



Since 1923

# TORONTO FIELD NATURALIST

Number 655 November 2020



Juvenile Black-crowned Night-heron at Col. Sam Smith Park, September 2020. Photo: Margaret Kelch

## REGULARS

About TFN	14
Extracts from Outings Reports	13
Junior Naturalists	11
Keeping In Touch	15
Lecture Notice	16
Lecture Report	5
Photography in Autumn	10
President's Report	2
TFN Outings information	3
Weather (This Time Last Year)	14
What's New on TFN's Website?	4

## FEATURES

TFN Publications	3
Golf Courses or Public Parklands?	4
Tree of the Month: Witch-hazel	6
Volunteer Profile: Anne Powell	7
Ectomycorrhizae: How Forest Trees get their Nutrients	8
Toronto Wildflowers: Genus <i>Bidens</i>	12
Discover the Natural Wonders of High Park	12

## PRESIDENT'S REPORT

A couple of years ago I joined the board of a rather small naturalists group in a rather large city. What I discovered: this group leads over 140 guided walks per year, publishes a delightful newsletter, hosts monthly guest lectures, owns over 170 hectares of nature reserves, offers kid-focused nature programming, and speaks up for nature at City Hall. Surely there must be a crack team of staffers. Some befuddled part of me was always looking for the staff. But, no, it turned out that volunteers managed the membership lists and the phone inquiries, volunteers tracked plants and animals at a restoration site, and volunteers ran promotions and outreach. It was all dedicated volunteers!

Like a juggler with plates, the President of this group kept the volunteer teams merrily spinning. What's more, he cheerfully invited new projects into the whirl. A weekly nature radio program; why not? A butternut tree protection program; absolutely. Literary-themed walks; of course.

Yes, I'm speaking of the Toronto Field Naturalists and the President now finishing his term, Jason Ramsay-Brown. Jason deserves raucous applause, and not just for his talent at plate juggling. Thanks to Jason's vision, IT skills (and relentless effort), TFN has stronger administrative bones and a more powerful, resilient online presence. Those invisible but all-important systems will help us weather the pandemic.

Our nimble volunteers have remobilized our core programs for COVID times. Our walks have pivoted to online RSVPs listed on the "Members Only" pages of our website. Each walk can take up to ten participants. For October we were able to offer ten walks, spread right across the city wherever physical distancing is feasible. Other walking groups are applauding and adopting our safety protocols. Our lectures have shifted to a Zoom format almost seamlessly. Our newsletter treated members to a double

issue in September – perhaps the best ever. Even our Junior Naturalists moved online over the summer and we have wonderful blog posts to prove it.

Now it's time for a new team to juggle TFN's spinning plates: Zunaid Khan as Vice-President and myself as President. We share a love of nature and affection for our city's diversity. We bring our willingness to learn. Wish us luck and the ability to keep our sense of humour. Last month Jason's report alluded to the best-laid plans of mice and men sometimes going awry.



Ellen Schwartzel



Zunaid Khan

TFN's mission continues to be connecting people to nature in Toronto – a mission that is more relevant than ever. TFN will adapt and get better at our mission, but we need your help. Let me suggest three ways:

- If you have always thought, "I'll never lead a TFN walk," please think again.

Now that our walking groups are smaller, we need more walk leaders. We have guides and checklists to help the first-time walk leader, and many of our veteran leaders would happily mentor you.

- Give a friend a gift membership to TFN. Accompany that friend on the first couple of TFN walks to help them break the ice.
- Think about why you joined TFN and how you would like to engage as a volunteer. What skills could you share, and what talents are you hoping to grow? Where do you see growing niches for TFN? Over the coming months I hope to connect with TFN members, new and old, to hear your thoughts. I welcome your suggestions and ideas.

Ellen Schwartzel  
president@torontofieldnaturalists.org

### Toronto's Oldest Red Oak Still Needs Our Help

We only have until December 12, 2020 to help the City of Toronto create a new parkette and permanently protect what is likely the oldest and most historically important red oak in Toronto! Despite great generosity from Torontonians, the City is still a long way from raising the \$430,000 required. Learn more in our blog:

<https://torontofieldnaturalists.org/coral-gable-red-oak-still-needs-our-help/>

## TFN OUTINGS

Due to COVID-19 we continue our practice of offering “members only” outings posted on our website. To ensure that groups do not exceed allowed maximums and to facilitate contact tracing should the need arise, members who wish to attend a particular walk must RSVP. The RSVP facility for each walk opens on the website at a random time of day, five days before the date of the walk. Walk leaders will have a list of who RSVPed, and only people on the list will be allowed to participate. Before RSVPing, please review all guidelines on the webpage and carefully review walk descriptions for any additional guidelines specific to that walk.

As we are unable to list walks in the newsletter at present, an Archive of Past Walks is being maintained for your enjoyment:

<https://torontofieldnaturalists.org/walks/archive-of-past-walks/>

### TO ACCESS OUR NOVEMBER WALKS LIST

Visit the “Members Only” Section  
of our Website

## TFN LECTURES

The TFN Lecture Series is now being conducted through Zoom technology. On the scheduled date of each lecture, members will be welcomed into the virtual space at 2:30 pm. The host will introduce the lecture and then play the speaker's pre-recorded presentation (approximately 45 minutes) with accompanying visual materials. Following this showing the speaker will be available to answer questions from the audience through Zoom.

The presentation and follow-up question period will subsequently be posted on our website for viewing by all TFN members.

See information about the November lecture on the back page.

### FOR DETAILS ON HOW TO JOIN THE LECTURE

Visit the “Members Only” Section  
of our Website

### TO ACCESS OUR "MEMBERS ONLY" AREA VISIT:

<https://torontofieldnaturalists.org/private>

The password was delivered in the email notifying you that the November newsletter is available online.

If you have misplaced the password you can request it by emailing

[membership@torontofieldnaturalists.org](mailto:membership@torontofieldnaturalists.org).

## TFN PUBLICATIONS

You can now access some TFN publications in the Stewardship section of TFN's website:

<https://torontofieldnaturalists.org/stewardship-citizen-science/studies-papers/>

### *TFN Ravine Studies:*

Find out the history of your local ravine and see how it has changed over the last 50 years. These park studies, prepared by TFN members in the 1970s, give a historic picture including species lists. They include: Brookbanks, Burke Brook, Chapman Creek, Chatsworth, Park Drive (Rosedale), Taylor Creek Woodbine Bridge, West Don River Valley and Wigmore Park.

### *Humber Forks at Thistledown*

### *Toronto Region Bird List*

Print publications are available for purchase at the TFN office (416-593-2656):

### *A Guide to the Toronto Field Naturalists' Nature Reserves*

### *Toronto Islands: Plant Communities and Noteworthy Species*

## GOLF COURSES OR PUBLIC PARKLANDS? A HEATED DEBATE AT CITY COUNCIL

Toronto's municipal golf courses are under new scrutiny with a broad coalition, including the Toronto Field Naturalists, asking for greener approaches. The plan is to transform these public lands, currently off-limits to all but golfers and maintained as manicured greens and fairways, into public parklands. The transformation would open hundreds of acres to local communities with opportunities to restore natural habitat and nature corridors as well as trails, community gardens and sports fields.

Toronto owns seven municipal golf courses, spread across the city and usually situated along floodplains and waterways. They include Dentonia Park, Don Valley, Humber Valley, Scarlett Woods and Tam O'Shanter golf courses. Several are near high-density communities and low-income neighbourhoods where access to public green space is a growing concern. As Toronto's Parks, Recreation and Forestry Department highlighted in the 2019 Budget, "Maintaining parkland provision across the City is becoming increasingly difficult in the face of high growth, decreasing availability and increasing cost of land acquisition."

In contrast, the GTA has a strong supply (some would say oversupply) of golf courses, all chasing a dwindling demand for the game. Toronto's Auditor General's office examined golf courses in 2012, finding that the GTA is served by over 100 public and semi-private golf courses with a further 30 executive par 3 courses. In addition, there are a number of private golf courses throughout the area. Over the past 20 years, golfing has been in decline across North America. A Canadian golf industry study in

2014 found that fewer rounds of golf were being played and fewer young people were taking up the game.

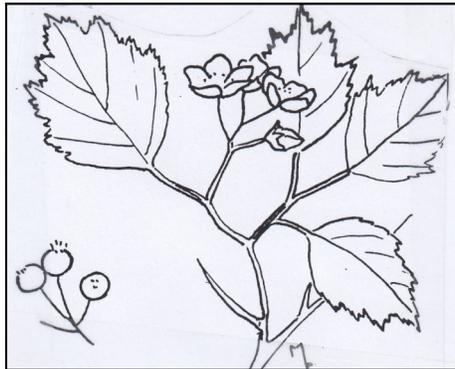
In early October, municipal golf course lands suddenly got a spotlight – and heated debate – at City Council. City staff had expected routine approval of contract extensions with golf course operators. To their surprise, a whole new conversation had started. Over 1,700 emails poured in, coordinated by the Toronto Environmental Alliance, demanding that these contracts be put on hold pending full

public consultation on the future of golf courses. TFN echoed those requests in letters to the mayor and council members.

Several councillors, notably Councillors Layton, Perks and Wong-Tam, supported the "golf courses to parklands" movement at the October 2nd Council meeting. They noted that the need for physical distancing during the pandemic has put a premium on public green spaces. But the majority of Council was not yet

ready to take that progressive step. Debate and a flurry of amendment proposals ended in a compromise. The golf course contracts were extended for two years but City staff has been directed to consult stakeholders and the public, including neighbourhoods near the golf courses. The scope of an ongoing consultant's report by Ernst and Young was also expanded to incorporate new concerns raised. Both the consultant's report and City staff recommendations will be brought to the Infrastructure and Environment Committee in the spring of 2021. This will be a chance for the public, including TFN and its membership, to speak up and offer greener concepts.

Ellen Schwartzel



Native hawthorn. Drawing: Anne Miller

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

Our site continues to grow by leaps and bounds! Come exploring today and discover:

- Golf Courses Or Parklands?
- Recordings of September and October Lectures
- Archive Of Past Walks
- TFN Juniors Fall Nature Club – Leaves!
- TFN Financial Statements

All of this and much more is yours at: <https://torontofieldnaturalists.org/for-members/>

## LECTURE REPORT

### Invading the Urban Ecosystem: Mechanisms, Impact and Management of Dog-strangling Vine

October 4, 2020

Stuart Livingstone, Lecturer, Department of Physical and Environmental Sciences, U of T Scarborough and Post-doctoral Researcher: Department of Ecology and Evolutionary Biology, U of T

On a rainy Sunday afternoon, as COVID was on the rise, a cohort of about 35 clicked on their computers to watch a fascinating discussion of *Vincetoxicum rossicum*, or dog-strangling vine (DSV). Stuart Livingstone has made DSV his especial study and cheerfully shared his knowledge with the audience. His lecture was composed of three parts: the impact of DSV on biodiversity and ecosystem functioning; what we can do about it; and a look at the public's perception of this vigorous invasive species.

In his introduction, Dr. Livingstone discussed why it's important to understand the impact of invasive plants in an urbanized world where green spaces will increase in value as there are fewer of them. (And therefore, why we should care about these alien invasions.) He pointed out the importance of quantifying the benefits for the general population so we can "bring people onboard," in a bid for restoration.

The "very problematic" *V. rossicum* (or pale swallow-wort, as it's known in Europe) can tolerate dense shade as well as full sun, although it prefers the latter. There, the vine produces ten times the number of seeds, in a kind of pillowy fluff that looks like old-fashioned mattress

stuffing. A member of the milkweed family, it bears follicles with these easily windblown seeds. Originally from western Ukraine, it is a robust healthy vine with toxic foliage, so there are no predators or herbivores in its invaded range "who want anything to do with it." One of his study sites, near University of Toronto Scarborough in the Rouge National Urban Park, bears witness to the monoculture it can create in North America. A beautiful wildflower meadow, which once showed a mix of yellows, whites and purples, had become wall-to-wall green, the DSV standing straight and unrelenting as soldiers. Later in the season, with nothing to climb, they scrolled around each other, building a dense mat that shut out the light for anything else.

After showing diagrams and photos of a couple of management practices (roto-tilling and chemical control), Dr. Livingstone turned to his particular area of study – biocontrol. He and a number of other study participants have been raising *Hypena opulenta*, a moth and natural control agent from the DSV's home country. The study (which was conducted a few years ago, but published in July 2020) was mainly conducted in Kirkfield in the Kawartha region of Ontario. There, they released *H. opulenta* in four areas: two experimental ones and two control ones (two each for sun and shade). At the end of the season the results were counterintuitive. There was marked defoliation from the *H. opulenta* caterpillar but the seed count had not diminished. Dr. Livingstone explained that this is an example of compensatory growth, made possible by extraordinarily vigorous root systems. Further, he explained that it had only been one year, *H. opulenta* was now well-established in the region and further study was needed to see how it plays out in future.



Curiously, while *V. rossicum* continues its march, like sorcerers' apprentices, through the forests, meadows and disturbed land near railway tracks of Ontario, it is considered a "threatened" species in its native habitat in Eurasia. In question period, Dr. Livingstone used the wonderful phrase "evolutionary naivete" to describe why our native plants might be so susceptible to DSV's dominance. That is, it has no co-evolutionary history as it would in the ecosystem it comes from.

He ended his talk by saying there is a great deal of work still to be done to educate folks about the negative impacts of DSV.

Susan Grimbley

## TREE OF THE MONTH: WITCH-HAZEL (*Hamamelis virginiana*)

Our native witch-hazel is not an imposing tree. In fact, it is almost always a shrub, though it can so overgrow itself that it squeaks into the lower size limits for trees. Even then, it is usually multi-stemmed, with only one trunk qualifying technically for tree status. What it does have however, that sets it apart from all our other trees, is a fall-flowering habit, anthesis occurring in September and October, or even into November. The flowers are distinctive too, 4-5 cm across overall with half-inferior ovaries, and four bright yellow, narrowly ribbon-like petals extending crookedly out to the sides. The fruits stand out as well: bi-lobed pods, woody at maturity, that also mature in the fall. They split open abruptly, spitting out dark, hard seeds and propelling them as much as 10 metres away from their parent.



Native witch-hazel is common in our region and can be found in many ravines here, where it is conspicuous while flowering in the autumn. In our cultivated landscapes, however, the common witch-hazels are red- and yellow-petalled eastern Asian species and the hybrids surrounding *H. mollis*. Unlike our native witch-hazel, these are spring-flowering here. Among the earliest woody plants to flower, they may even begin flowering during the winter in more warm-temperate regions than ours.



Witch-hazels get their common name partly from their weak resemblance to the completely unrelated hazels and filberts (*Corylus* spp.) in the birch family Betulaceae. Both genera include tall shrubs with arching branches and both have similarly shaped leaves, comparatively broad and widest at or beyond the middle, with somewhat wavy-margined edges. These margins are considerably different in detail, those of hazels being sharply double-toothed while those of witch-hazels are roundly single-toothed. Autumn leaves of our native witch-hazel take on a uniform, rich, clear yellow colour, while the cultivated ones frequently add fiery reds in flame-like patterns.



The winter buds, which you can see now, are unusual. They are described as naked, consisting solely of arrested leaves that will become foliage leaves as they expand when the trees come out of dormancy in the spring. In almost all our other trees, winter buds are enclosed by specialized, protective bud-scales, highly modified leaves (or their parts) that are shed when the shoots expand as the rising temperature makes their tight shrouding unnecessary. In witch-hazel, winter protection for the embryonic leaves is provided, not by tightly wrapped scales, but by a thick winter coat of stellate (branched) hairs.



*continued on next page*

From the top: Four-parted flower showing ribbon-like petals  
and a nice leaf scar flanked by stipule scars;  
Mature fruits after shooting out the seeds;

Foliage beginning to turn. Colouration proceeds inward from the margin  
over the season.

Photos: Ken Sproule

Twig with a pair of arrested leaves forming a winter bud  
and a cluster of flower buds before opening.

Photo: Ron Dengler

## VOLUNTEER PROFILE: ANNE POWELL

Anne Powell grew up in southwestern Ontario in a rural community where she was always surrounded by nature and its seasonal changes. Her family spent their summers at their cottage in Long Point where she remembers the purple martins perched on the hydro wire. Her close connection to nature continued while she was living in Montreal for fifteen years, working in the medical field and earning her MBA. She spent much of her time in the Laurentians immersing herself in the area's natural beauty year-round, whether on bicycle or skis.

After earning her MBA, Anne moved to Toronto for a career in energy finance regulation and policy. This was the first time she felt distanced from nature, devoting her time to work and finding few opportunities to connect with nature in the seemingly dreary city. After retirement, she was introduced to the TFN through a birding walk and became devoted to the organization. "It meant a great deal to me because it opened up the city, and I became aware of the beauty of the ravines and the lakefront parks and everything else," she says.

Anne joined the TFN Board of Directors in 2013 and continued to serve on the Board for five years. With her background in finance and policy, Anne brought to the table a unique skill set that helped shape the TFN as we know it today. As with any organization with a long history like that of the TFN, some housekeeping and revitalization of its by-laws and books were due. Anne was one of the leads in modernizing the TFN by-laws to

better align with our present-day objectives and operations. Further, Anne's contributions helped improve the financial health of the organization, allowing the TFN to maintain important youth programs such as scholarships and free memberships.

These and other changes brought to the organization during the years Anne served on the Board have resulted in increased membership numbers and youth engagement. She says, "I realized the importance of nature in my life,

what it does for me. Therefore, I think it's so important now that TFN has picked up on the youth side of things."



Anne is also very supportive of the TFN Cottonwood Flats monitoring project. She states, "I have always been of the belief that TFN's success is doing projects." With this multi-year restoration monitoring effort, she says, "TFN is bringing its knowledge and skills to a project that I feel will be of benefit to the

city. And that is where I think the strength of the organization belongs." Thinking back to the old TFN by-laws, she adds, "It was part of the original vision for TFN."

While retired from the Board, Anne continues to lead winter birding walks for the TFN. She also encourages other members to volunteer with the TFN: "If you're passionate about nature, you don't have to be an expert in botany or ornithology. ... You have skills that TFN can benefit from," she says, "it's a mix of those skills that makes the organization successful."

Agneta Szabo

### TREE OF THE MONTH *continued*

Although tinctures and teas of witch-hazel are prepared and sold by herbalists and commercially, the non-hazel part of the common name, also rendered as "wych" (or one of many other spellings historically), probably references the long, thin, flexible shoots (like those of European wych elm, *Ulmus glabra*, which also has vaguely hazel-like leaves). Probably contributing to the common name as well, these twigs have been used (and perhaps still are, for all I know) in dowsing, also known as water-witching.

James Eckenwalder

*Lofty white birch trees*

*Stretch their shining golden crowns  
to the autumn sky*

Haiku by Elisabeth Gladstone

## ECTOMYCORRHIZAE: HOW FOREST TREES GET THEIR NUTRIENTS

Our magnificent forests around the Great Lakes and St. Lawrence River are characterized by a mixture of coniferous and deciduous trees. When we look at our pines, firs, hemlocks, aspens, birches, oaks and beeches, they all appear to be independent organisms, growing intermingled but in competition with each other for light, water and nutrients. Appearances can deceive, however, and we now have a much clearer idea of the extent to which all these trees depend on a network of underground fungi in order to thrive. In addition, we now know that all these different tree species interact with each other using this fungal network in ways unknown a couple of decades ago.

In the field, we recognize fungi by their above-ground fruiting bodies: mushrooms or puffballs or brackets. Every fungus fruiting body is supported by kilometers of microscopic fungal filaments called hyphae that mine the soil (or rotting wood or living plant tissues) for nutrients. Fungal hyphae are very thin and thus have a large surface area for absorption and secretion. In addition to taking up water and dissolved nutrients, they can secrete enzymes to break down large insoluble organic molecules in the substrate into smaller subunits which can then be easily absorbed by the hyphae. The hyphae of a single genetic

individual can probe tens of thousands of cubic meters of soil. Thus, a fungus is more likely to encounter sources of water than are the roots of a single tree. Water can move rapidly through the underground hyphal network, providing the force for growth of new hyphae and the mushrooming of above-ground fruiting bodies.

Trees that can form mutually beneficial partnerships with these underground fungal hyphae are much more likely to succeed. Trees provide some of the carbon that they have fixed by photosynthesis (in the form of sugars) to the fungus which, in exchange, provides water and essential nutrients such as nitrogen and phosphorus. This mutualistic partnership is called a mycorrhiza, from the Greek words for 'fungus' and 'root.' Several different kinds of mycorrhizae are known, but the type most important for forest trees here in Ontario is ectomycorrhizae. In ectomycorrhizal partnerships, the exchange of nutrients takes place at the tree's root tips. The fungal hyphae form a dense sheath over the root tip and some hyphal cells push between the outermost cells of the root tissues, forming an extensive area of contact for the exchange of carbon, water and nutrients.

*continued on next page*



Mixed conifer-deciduous forest of Algonquin Park. Photo: Ron Dengler

Most ectomycorrhizal fungi are not host-specific; that is, they are able to enter partnerships with multiple forest trees. For instance, fly agaric can form ectomycorrhizae with pine, spruce, fir, birch and cedar trees. Another common mushroom, golden chanterelle, forms fruiting bodies under aspens and white birch early in the summer and under spruce and balsam firs later in the summer. Experiments using small amounts of radioactive tracers have confirmed that tree species as diverse as these four can share the same fungal partner and thus are interconnected through their ectomycorrhizae. A few ectomycorrhizal fungi are more specific in their partnerships.

*Russula* species form ectomycorrhizae on conifers, especially pines, and are often found fruiting where there is sphagnum moss. Bolete mushrooms can be quite particular about the trees they associate with: white pine bolete occurs only on white pine, hemlock bolete on hemlocks, birch bolete on birches, etc.

New research has shown how extensive and important ectomycorrhizae are for the growth and survival of forest trees. Key experiments carried out in the Douglas fir forests of interior B.C. showed unequivocally that carbon, water, nitrogen and phosphorous travel from older trees to younger saplings through their interconnecting ectomycorrhizae. Sugars and water were shown to travel from one tree to as many as 50 others within a 30 meter radius. When the researchers mapped out this movement, the map looked like an airlines route map, with large old trees forming a hub that was providing carbon and water to many smaller trees. Even nitrogen and phosphorus that hub trees originally had obtained from mycorrhizal fungi were passed on to the younger trees through the mycorrhizal network. Traffic through the mycorrhizal hyphae can run in both directions as well. In the spring, carbon from evergreen Douglas firs flowed through the hyphae to neighbouring birch trees that were still leafless; later in the summer, carbon flowed in the opposite direction from birch to firs that were shaded and could not photosynthesize as well.

Such experiments show that not only do forest trees form a partnership with mycorrhizal fungi for mutual benefit, but individual trees are sharing resources with other trees through that same mycorrhizal network. Thus, neighboring forest trees are not only in competition with each other for resources, but at times also help and facilitate the growth of nearby trees, both of the same and different species.

Nancy Dengler



Ectomycorrhizal fungi belong to the Basidiomycota and the Ascomycota. The examples here are all Basidiomycota. From the top: the mushrooms fly agaric (*Amanita muscaria*), golden chanterelle (*Cantharellus cibarius*), and the *Russula* species shed their spores from gills under the cap, while the one bolete (*Boletus bicolor*) sheds its spores from tubes under the cap.

Photos: Ron Dengler

## AUTUMN PHOTOGRAPHY

This is a great time of year to be out taking photos – beautiful fall colours and fall bird migration. I particularly enjoy trying to capture shots of a bird with fall colours in the background. Wetlands present great opportunities to photograph larger birds. My favourite species to seek out are herons, including the Great Blue Heron, Great Egret, Black-crowned Night-heron and Green Heron. They can be found stalking prey in shallow wetlands around the city such as in Earl Bales Park, East Don Parklands, High Park, Humber Bay Park and Tommy Thompson Park. The ideal time is early mornings due to better light conditions and also because there are fewer people on the trails even with the increased use of our green spaces during the pandemic.

Given my practice of ethical nature photography and not wanting to stress the birds I photograph, I seek out a natural blind from which to observe and position myself to

capture the scene. It is best to select a blind close to the trail so as to have minimal impact and leave no trace. I tend not to linger, as the bird will be aware of my presence and become agitated.



Being efficient in surveying the scene you wish to capture, setting up and taking your shot then moving off quickly and quietly should be the standard practice for all nature photographers. Being aware of the conditions you will be shooting in that day is key to being efficient out on the trail. I configure my camera settings for the conditions of the day and primary subject of interest (in my case birds and other wildlife) before setting out. This enables me to quickly survey what I intend to capture, then set up and take the shot. Other aspects of nature such as landscapes, trees and plants do not require me to move as quickly, so I can take time to adjust my camera settings for those shots.

Zunaid Khan

Join Strickland Reading Clinics/Toronto Field Naturalists Nature Club!

Contact: [kannepurvis@gmail.com](mailto:kannepurvis@gmail.com)

Sessions will take place on Wednesdays at 4:30 starting September 30th for 10 weeks

Free Nature journaling, crafts, experiments

We will explore many fall nature themes- leaves, acorns, weasels, garter snakes

There will be a chance to submit photos, art and stories from nature to share with the other participants

Accompanied by Sandra Iskandar, arts educator who will be teaching the wonderful art of nature journaling

## JUNIOR NATURALISTS

The TFN Juniors have continued to share their nature adventures through weekly Blogposts on the Juniors site:

<https://torontofieldnaturalists.org/for-members/junior-naturalists/junior-naturalists-blog/>.

Here are some of the photos that have been shared. We had fun identifying these creatures and learning a little more about them.



Praying mantis



Fat-backed millipede



Female ichneumon wasp *Megarhyssa*

On Sept 30th the TFN Juniors kicked off a series of Ten Nature Classes, meeting every Wednesday at 4:30. Thirteen participants joined in. In anticipation of doing leaf collages the following week, we observed the shapes of various leaves and looked at some leaf art by Morteza Sohi. We learned where to find leaves of various sizes and shapes and how to recognize them. We also learned how to press them. We did leaf chromatography to see the various pigments that are hiding under chlorophyll in a leaf (see below). Art Educator Sandra Iskandar taught us about nature journaling and led us in making our first journal entry on sumac.



Chromatography using rubbing alcohol and a coffee filter separates the chlorophyll and other pigments inside a leaf.

The classes will continue to do experiments, crafts and nature journaling, exploring themes such as weasels, fungi, garter snakes and Arctic ducks.

Anne Purvis

## TORONTO WILDFLOWERS: GENUS *BIDENS*

The genus *Bidens* is in the Asteraceae (sunflower or aster family). This family was discussed in the TFN Newsletter (2017 December) in an article on the genus *Rudbeckia*. Other family members were described in articles in 2011 September, 2011 November, 2018 September, and 2020 September.

The TFN's *Vascular Plants of Metropolitan Toronto* (TFN) listed four or five *Bidens* species in Toronto. The only species I can definitely distinguish is *B. cernua* (nodding bur-marigold or nodding beggar-ticks). This distinctive species is common locally. It has well-developed ray florets up to 17 mm long that surround a central disc up to 28 mm across. The disc florets are large enough to be recognized as individual florets even without a lens. This is a species of moist open areas, blooming from August to October. It is found across southern Ontario and much of northern Ontario (ROM), as well as throughout most of North America (USDA).

The other local species are collectively called sticktights, referring to their barbed achenes which adhere to clothing and fur. Unlike *Bidens cernua*, none of them has well-developed ray florets. *B. frondosa* (common or devil's beggar-ticks) is common in Toronto while the others are locally uncommon or rare.

Article and photos by Peter Money

### References:

- ROM Dickinson, T. et al. *The ROM Field Guide to Wildflowers of Ontario*, McClelland & Stewart, 2004
- TFN Banville, D. *Vascular Plants of Metropolitan Toronto*, 2nd ed., Toronto Field Naturalists, 1994
- USDA U.S. Department of Agriculture Plants database, [plants.usda.gov/java/nameSearch](https://plants.usda.gov/java/nameSearch)



From top: Nodding bur-marigold (*Bidens cernua*),  
Sticktight (*Bidens* sp)

## DISCOVER THE NATURAL WONDERS OF HIGH PARK



Photo: Wendy Rothwell

High Park Nature has just announced the launching of a wonderful new website. Designed and organized by Yuliya Hluzd and implemented with the IT expertise of TFN's own webmaster, Jason Ramsay-Brown, it performs well on all the devices people use today.

This exciting website is loaded with a wealth of information, including articles about the park's natural and cultural history, its geology, its rich variety of habitats and the plants and animals found in them. I was pleased to see articles on June-blooming and Mid-summer Wildflowers by our Peter Money. There are stunning photos of birds, butterflies and other insects, mammals, amphibians and reptiles, trees, wildflowers and grasses ... There is information about restoration principles and the challenges faced by High Park Stewards in conserving precious native species and eradicating invasives. You can also learn about tours, walks and workshops offered in the park.

Whether you want to enrich your experience of visiting High Park or take advantage of this opportunity for a virtual experience of the park, I highly recommend that you go to: <https://highparknature.org>

Wendy Rothwell

## EXTRACTS FROM OUTINGS LEADERS' REPORTS

**Cedarvale Park, Sept 5. Leaders: Bob Kortright and Rachel Gottesman.** Our main focus was woody plants (33 native and 23 non-native) and we saw about 70 other plant species including white turtlehead. We found fungi: *Trametes pubescens*, and chicken of the woods (sadly mostly harvested). Highlights were a ring-necked snake and a flock of migrant birds, including Northern Parula, American Redstart, Chestnut-sided Warblers, Red-eyed Vireo, Rose-breasted Grosbeak, Red-breasted Nuthatch, Least Flycatcher, with chickadees, Hairy and Downy Woodpeckers and robins. We discussed some history. Cedarvale was a favourite haunt of Richard Saunders, former TFN president and newsletter editor.

**Fall Migrant Birds on the Toronto Islands, Sept 9. Leader: Justin Peter.**

North winds the previous night gave us reason to anticipate a good number of migrant songbirds. We spotted a small group of Chimney Swifts and one Barn Swallow circling close to the top of an eastern cottonwood. Upon approaching the residential community east of the Ward's Island ferry dock, numerous warblers and other songbirds flew up in the high cottonwood canopies giving us a case of "warbler neck" – something one might expect during spring migration at Point Pelee! We got decent views of several species, Cape May Warblers being the most numerous. A Swainson's Thrush close to eye level provided good views of its glowing buffy face. Some local breeding birds such as Common Yellowthroat and Song Sparrow were still present with recently fledged young. On Algonquin Island we saw, perhaps for most of us, the last Ruby-throated Hummingbirds of the season.

**Scarborough Bluffs, Chine Ravine and Midland Ravine, Sept 17. Leader: Charles Bruce-Thompson.** A glorious late summer day, dimmed a little by a haze from the recent forest fires in the west. As is usual for this time of year, asters and goldenrods were abundant. We saw a good selection of birds, most notably Northern Flickers, an Eastern Phoebe, an American Redstart, White-breasted Nuthatches, a Ruby-throated Hummingbird and a Black-and-white Warbler. Flocks of Blue Jays were streaming over us all morning.

**East Don Trail, Sept 19. Leader: Charles Chaffey.** At the bottom of the steep hill down from Wynford Heights

Crescent, we joined Phase 2 of the East Don Trail which is nearly ready for its official opening. With its 7-metre wide cut through the valley forest and three massive steel bridges, 40 m long and 3.5 m wide, the trail makes a big change to the river ecosystem. In the areas disturbed by construction, now restored with topsoil and grass, we saw yellow nutsedge, black nightshade and much common ragweed. At one place on the riverbank we were surprised by the gaudy scarlet flowers of double garden balsam. At the edge of the wood beside the trail were blooming calico, New England, panicled and purple-stemmed asters, and one clump of the less familiar smooth aster with its clasping leathery leaves. Grass-leaved and Canada goldenrods were abundant in open areas, with zigzag and blue-stem goldenrods in the shade.



Purple-stemmed aster. Drawing: Diana Banville

**Col. Samuel Smith Park, Etobicoke, Sept 24. Leader: David Creelman.**

Some highlights among the many birds seen were Red-breasted and White-breasted Nuthatches, Yellow-rumped, Magnolia, Nashville and Palm Warblers, Pied-billed and Red-necked Grebes, White-throated Sparrow, Great Blue Heron, Red-eyed Vireo, Eastern Phoebe, Eastern Wood-pewee and Swainson's Thrush. A recent concern in the park is the large number of warblers being found

dead at the base of the old power plant, likely due to recent renovations that have left it well-lit with spotless windows. Local community members, most from the Friends of Sam Smith, are working with the local Councillor to fix this problem.

**Leslie Street Spit, Sept 26. Leader: Charles Bruce-Thompson.** Upon our arrival we saw a Cooper's Hawk vainly pursuing a flock of starlings, and at the end of our walk a red-tail was there to observe our departure. In between we saw more people than wildlife. The Spit is becoming very crowded, especially on weekends. But we did see a couple of warblers: a Nashville and a Yellow-rumped. Also of note were newly-arrived Gadwalls and White-throated Sparrows. On my pre-walk I had seen American Coots and a Redhead. Among the non-bird species we saw mink, leopard frogs and viceroy butterflies. We also had a look at TRCA's continuing efforts to tackle the phragmites. Pumps had been installed to partially drain Cells 1 and 2 and Embayment D. The idea is to lower the water level so that the phragmites can be sprayed with herbicide over dry land. There is certainly less phragmites than before, and cattails are growing rampantly in its place.

## WEATHER (THIS TIME LAST YEAR)

November 2019

The most striking feature of November was the early onset of winter. The earliest hints of this actually came in the last parts of October with a couple of storm systems bringing heavy rain and chilly conditions. November opened with lake effect wet snow north of Toronto near Georgian Bay. A second cold front came on November 6th. This brought a dusting of snow and temperatures that mostly remained below freezing by the 8th. After another brief warm-up, the third and strongest cold front came. This arctic high pressure cell was remarkable in that it brought record cold from Ontario to the Gulf Coast. It was preceded by a significant snowfall on Remembrance Day, with about 13-16 cm of snow falling and remaining for about ten days. (Average November snowfall is about 8 cm. The monthly total at Pearson of 19.2 cm was the highest since 2002.)

Minimum temperature records were broken at all Toronto-area stations. The low of  $-11.3^{\circ}$  downtown on the 13th was particularly impressive. It was not only a record for the date, but the earliest reading of below  $-10^{\circ}$ . Furthermore, the downtown weather station has a 180-year period of record. The cold snap also occurred in the face of climate change and the Toronto urban heat island. Meanwhile the actual coldest reading was at Buttonville Airport in Markham, which had a minimum of  $-16.2^{\circ}$ . As

the cold reached the southern USA, frost reached the Gulf of Mexico between Louisiana and the Florida panhandle, and social media showed the Gulf steaming with arctic sea smoke.

The pattern normalized later in the month, with temperatures fluctuating. It rose briefly above  $10^{\circ}$  on the 26th.

Although conditions were more-or-less seasonable after the 17th, the month averaged a full  $3^{\circ}$  below normal: a mean temperature of  $2.1^{\circ}$  downtown and  $0.9^{\circ}$  at Pearson Airport. It was tied with 1996 for second coldest on record at Pearson and the coldest since 1951 downtown.

Arctic air on northwesterly flow interfered with Gulf of Mexico moisture moving north. In spite of the Remembrance Day snow storm, total precipitation was significantly below average. We had 38.2 mm downtown and 40.8 mm at Pearson. Normal precipitation amount is around 65-70 mm.

Because of the influence of November, it was the coolest fall since 2008, with a mean temperature of  $9.6^{\circ}$  (Pearson). The long-term average is  $10.3^{\circ}$ .

Gavin Miller

## ABOUT TFN

TFN is a charitable, non-profit organization.

### BOARD OF DIRECTORS

President & Action Committee: Ellen Schwartzel  
 Past-President: Jason Ramsay-Brown  
 Secretary-Treasurer: Bob Kortright  
 Vice-President, Promotions & Outreach: Zunaid Khan  
 Junior Naturalists: Anne Purvis  
 Newsletter: Jim Eckenwalder  
 Volunteers: Lynn Miller  
 Walks & Outings: Kayoko Smith  
 At large: Liz Menard, Mark Stewart

### NEWSLETTER

*Toronto Field Naturalist* (ISSN 0820-636X) is printed on 100% recycled paper. Printing & mailing: Digital Edge Printing & Media Services.

Views expressed in the newsletter are not necessarily those of the editor or Toronto Field Naturalists.

Members are encouraged to contribute letters, short articles and digital images. Please email to: [newsletter@torontofieldnaturalists.org](mailto:newsletter@torontofieldnaturalists.org)

**Submissions deadline for Dec issue: Nov 4**

### CONTACT US:

Telephone: 416-593-2656

Website: <http://www.torontofieldnaturalists.org>

Email: [office@torontofieldnaturalists.org](mailto:office@torontofieldnaturalists.org)

See email addresses for specific queries at: <https://torontofieldnaturalists.org/about-tfn/contact-us/>

Address: 2 – 2449 Yonge St, Toronto M4P 2E7. The office is normally open 9:30 am to noon on Fridays.

**Note:** If you wish to drop by on Friday, please phone first to ensure that someone will be there.

## KEEPING IN TOUCH

### Red-tailed Hawk encounter

On September 29th while birding on Toronto Islands, Jenny Bull and I observed an adult Red-tailed Hawk as it flew in front of us carrying a dead black squirrel and landed on a nearby low branch. Then we noticed it already had another dead squirrel draped over the branch. We watched while the hawk decided what to do next. It ignored us, but was no doubt aware we were nearby. Finally it stepped over the squirrel it had just brought, causing that one to slip to the ground. Now what to do? At last it began feeding on its earlier prey, leaving the other lying on the ground. After a few minutes' observation we left it to enjoy its double lunch.

Both squirrels appeared a bit small, perhaps young of the year. For the hawk to have apparently left one kill uneaten while it went after a second surprised us – especially so late in the season when surely it would no longer be taking food to young.

Marilynn Murphy

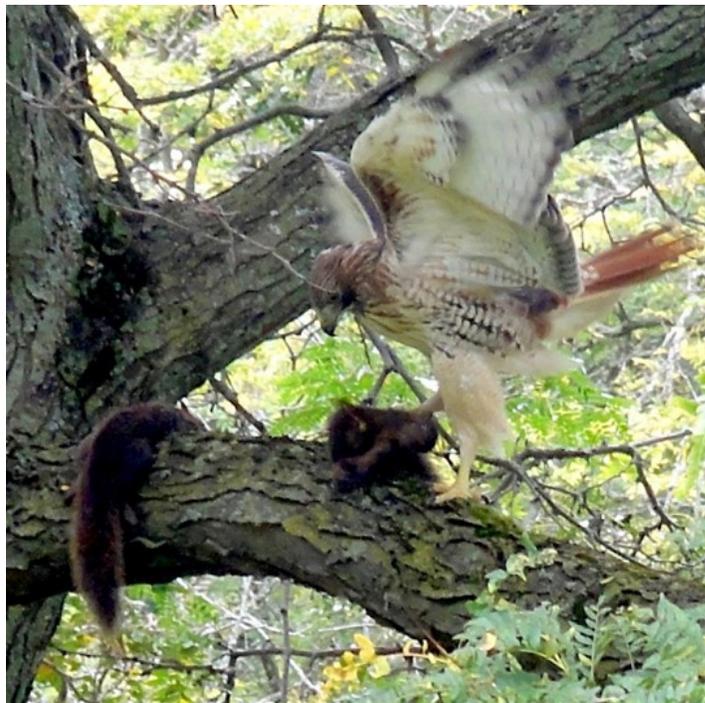


Photo by Jenny Bull



With the reluctance to do out of town trips, my wife and I explored the East Don trail many times and were not disappointed. In late May, I photographed Rose-breasted Grosbeaks and Baltimore Orioles. In July, I photographed mink and deer, both adult and young. One day we were fortunate to spend probably ten minutes watching and photographing two cute fawns.

Frank Miles

In late September I enjoyed a close encounter with this gorgeous fox near the lake shore. It was unaware of me as it concentrated on eating a squirrel for lunch. Incredible brush and mask with stunning black markings around the ears. What a treat!

Lynn Pady



Please "Keep in Touch"  
by sharing your nature experiences – stories  
and/or photos – with fellow TFN members.  
Send them to  
[newsletter@torontofieldnaturalists.org](mailto:newsletter@torontofieldnaturalists.org)

**Toronto Field Naturalists**  
2 – 2449 Yonge St.,  
Toronto, Ontario, M4P 2E7

**Publications Mail**  
Registration No. 40049590

## TFN LECTURE

Sunday, November 1 at 2:30pm

See page 3 for information about lectures via Zoom

### James Bay Shorebirds

Shorebird stopover ecology  
in the world's third largest wetland,  
the Hudson Bay Lowlands

*Speaker: Allie Anderson, Trent University,  
James Bay Shorebird Project*



Upcoming lecture:

Dec 6 Rethinking Beauty: Inspiring Gardeners in a Changing World, Paul Zammit, Niagara College