing and no extra heat is lost to the water! If the feet get really cold, the duck has enough extra energy to bypass the heat exchanger and send a pulse of hot blood to the feet to warm them up.

Answers on page 15.

Project by Anne Purvis

**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.

## TAKE ACTION COMMITTEE REPORT

Following the Ontario Government's announcement of the dissolution of the office of the Environment Commissioner, TFN responded with a web post\* encouraging the membership to sign an Ontario Nature petition opposing this. Ellen Schwartzell, who worked for several Environment Commissioners and was acting Environment Commissioner before she retired, wrote a detailed piece about what will be lost when this office disappears. She subsequently hosted a Canadian Environmental Law Association panel and made a deputation to the Finance Committee of the Ontario Government. Although the legislation was nonetheless passed, it is important that the public record show that there was opposition to this bill.

The Take Action Committee discussed making a deputation to the City Budget Committee to increase funding for the Community Stewardship Program (CSP) in January 2019. This would allow more public participation in ravine restoration. Four potential requests could be made: i) more funding, ii) faster timeline on management plans for Environmentally Sensitive Areas, iii) funding for a certification program for volunteers to lead a CSP group and iv) a source of dedicated funding for ravine restoration, such as the \$250 million fund accumulated from developers for purchase of parkland elsewhere.

Nancy Dengler and Paula Davies crafted a letter on behalf of ProtectNatureTO (PNTTO), to be sent to new Councillors on the day of their swearing in, requesting more Community Stewardship Program funding and faster timelines on management plans for Environmentally Sensitive Areas.

Bob Kortright and Paula Davies represented TFN and PNTTO, respectively, at the Biodiversity Strategy

Advisory Group. A new draft strategy will be published in late January and public consultations will take place in February.

Charles Bruce-Thompson attended the Tommy Thompson Park User Group meeting on November 22nd. Cells 1 and 2 will be drained for phragmites control. There will be changes to the entrance way and a pavilion will be constructed in 2019. The multi-use trail through the baselands is under construction.

Four of our members attended a TRCA event on salt use. Salt on roads is probably at the minimum allowable amount for public safety, but parking lots and sidewalks still suffer overuse of salt. Suggested solutions included a certification requirement for salt contractors.

Bill 66, the Ontario Government's 'Open for Business' legislation, will open the Greenbelt for development. An explanation was posted on TFN's website\* asking members to respond to one of the many petitions that have been launched to stop this bill (e.g. by Ontario Nature or Environmental Defence).

\*see <https://torontofieldnaturalists.org/for-members/>



Phragmites

Photo: Wendy Rothwell

Anne Purvis

## 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.

### **The Market Gallery** ([www.toronto.ca/marketgallery](http://www.toronto.ca/marketgallery))

To Apr 27, Toronto Through the Eyes of Women Artists. Admission \$5 - \$8.

Location: South St Lawrence Market, 2nd floor, 95 Front St E. The gallery is closed Sundays, Mondays and holidays.

### **Royal Ontario Museum** (<https://www.rom.on.ca/en/wildlife-photographer-of-the-year-2018>)

To March 31: Wildlife Photographer of the Year Exhibit)

### **Ian Wheal Walks**

- Sun Feb 3, 11 am. Centenary of Union Station. Path Walk to celebrate transit in Toronto. Meet at the clock tower at the main entrance to Union Station, Front St.
- Sun Feb 10, 1:30 pm. Eaton Horse Stables, Horses Alive and Well. Meet at Coxwell subway station. A 7-km walk of the Coxwell area.
- Mon Feb 18, 1:30 pm. Centenary of Earls Court Park. Meet at the southwest corner of St Clair Ave W and Lansdowne Ave. An 8-km walk.
- Sun Feb 24, 12:45 pm. Toronto Islands - Bike, boat and foot. Meet at the ferry docks to catch the 1 pm ferry. A 10 km walk.

## EXTRACTS FROM OUTINGS LEADERS' REPORTS

### Gates Gully and Scarborough Waterfront, Nov 3.

**Leader: Jonathan Harris.** Non-native and/or invasive vegetation is threatening to take over the remnant native forest on the slopes of Gates Gully. Along the shoreline of Lake Ontario we spotted gadwall, common merganser and mallard. At South Marine Park we viewed swallow colonies in the exposed bluff faces.

### Rosetta McClain Gardens and Lakeshore, Nov 10.

**Leader: Bob Kortright.** The strong west wind was not conducive to raptor migration. However, the gardens offer a nice mix of trees ranging from those native to Toronto (Carolinian such as hackberry, black gum and tuliptree); those native to more distant parts of eastern North America (catalpa and yellowwood) or western North America (Colorado spruce) and those from Eurasia (Norway spruce, apple and pear, European larch, sycamore and amur maple). At the bottom of the hill we enjoyed views of the bluffs and lake, and found some poison ivy plants with numerous berries but no leaves – beware!

### Lower Don Trail, Nov 15. Leader: Vivienne Denton.

A new rail fence around the wetland in Riverdale Park enlarges the naturalized area to take in cattails which have sprung up in the swamp. As we walked up the Don, to our surprise a deer came ambling down the pathway towards us. We froze, but she decided not to mess with us and

slipped down the riverbank, crossing the river to disappear in the brush on the other side. Golden brown leaves still on the oak trees and swathes of rust-coloured invasive Japanese knotweed caught our eyes. We admired the seed heads of late fall: fluffed out plumes of goldenrod and aster, exquisitely shaped seed capsules on tall evening primrose, big bluestem and switchgrass, wild cucumbers, milkweed seeds escaping their pods and masses of orange-brown bladdernuts. Birds seen included a flock of grosbeaks, goldfinches, chickadees and a perched red-tailed hawk.

### Trees, Echo Valley Park, Mimico Creek, Nov 17.

**Leader: James E. Eckenwalder.** Our walk was through Corson's old nut tree orchard and over to the streamside walkway. Deciduous canopy trees were bare but many understory shrubs still retained their leaves, especially the dominant invasive European spindle tree (*Euonymus europaeus*). River grape was common. The canopy within the orchard is dominated by walnut and hickory species (including shagbark, shellbark and bitternut hickories) and black, common and Japanese walnuts. Other trees in the orchard included introduced common hazel and crack willow, Manitoba maple and eastern sycamore. A fallen black walnut branch provided an opportunity to look at chambered pith and the bundle scars that connect twig xylem and phloem to leaf venation through the leaf scars and petioles.

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## WEATHER (THIS TIME LAST YEAR)

### February 2018

A summer-like Bermuda high over the western Atlantic Ocean dominated February's weather. Early in the month, the warm air it pumped northward into eastern North America stayed in the southeastern United States, while fairly cold weather remained over the Great Lakes. This meant there was frequent snowfall. The coldest day of the month was February 2nd, with a minimum of  $-15.0^{\circ}$  downtown and  $-15.7^{\circ}$  at Pearson Airport. Snow fell on the 3rd to 4th, 7th, and 9th to 10th.

During the second half of the month, the warmth expanded north to our area with record high temperatures on several days. This scenario was reminiscent of a year ago (and of March 2012). A barely modified tropical air mass, complete with high dewpoints, fog and mugginess, reached us on the 20th – the warmest day of the month. It hit  $15.5^{\circ}$  downtown and  $16.5^{\circ}$  at Pearson. Lingering snow pack and ice cover on the Great Lakes prevented us from reaching the ridiculous temperatures that prevailed in the U.S.:  $26^{\circ}$  in New York City and  $27^{\circ}$  in Massachusetts. Spring-like conditions held on to the end of the month, with highs reaching  $16.2^{\circ}$  at Pearson Airport on the 28th. Intermittent rain also resulted from the incursion of tropical moisture.

The warm pulse in the Atlantic ended up circling east of Greenland and brought brief thaw conditions to the High Arctic. At the same time, severe cold moved west from Siberia across Europe.

Snow cover lingered until the 20th, and the warmth did not produce an early bud burst (though there were reports of salamanders and ticks emerging in southwestern Ontario).

February ended up being a warm and fairly wet month. The monthly mean temperature downtown was  $-0.4^{\circ}$ ,  $2.4^{\circ}$  above normal. At Pearson, the mean was  $-1.8^{\circ}$ ,  $2.6^{\circ}$  above the normal of  $-4.4^{\circ}$ . These values were considerably below the record warmth of 2017 because the first half of February remained seasonably cold in 2018.

Rainfall and snowfall were both above normal. Snowfall, measured at Pearson Airport, was 28.8 cm (normal 26.2 cm). Rainfall was 37.0 mm. Total precipitation at Pearson was 65.4 mm (normal is 48.7) and downtown was 62.0 (normal is 54.5 mm).

**OUTINGS REPORTS EXTRACTS** *continued***Centennial Park, Nov 21. Leader: Nancy Dengler.**

Several trees in the conservatory, including banyan fig, screw pine and Canary Island date palm, are presumably more than 50 years old and reaching an impressive size, as are the epiphytes staghorn fern and lacy philodendron. In the desert house, we looked at Madagascar palm (milkweed family), elephant foot (agave family), Buddha's belly (spurge family) and pony tail palm (mayflower family), unrelated plants that all show the same adaptation to life in a dry climate – a thickened trunk that stores water (an example of evolutionary convergence). We looked at evolutionary divergence in the cactus family: Barbados gooseberry, prickly pear cactus, golden barrel cactus and Christmas cactus are all very different in shape but share the same floral ground-plan. In the tropical house, we looked at the Wollemi pine, a living fossil from Australia that is threatened by introduced water mould fungus in its very limited native range. The nearby bird-of-paradise was in bloom, giving us a good opportunity to observe how the flowers and inflorescence are adapted to pollination by perching sunbirds. On a brisk walk in the woods, we looked at

turkey tail bracket fungi covering a standing, but dead, ash trunk; also a small grove of planted pawpaw trees, some with papery green leaves still clinging to the branches.

**Cherry Street to Clarke Beach, Nov 28. Leader: Charles Bruce-Thompson.** We saw the beginnings of the ambitious Don Mouth Naturalization and Flood Protection Project; also two other large city projects that are underway: the Martin Goodman Trail being pushed through the Leslie Spit baselands and the Ashbridge's Bay Landform Project. Nature sightings of interest included a raft of about 400 redheads, a flight of six tundra swans, a turkey vulture and a solitary mockingbird.

**Leslie Street Spit, Dec 8. Leader: Stephen Kamnitzer.** Though we failed to spot any snowy owls, we did see 14 species of birds including two great blue herons, a snow bunting, a brown creeper and numerous waterfowl: mallard, American wigeon, bufflehead, common goldeneye, common merganser, hooded merganser, long-tailed ducks, scaup, redheads and white-winged scoter.

**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.

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

**NEWSLETTER**

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Tax receipts issued for donations.

*TFN does not give out its membership list.*

## KEEPING IN TOUCH

I took this photo of a trumpeter swan on December 23rd during a long walk on the Leslie Street Spit. We met individuals who had been walking for hours hoping to spot a saw-whet owl, which neither they nor we came across. My friend and I saw a beaver and an otter, and of course a number of waterfowl. We took a little pathway down to a large pond and spotted some swans. When they saw us, they started to approach. Then others began to arrive from several directions – a flotilla of swans, both adult and juvenile. It was quite exciting! They must have thought we had food for them but of course I only had some seeds for chickadees.



I was strolling around Mt. Pleasant Cemetery on January 8th. The day was grey and kind of misty. It was very peaceful with few people about. I thought I caught sight of a dog out of the corner of my eye but when I turned my head, I was surprised to see what I am pretty sure is a coywolf. When it saw me, it loped off. But a few minutes later, there it was again – and much closer this time. He looked right at me but didn't run. I got a little closer and was able to take a few shots with my cell phone. Then he just lay down as if he were on a carpet in a house. I was too far away for the photos to have great resolution. However, it was very exciting!

The next day I took the photo [on the back cover] in the Don/Crothers Woods area. What a day – it snowed, the sun came out, it was calm, another blizzard erupted and so on. Crazy!

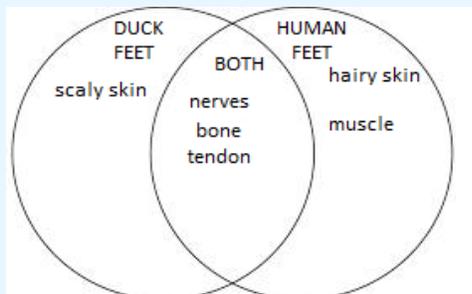
Diana Sernick

### 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 March issue: Feb 1.**

Answer from page 11.



Ducks' feet have very few nerves and no muscles.



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.

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Lower Don, January 9th, 2019. Photo: Diana Sernick. See page 15.