Toronto Field Naturalists
Since 1923

TORONTO FIELD NATURALIST

Number 674 March 2023

Wasp on Aster. Photo: Mitch Pencharz

REGULARS

FEATURES

PRESIDENT'S REPORT – RESILIENCE

As I write this report and contemplate leading a walk for members along the waterfront in the morning, the City issues an extreme cold alert. I wonder whether anyone will show up. I am reminded of a conversation with a guest lecturer in an empty hall at Emmanuel College. He wondered the same thing, as a snowstorm raged outside. I smiled and said, "Don't you worry. TFN members are a hearty bunch, this storm won't stop them from coming." I think around 30 people attended that lecture.

In my time as part of TFN, I have been in awe of the resilience of this organization and its members. The fact that we will celebrate our 100th anniversary later this year is evidence of this resilience. It is important, in order to maintain the resiliency of TFN, that we effectively adapt to change. It is the board's responsibility to be aware of these changes and make decisions to ensure that we can continue to fulfill our mandate and deliver our programs. The pandemic forced us to adapt: our board meetings shifted to Zoom, our newsletter team works remotely, and the technology services we use are no longer reliant on the office. Consequently, the board has decided not to renew the lease on our office, and has implemented a plan to vacate the premises by March 31, 2023. Given that we were paying for office space that was being used less than 10 hours per month, it did not make financial sense to renew the lease. We feel the $16,000 we spent in rent in the last fiscal year would be better allocated to our programs, such as the newsletter, stewardship and social events for members. The plan we have in place will see the contents of the office moved to an easily accessible storage space, the securing of our important documents in a safety deposit box, and will provide for phone, mailbox and meeting room services. Members will still be able to communicate with us by phone, mail, and email. The board and I firmly believe that this is in the best interest of TFN.

Finally, an "ask" before I end this month's report. If you enjoy our walks and outings and would like to assist us in developing and planning these activities for our members, our outings committee is looking for volunteers. This would consist of attending a Zoom meeting once a month and providing feedback on the committee's activities via email, approximately 2-3 hours per month. If this is of interest to you, please email volunteering@torontofieldnaturalists.org.

Get outside and enjoy nature!

Zunaid Khan
president@torontofieldnaturalists.org

ETHICAL NATURE VIEWING

Special Lecture for TFN Members via Zoom

March 19, 2:30 pm

There have always been concerns about the impact of human behaviour on wildlife. During the pandemic we saw a disturbing increase in the harassment of wildlife by photographers, birders and general nature users, often unintentionally as they do not realise the impact of their actions. However, the worst instances of this behaviour have been among nature photographers. In response to this, TFN has created a wildlife protection group with the mandate to create educational material in order to promote the practices of ethical nature viewing. One of the outcomes of the work of this group is this presentation titled "Ethical Nature Viewing – What It Is, Why It Matters, and What We Can Do." Given that photographers are not the only ones we seek to educate about the issue of wildlife disturbance in our green spaces, much of the content in this presentation also applies to wildlife viewing in general.

This lecture will be presented by Zunaid Khan, President of TFN. Zunaid is a Nature Photographer, Digital Marketing Consultant and Fellow of the Royal Canadian Geographic Society.

Join the Zoom meeting:
https://us06web.zoom.us/j/81218949443?pwd=aFpRS05wSDNRRUZ6WFFXYTcvcUNTdz09

Meeting ID: 812 1894 9443 Passcode: 923406 Dial-in by phone: 1-647-374-4685

LECTURE REPORT

Phragmites Australis (European Common Reed): Eradicating a Troublesome Invader

February 5, 2023

Panel: **Lynn Short** (Environmental Stewardship Coordinator, Humber College), **Nicole Carpenter** (Science Projects Manager-Phragmites Research, Georgian Bay Forever) and **Jessica Iraci** (Natural Environment Specialist, Natural Environment and Community Programs, Urban Forestry, City of Toronto).

Phragmites australis had the ignominious distinction of being named "Canada's worst invasive species" (Agriculture Canada, 2005). Little has changed, and municipalities are still battling this perennial wetland grass. Three experts on the eradication of phragmites shared control strategies and lessons on the use of volunteers in this fight. They have developed creative ways (both managerial and mechanical) to tackle this disaster.

Phragmites appeared in the St. Lawrence Valley in the 1920s, and over the last 20 years has rapidly spread around the Great Lakes. It grows in dense monoculture stands and inhibits the growth of native plants, making the habitat unfriendly to animals that depend on the wetland. Phragmites not only takes over wetland ecology but also threatens highway infrastructure, causes visibility and fire hazards and has a negative impact on property value and recreational waterfront activities.

What is phragmites? It is a wetland grass that can grow up to five metres tall on waterfronts and in ditches. It reproduces by seeds blown down our windy highway corridors, rhizomes (up to 10 feet in length), stolons and cuttings. Most of the biomass is below ground. Vegetative growth and flowering occur from July to early October, so this is the optimal removal time. When phragmites is removed, the uncovered native seed bank grows, plants can return and, with them, animal life.

There are several methods of control depending on location (aquatic or terrestrial) and the size of the phragmites stands. Lynn has developed a spading and cutting technique for use on land while Nicole focuses on cut-to-drown for removal in deeper water. Plans must be flexible to work with natural changes in hydrology and water levels.

Both manual techniques are based on the plant's need for sun to grow and develop. In order to disrupt photosynthesis, Lynn uses a sharpened spade to cut phragmites below the soil surface. Since Nicole's stands are largely aquatic, she uses raspberry cane cutters to cut the stem as close to the sediment as possible. Because of the dynamic growth of phragmites, these cleanups must be monitored, but good results have been seen on Georgian Bay and at Cherry Beach in Toronto. In the first year of treatment at Cherry Beach, phragmites covered 80% of the area and volunteers took 30 hours to clear it. The next year only 10% was covered and clearing took three hours.

Our panelists see community involvement and partnerships as key to the control of invasives. Education and outreach are crucial, so that the problem (and the plant) are recognized. Once this has happened it is easier to get support from the community and municipalities. In Toronto, Jessica coordinates programs for 40 species of invasives including phragmites. $2.6 million is invested in management of invasives in Toronto, but the number of species and the amount of land affected are staggering. She advocates for more resources and balances priorities using as many management tools as possible while choosing best tools for each area. The City of Toronto has volunteer programs targeting invasives and has developed partnerships with Toronto Nature Stewards and EcoSparks, a citizen science group. One challenge is to offer a diversity of activities with positive outcomes to retain volunteers.

The big question from the audience was "Can we truly eradicate phragmites?" Monitoring phragmites patches is crucial. You can't feel everything is under control and then become negligent. Even if you control the patch, more seed is being released and transported. You may be on the site indefinitely, and eradication techniques may need to be fine-tuned. "Match the Patch" for tools and strategy.

TFN members can view this panel discussion at: https://tfngo.to/feb2023lecture

Nicola Lawrence

What Can You Do?

Learn about the plant.

Find out about community efforts in your locality.

Support conservation efforts in municipalities.

Get involved in physical removal.

Don't give up! You can make a difference!

To volunteer in Toronto go to https://torontonaturestewards.org/

VOLUNTEER PROFILE – ANDREW INTERISANO

In 2020 Andrew Interisano signed up for the Ontario Master Naturalist Program (OMNP) offered by Lakehead University Orillia to explore his interest in nature. At the end of the program, students were encouraged to join their local naturalist club. Three years later, it is clear that completing the OMNP and pursuing subsequent opportunities, including volunteering with TFN, have changed the course of his life. Meanwhile, TFN has gained an enthusiastic and versatile volunteer.

Soon after joining TFN, Andrew joined the promotions and outreach committee, of which he is still a member. In 2021 and 2022 Andrew participated in TFN's Cottonwood Flats stewardship program, including working on bird and insect counts. He has also made virtual presentations to TFN's junior naturalists on spring amphibians and wasps. These volunteer opportunities gave Andrew insight into the diverse range of work that needs to be done with regard to nature and conservation. Andrew describes his work with the junior naturalists as a great opportunity, not only to share his knowledge and excitement with youth, but also to learn more about the subject matter through the preparation process and to practise his presentation skills.

Andrew is a lifelong learner and has been pursuing his interest in nature alongside his full-time career in digital marketing. Since completing the OMNP he has explored his scientific interest in nature through additional learning opportunities. He completed the Amphibian Foundation's Master Herpetologist program in 2021 and, in 2022, an intensive two-week wasp course offered by Penn State University, aimed at graduate students, that included lectures by world leading wasp researchers. Andrew has developed a particular interest in wasps, which are an under-studied group of insects. In 2022, Andrew also leveraged his growing knowledge and TFN volunteer experience to volunteer with the Royal Ontario Museum's entomology department. Andrew hopes to pursue post-secondary studies in biological sciences, likely with a focus on entomology and wasps.

Andrew has combined his growing knowledge of nature with his self-taught interest in photography, which he began pursuing seriously in 2018, and has contributed his photography skills to his TFN projects. Andrew enjoys wildlife photography as a means of sharing the story of the behaviour he observed when taking the photograph. In 2022, Andrew's nighttime photograph of a pair of coyotes on a suburban Ontario street was recognized as the overall winner in the inaugural international Urban Wildlife Awards. The story of his win was covered by major international news outlets. Andrew is currently building a macro photography studio, with the hope of offering insect imaging services, either for volunteer projects or as a business opportunity. This project involves technical learning and practising the intricate technique of specimen studio photography.

Andrew plans to continue building on all of his interests and accomplishments to grow his career in science communication. Andrew gratefully describes volunteering with TFN as "a giant learning opportunity" that has been key to developing his burgeoning career. Reflecting on volunteering, Andrew says, "Volunteer with passion and give all you can, because you will get amazing experience in return."

Tracy Garner

Three of Andrew Interisano's stunning insect photos: From left: Peck's skipper, blue dasher, yellow-collared scape moth

TFN OUTINGS INFORMATION

A list of walks available to members is posted at the beginning of each month on the 'Members Only' walks page of our website (https://tfngo.to/memberwalks) and can be downloaded or printed. You are welcome to bring one non-member guest. Listed below are two March outings you might like to consider.

Lower Don River and Corktown Common Nature Walk.

Leader: Vivienne Denton

Thursday, March 16, 10.00 am

Meeting Point: Broadview subway station

Walk Details: A 2-hour, 4 km linear walk over mostly paved, flat surfaces with a few gentle slopes and some stairs

Walk description: We'll walk south on the Lower Don River Trail from the Riverdale Park footbridge. We'll observe nature and wildlife along what appears to be an uninviting urban stretch of the river. When we reach Corktown Common, we'll leave the riverbank and walk around the naturalized park, looking at winter plants and searching for signs of spring growth.

TTC: At the end of the walk, take the King streetcar back to Broadview station or walk to the Distillery District for warm drinks and catch the King streetcar from there.

What to bring: binoculars. Note: The route is not maintained in winter and could be icy.

Washrooms: Available at beginning and end of the walk

TFN walk by the East Don, 2016.
Photo: Charles Bruce-Thompson

Trillium Park and Ontario Place: A Nature Walk in Partnership with Ontario Place for All.

Leaders: Zunaid Khan and Francesca Bouaoun from Ontario Place for All.

Saturday, March 25, 10.00 am

Meeting point: The entrance to Trillium Park, 955 Lake Shore Blvd W, by the washrooms

Walk Details: A 2-hour, 3-5 km circular walk over mostly paved surfaces with a few gentle slopes

Walk Description: This will be a public walk. Our route will be along the waterfront trail into Ontario Place towards the west island, then looping back to our starting point. We will enjoy great views of the lake and explore nature and the wildlife that this beautiful area of the waterfront has to offer. We will discuss the proposed development plans for Ontario Place, their impact on nature, and public access to this area.

TTC: Take subway line 1 to Union Station and then #509 streetcar to Fleet St and Strachan Ave. Walk south for about 10 minutes to Trillium Park.

Parking: Available in Ontario Place.

What to bring: Snacks, water, binoculars, camera. Dress for the weather.

Washrooms: Available at the beginning, along the way and at the end

Walk Leader's Cell Number: 416-716-6464

Mallard photographed from Waterfront Trail, November 2022, by Zunaid Kahn

EXTRACTS FROM OUTINGS LEADERS' REPORTS

Trees, Lambton Woods, Jan 4. Leader: Lillian Natalizio. Walking through woodlands largely dominated by red oak and sugar maple, we also encountered numerous stands of eastern hemlock, eastern white pine and a relatively large number of yellow birch. In addition to the usual winter clues of buds and bark to identify American beech, basswood, red ash, hop-hornbeam and black cherry, among others, the lack of snow cover allowed us to use the leaf litter to help identify several species, finding black and bur oaks as well. We saw remnants of the flowers of witch hazel: faded yellow sepals still firmly attached to the twigs. The recent mild and wet weather may also be responsible for the sightings of a few fresh mushrooms and slime molds, the emergence of several spathes of skunk cabbage, and singing of a few robins and a cardinal.

Basswood, Feb 2016. Photo: Ken Sproule

Birds, Tommy Thompson Park, Jan 12. Leader: Zunaid Khan. We enjoyed a lovely walk on a chilly, foggy morning. Fortunately the rain held off and, despite the foggy conditions, we were able to see quite a number of winter ducks. Bird sightings included Black-capped Chickadees, American Robin, American Goldfinches, Mallards, Gadwalls, American Black Ducks, Trumpeter Swans, Mute Swans, Common Goldeneyes, Buffleheads, Red-breasted Mergansers, Common Mergansers, Greater Scaups, Redheads and Tree Sparrows.

Cherry Beach and Villiers Island, Jan 19. Leader: Charles Bruce-Thompson. While still in Tommy Thompson Park we saw a Northern Mockingbird. Later at Unwin Bridge we saw a pair of American Coots, along with the usual (duck) suspects and a family of Trumpeter Swans. We had three Toronto stewards in the group to identify and point out invasive species, of which there was a great variety. This prompted a stimulating conversation about the pros and cons of invasive control. Walking up Cherry Street and then east back to Leslie Street, we admired the progress made by Waterfront Toronto on the Toronto Port Lands Protection Project in general and Villiers Island in particular. The size and scope of the project impressed us all. The new course of the Don will soon be flowing in its new location, south of and parallel to Keating Channel.

Redhead. Photo: Edward O'Connor

East Don Parklands, Jan 23. Leader: Zunaid Khan. We observed lots of beautiful winter scenery with freshly fallen snow from the previous day's storm. We discussed the work the City is doing to the Don River at Sheppard and Leslie as well as the invasive species removal along the trail. On our way back, we encountered a City crew doing work on invasive species, including buckthorn, Norway maple and Manitoba maple. There were not a lot of bird sightings; however we did see some Black-capped Chickadees, Mallards, and a couple of Red-tailed Hawks circling above.

Heritage, from Corktown Common to Union Station – A History of Railways in Toronto, Jan 28. Leader: Paul Overy. We explored a few aspects of how, where and why the railways developed as they did…and the outcomes for the city's relationship to Lake Ontario. Walking from Corktown Common, we considered the significance of the Gooderham and Worts distillery and the William Davies pork-processing plant – how the need to export their products beyond the local market was an important impetus for railway development in the Toronto area. We also spoke of the ecological restoration and flood-management work which led to the Corktown Common development, as well as the Canary District to the west. In the Distillery District, we spoke of the significance of the establishment of the first Windmill Line planning control from the site of the original windmill there, and its role in organizing subsequent development of the rail lands and Harbourfront area south of the original city core. Walking westward, we explored the St. Lawrence neighbourhood as well as the significance of the St. Lawrence market and Gooderham Flatiron building. The walk ended with a history of the three Union Stations, including the development of the current Union Station, on the site of the 1904 Great Fire. We also spoke about the seven-year stalemate between the City and the railway companies regarding funding the construction of the viaducts needed to separate rail traffic from pedestrian and road traffic, which delayed the opening of Union Station until 1927.

WINTER BOTANY FOR BIRDS

Overwintering songbirds need to be experts at identifying and finding food plants in order to feed efficiently and keep warm. Birds such as robins, cardinals, chickadees, goldfinches and House Finches can survive winter as long as they can access enough calories to maintain their core body temperature in the 39 – 43º C range. How do they do this? Along with the insulation of down feathers, finding dependable food sources with high caloric content is essential for their survival. If birds have enough calories, they can generate heat by contracting opposing muscle groups – essentially shivering to warm up.

Some of our overwintering birds, such as **American Robins**, dramatically change their diet with the season. During the spring and summer nesting season, foraging robins are conspicuous as they cock their heads and listen for earthworms and other soft-bodied invertebrates underground. Nestlings and fledglings are fed a diet that consists of over 90% animal foods, with only 10% coming from plants. In the autumn and winter, proportions are reversed: over 90% of their diet now consists of fruit, with less than 10% consisting of invertebrates found around springs and other unfrozen soils.

American Robin feeding on winterberry holly (RD)

Observations in the field and under experimental conditions indicate that robins use a variety of cues to make a decision about what to eat: they prefer plants with numerous fruits, large individual fruit size, and pulpy fruits with small seeds. When given a choice, they prefer sugar-rich fruits over lipid-rich fruit, as sugars are metabolized more quickly.

Overwintering robins seek out and devour the dried, raisin-like fruits of dogwoods, viburnums, mountain ash, winterberry, staghorn sumac and others. Robins will test new foods repeatedly. For example, the toxins in winterberry are distasteful at first but become degraded by freezing temperatures, so the berries become more palatable with time. Small seeds pass through robins' digestive tract, making them excellent seed dispersers. Unfortunately, this is also true for some non-native invasive plants such as buckthorn, honeysuckle and bittersweet; all are dispersed by wintering robins.

Northern Cardinals follow the same flip flop dietary pattern. During the nesting season they feed their young almost exclusively on beetles, grasshoppers, butterflies, moths and other insects. In the fall and winter, they switch over to feed on seeds and fruits, including those of grape, staghorn sumac, dogwoods and mulberries. Cardinals have been observed discarding the skin of wild grapes to eat the pulp and seeds. Their bills are specialized for crushing and masticating, so seeds rarely make it through a cardinal's digestive system unharmed. Thus, cardinals are poor seed dispersers in comparison to robins.

Female cardinal feeding on wild grape (KS)

During the spring and summer, **Black-capped Chickadees** feed mostly on spiders and small insects that they glean from the surfaces of twigs and leaves. In the fall and winter, however, they increase the proportion of plant foods to about 50% of their diets. They prefer small seeds lingering on dried herbaceous plants such as goldenrods and asters and small wax-covered berries such as those of poison ivy. Chickadees harvest and cache food for future use, a strategy that requires a good spatial memory. The same memory serves to help chickadees return to locations where their favoured winter food plants grow, so they spend less time seeking out and identifying their food sources for the calories gained.

Black-capped Chickadee foraging on goldenrod (KS)

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WINTER BOTANY *continued*

Other overwintering birds are vegetarians year-round, only occasionally eating small insects when encountered. **American Goldfinches** specialize in the seeds from plants in the Aster family, especially thistles, and the small seeds of some trees, including alders, birches, elms, larches and eastern white cedar.

House Finch feeding on seeds of eastern white cedar (RD)

Similarly, **House Finches** eat plant materials almost exclusively throughout the year, including fruits, seeds and buds. House Finches are unusual in that they can alter their metabolic rate, lowering it to conserve energy and then raising it when they need to warm up.

For all these birds, a key to winter survival is being able to feed efficiently. The calories spent in searching out their food plants cannot exceed the calories gained by consuming them. Birds, of course, are opportunists and might check out anything at least once. To be successful, however, birds have to be good winter botanists. They need to recognize their familiar food plants at a distance and zero in on the edible parts quickly. Much remains to be learned about how they hone those identification skills!

American Goldfinch feeding on seeds of European larch (RD)

For more on overwintering bird diets and foraging, see https://www.allaboutbirds.org/ or https://birdsoftheworld.org

Nancy Dengler
Photos: (RD) Ron Dengler; (KS) Ken Sproule

UPCOMING JUNIOR NATURALISTS' EVENTS

We are excited to welcome families with children between 6-14 years to join in the TFN Juniors programs that run Saturday mornings 10:00 am – 12:00 noon. One parent is required to stay with your children for the duration of the program.

Mar 18	Come and enjoy and ID late winter trees at Moccasin Trail Park and Milne Hollow
April 15	As the early songbird migrants arrive in Toronto, join us for a morning with Shadowland Theatre Co on Toronto Island. Find out how it feels to be a bird!
May 13	Come and meet the Blanding turtles and songbirds at Rouge National Park.

Please contact Anne Purvis at juniortfn@torontofieldnaturalists.org if you wish to join the TFN Juniors. Your name will be added to an email list and you will receive an invitation with location details a week before each event. If your family is able to attend, you pre-register by responding to the invitation email. The day before the event we'll send a reminder email with details about weather or any changes.

JUNIOR NATURALISTS
Pollination Strategies of Milkweed

At this time of year, plants are not yet returning to life after winter dormancy. One of the few ways we can enjoy wildflowers is to search for last year's dried stems and fruits. The loveliest of these, in my opinion, is milkweed. The tapered, slightly twisted seedpods of milkweed are an essential part of any dried flower bouquet. Several varieties, butterfly weed, swamp milkweed and common milkweed, all make beautiful sculptures.

The middle of winter is a good time to think more deeply about how these elegant structures came to be. Milkweed pods are fruits or seedpods. This is what the ovary (the female part of the flower) turns into. It houses the seeds, with a baby milkweed plant inside each seed. If you open a ripe milkweed pod, the seeds on their parachutes will fly up into your face and float away on the wind. You can see a brown papery membrane that still bears the impression of the seeds as they grew. You might ask, "Where did all these seeds come from and how did this happen?"

This story begins way back eight months ago when the milkweed flower was in bloom. The odd-looking flowers of common milkweed do not have the usual bright-coloured petals, prominently displayed to attract insects. Instead they are pale pink and bent down so as to be out of the way. What you notice right away are the five bright white cups that face upward. These hold nectar, which many bees and butterflies love to harvest.

Every milkweed flower has ovules (eggs) inside its ovary. The ovules need to be joined with pollen, a male powder, to become seeds. Every milkweed flower must get this pollen from a plant other than its own. Nature does not want flowers using their own pollen for pollination, and has set things up to make this almost impossible. What tricks has milkweed got up its sleeve to get pollen from other milkweed flowers?

When a bee lands on the flat top of the pistil in the middle of a milkweed flower, it reaches down into one of the nectar cups. Its feet slip into tiny slits between the nectar cups. As it removes a leg, it has two pollen sacs yoked together on a thread looped over its leg. When it moves to another flower, the pollen sacs brush up against the pistil and fertilize the ovules of the next flower.

To show how this works, here are two pictures of an experiment we did. In the first picture, the nectar cups had been

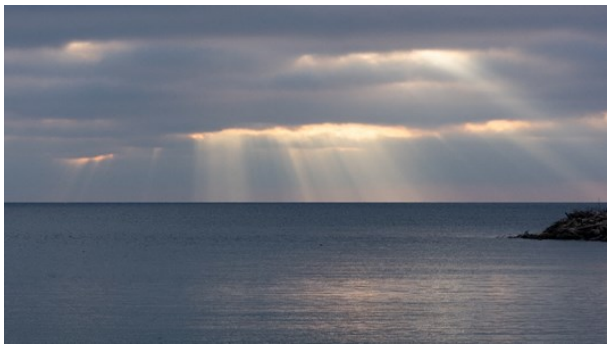
removed so we could see better. Then we put a straight pin in the slit, just as a bee would put its legs in, and pulled out the pollen yoke.

We explain all about it in this video: https://tfngo.to/jrsmilkweed

Article and photos by Anne Purvis

TFN NATURE IMAGES SHOW 2023

On Saturday, February 4, about 50 TFN members gathered on Zoom to view nature images created by 12 of the talented photographers within our organization. We were welcomed by our president, Zunaid Khan, who drew attention to the benefits of TFN's Photography Group through which members share their enjoyment of nature through the lens of their cameras, encourage one another to hone their photography skills, and learn ethical practices to protect the species they photograph.



Zunaid presented a selection of his favourite photos, mainly of birds, taken during the past year. He especially enjoys Ontario Place, which he described as "the best place in Toronto to photograph waterfowl without disturbing them" – a habitat the Ontario Government plans to destroy. The climax of his presentation was this dramatic sky.

Amara, a member of our Junior Naturalists' group, shared her video entitled *Nature in Four Seasons* showing a variety of wildlife she had seen in Ontario parks last year. A sequence of a family of frisky river otters was especially appealing. In her commentary she included interesting facts about the species depicted, such as moose liking to drink salty water, which provides the sodium its body needs. She was very mindful of the importance of keeping her distance so as not to stress the animals she photographs.

Philip Jessup showed images he had photographed on the Leslie Street Spit from 2018 to the present, describing steps taken to naturalize the area and attract wildlife. This shot of Cell 1 shows how a waste site has been transformed into a beautiful wetland. He referred to efforts being made by TRCA to eradicate phragmites, and to protect trees by forcing cormorants to nest on the ground.

Theresa Moore presented a video entitled *Wildlife in Habitat*. Her purpose was to demonstrate how "keeping our distance protects wildlife from the harmful effects of disturbance and allows us to tell a story about their habitat." As demonstrated by this photo of a Black-crowned Night-heron, "careful attention to timing and composition allows the animal to remain a strong focal point in the image despite its small size."

Lillian Natalizio's presentation entitled *At the Pond* included an extraordinary diversity of flora and fauna seen at her favourite spot for nature photography – the large pond in Centennial Park. Many of her photos, such as this one entitled *Cattail Leaves Aglow in Fall,* portrayed artistic effects like blurred backgrounds or colourful reflections on water.

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NATURE IMAGES *continued*

Jane and Jim Goad shared their photos of birds and other animals, including this stunning Ruby-throated Hummingbird by Jim and a broad-winged skipper on goldenrod by Jane. They closed their presentation with two examples of unethical behaviour – people endangering wildlife by feeding them.

While walking through High Park in the fall, **Charlotte Broome** was struck by the beauty that still exists as the trees lose their bright colours and the mood changes from exuberant to reflective. Her video of impressionistic fall images with peaceful free-flowing music, entitled *Autumn Rhapsody*, was inspired by this experience.

Martin Chen presented *Acer Rubrum Trip 2022: My Journey to Follow the Red Maple Tree*. He travelled 3600 km from Timmins, Ontario to Florida recording the colour change of the foliage of red maple. He shared interesting facts he learned about this species along the way. This image was taken in Algonquin Park on August 17 at the beginning of the trip.

Wendy Rothwell's video entitled *Seasons of 2022 in High Park* showed examples of the diversity of plants and animals, such as this inquisitive chipmunk, that can be seen in the various habitats of the park.

Susan Pekilis, a new member of TFN's photography group, shared striking photos of plants, mushrooms, animals and landscapes, and this exciting image of a garter snake, all taken with her i-phone, demonstrating that we do not need expensive sophisticated equipment to create great photos.

Mitch Pencharz's presentation named *The Good, the Bad and the"Bug"-ly,* included dramatic close-up and macro images of native wildflowers, invasive plants and pollinating insects. See the front cover for his *Wasp on Aster*.

Thank you to the photographers who generously shared their inspiring images. And we owe a great debt of gratitude to **Lynn Miller** for her expertise and the great care she took to make this event a success. You can view several of the videos from this event on YouTube at https://tfngo.to/imagesshow2023

In his closing remarks, Zunaid encouraged us to attend the special lecture for TFN members, *Ethical Nature Viewing* via Zoom on March 19 (see announcement on page 2). If you would like to join the TFN photography group, email photography@torontofieldnaturalists.org.

Wendy Rothwell

TREE OF THE MONTH: BLACK CHERRY (*PRUNUS SEROTINA*)

Black cherry, our largest native cherry, may be best known for its bark, which is unmistakable in mature individuals. It starts as a fairly typical cherry bark, with a shiny, smooth skin (sometimes dulled by a chalky bloom of greyish wax), interrupted by horizontal dashes of elongate lenticels, darker overall than most, perhaps, but otherwise unremarkable for a cherry. Once the trunk gets so large that the original bark can no longer contain it, the smooth outer bark begins to break up progressively into plates and then small dark "cornflakes" that stay put throughout life. The pale, tawny, newly-minted fresh bark exposed by rupture of the old coat initially looks like rough, angry scar tissue but eventually settles down, smooths out a bit, and darkens. The new bark, in turn, breaks up into new "cornflakes" which may be partially produced by individual, separate patches of cork cambium (known as rhytidomes) developing within older secondary phloem tissue as it is stretched and damaged by the expanding trunk.

This process is somewhat reminiscent of the production of "shags" on shagbark hickory, though on a finer scale. Bark at the base of the trunk on the largest trees may become somewhat narrowly ridged and furrowed but, even then, the ridges are still topped by the characteristic flakes. Since black cherry is an important timber tree, the fragrant bark would be a waste product if it weren't distilled to produce (with an otherwise hefty dose of cyanide removed) the familiar bitter black cherry flavouring of some cough drops, syrups and liqueurs, that you might have thought came from the actual cherries.

The cherries themselves are also bitter and, like almost all cherries, plums, peaches and other fruits of members of the genus *Prunus*, their pits are loaded with cyanide, giving them their bitter almond scent and flavour. But don't taste them! Only almonds themselves have little enough cyanide as to be safe to eat. Otherwise, all parts of black cherry and its relatives are loaded with compounds that release cyanide when their tissue is damaged. Desperately hungry horses have died of cyanide poisoning after turning to drought-stressed black cherry foliage, despite its general unpalatability, when their preferred graze was lacking.

Like other *Prunus* fruits, black cherries are poster children for drupes (stone fruits), with soft flesh surrounding the hard pit (stone) that protects the seed inside against the teeth and digestive systems of the myriad birds and mammals that consume them. Black cherry differs from all but three of our local cherry species in bearing small cherries, only about one cm in diameter, arranged over the length of an elongate infructescence about 10 to 15 cm long. These fruiting racemes are very similar to those of its closest native relative, choke cherry (*P. virginiana*), an abundant, thicket-forming, understorey shrub that only occasionally reaches tree size, except in the commonly planted, purple-leaved tree cultivar 'Schubert' and its offspring. In contrast to black cherry, the fruiting racemes of choke cherry are usually stiffer, less drooping, and a little shorter, averaging less than 12 cm long, while the cherries themselves lack the persistent calyx (actually, the floral cup or hypanthium, accompanied by calyx lobe tips) that hugs the base of black cherries. The flowers, too, are

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Smooth young bark with horizontally elongate lenticels

Bark breaking up into plates and flakes

Mature bark, shaggy with overlapping "cornflakes"

Racemes of immature cherries nestled in the persistent floral cup

Photos by Ron Dengler

FOR READING

The Aliens among Us: How Invasive Species are Transforming the Planet – and Ourselves
Leslie Anthony, 2017

This book is an eye-opening and accessible exploration of invasive species disasters, and the science and politics of trying to fight them. Anthony is a biologist and journalist based in Whistler, BC, so some of the stories cover struggles with gorse, Himalayan blackberry, Japanese knotweed and giant hogweed in southwest BC, but he also covers invasives that have so damaged the Great Lakes and the land around them, including the buckthorn, phragmites, dog-strangling vine, garlic mustard and others that we struggle against in our stewardship in Toronto and at our nature reserves. He also writes about pythons in the Everglades, Asian carp and lamprey in the Great Lakes, and organisms that have invaded invisibly, like Zika and West Nile viruses. But beyond documenting the disasters, he also illuminates why the problems exist – ranging from the horticultural and pet trades to the difficulty of getting government to spend money preventing problems or controlling them before they become more difficult to control. I particularly appreciated his takedown of books such as *Where do Camels Belong?* that preach acceptance of invasive species.

Bob Kortright

A Place between the Tides: A Naturalist's Reflections on the Salt Marsh
Harry Thurston, 2004

Harry Thurston's lifelong fascination with nature in all its forms led him to a career as nature writer and poet. In *A Place between the Tides* he describes his observations of two tidal marsh areas of Nova Scotia, first as a child in Yarmouth County, and years later on the Chignecto Isthmus. By paying close daily attention to areas near home he has gained a deep understanding and respect for the life around him, the seasonal patterns and environmental changes both historically and during his own lifetime. He points out the results of human folly but focuses mainly on the joy and wonder of observing and learning from the natural world. Having only recently been introduced to Thurston's engaging writing, I'm glad there are several more of his books for me to enjoy.

Marilynn Murphy

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TREE *continued*

very similar between the two species, spreading flat to about one cm across with five round, white petals. In both species the flowering racemes, with a few leaves near their base, emerge along with the foliage in the spring, but those of choke cherry bloom well before the leaves mature while those of black cherry do not.

Besides the unmistakable bark, leaves provide the easiest way to distinguish black cherry from choke cherry, since lots of leaf features differ between them. In overall shape, black cherry leaves are broadest near or before the middle, while those of choke cherry are usually widest beyond the middle, and are proportionately slightly broader overall. Toothing around the margins of black cherry leaves is finer and blunter than in choke cherry. The upper side of the leaf is darker green and shinier in black cherry than in choke cherry. Likewise, the texture of black cherry leaves is thicker than in choke cherry, giving them a stiffer, more rigid feel.

Underside of mature leaf with hair brushes flanking leaf midrib. Photo: Ken Sproule

All of these are somewhat variable features but the strongest difference, and a highly distinctive feature of black cherry compared to all of our other trees, lies on the underside. On either side of the midrib, stretching for about half the length of the leaf from the base, is a dense lining of rusty-coloured hairs (white at first), flanking the midvein like a pair of push brooms.

Two introduced cherry tree species are also close relatives of black cherry. Rarely seen in and around Toronto, they are easily distinguishable from black and choke cherries when they are encountered. European bird cherry is planted here as a purple-leaved cultivar with pink flowers, *P. padus* 'Colorata', and isn't very winter hardy. With a similar leaf shape to choke cherry, its purple foliage is, nonetheless, strikingly different from that of 'Schubert' choke cherry because the leaves emerge purple and fade to green during the summer, while those of 'Schubert' emerge green and gradually turn dark purple. Manchurian cherry, while very cold hardy, is still not often planted here. The surface of its bark is typical of cherries, smooth and glossy with elongate horizontal lenticels, but the colour is unique, a warm golden honey shade that is in complete contrast to the somber hues of black cherry bark.

James Eckenwalder

WEATHER (THIS TIME LAST YEAR)

March 2022

March was a very changeable month with no persistent trends. Monthly mean temperatures were slightly above normal but still the lowest since 2019. The absence of a trend meant that early March was warmer than normal and late March slightly colder than normal. Precipitation was near normal overall but with more snow than usual. Snow cover receded through March, albeit reluctantly. The snow cleared most quickly from open, exposed suburban areas where it was patchy off and on through most of the month. Downtown melted off by mid-month; we had 58 days of continuous snow cover at the Toronto City station at University of Toronto, ending on March 15. (Downtown is a bit warmer, but more shaded and less exposed.) In rural areas, it persisted most of the month with woods and ponds having snow and ice into early April. Snowdrops were blooming by mid-month and a few crocuses by the last week.

Snowdrops in High Park, March 11, 2022. Photo: Wendy Rothwell

The monthly mean temperature was 2.3˚ downtown (0.6˚ above the 30-year running average). At Pearson Airport, the monthly temperature was 1.1˚ (also 0.6˚ above normal). Warm and cold periods alternated in rapid succession through the month as systems travelling from the midwestern USA brought warm fronts followed by cold fronts. Warm spells occurred on the 6th, 17th-18th, and 31st. Pearson's monthly maximum was 18.2˚ on March 31st, while downtown reached 17.3˚ on the 6th. Across the GTA as a whole, the warmest reading was at Georgetown, which attained 20.5˚ on the 17th.

Cold spells occurred on the 3rd-4th, 12th-13th, and 26th-30th. The 28th was the coldest day: downtown dropped to -10.1˚ and Pearson hit -11.4˚. This was a daily record for Pearson, breaking the previous record of -11.0˚ set in 1982. The lowest reading for the GTA was -15.5˚ at Georgetown on March 4th.

Precipitation was frequent but short in duration as systems passed quickly. There were several occasions of tornado outbreaks in the south-central USA and flooding in the eastern USA but we were spared. Minor flooding occurred in outlying areas on the 23rd-24th when rain fell on lingering snow cover. High winds occurred at times, and there was an unseasonably early thunderstorm on the morning of the 6th with a warm frontal passage. Total precipitation was 55.9 mm downtown and 59.0 mm at Pearson; these values are near to slightly above normal. Snowfall was 24.8 cm at Pearson. This brought seasonal totals to the highest since 2013-2014, even before whatever April might contribute.

Gavin Miller

FOR READING *continued*

Chasing Plants
Chris Thorogood, 2022

Chris Thorogood's fascination with plants, particularly parasitic and carnivorous ones, took root in childhood. Now a researcher, botanical illustrator and author, he holds a dream position as Deputy Director and Head of Science of Oxford Botanic Garden and Arboretum. In *Chasing Plants* he regales the reader with adventure tales, sometimes hair-raising, finding the most bizarre and the most exquisite plants around the U.K., the eastern Mediterranean area, South Africa, the Canary Islands, Japan, and culminating in "pitcher plant paradise", Borneo, all lavishly illustrated with his own paintings and drawings. His expeditions involve plant surveys and collection of specimens including seeds, with a view to documentation, education and long-term preservation of species diversity. Thorogood's energy and enthusiasm shine throughout the book.

Marilynn Murphy

The Hidden Kingdom of Fungi: Exploring the Microscopic World in Our Forests, Homes, and Bodies
Keith Seifert, 2022

If you enjoyed *Entangled Life*, *Finding the Mother Tree* or *The Hidden Life of Trees*, you may be fascinated by this well-written exploration of the doings of microscopic fungi. But mycologist Seifert does not limit the book to soil fungi that enable the growth of plants and communication between them. Fungi enable fermentation, giving us bread, B vitamins and medicine as well as alcohol. They break down dead plant matter, but they also attack crops and stored food, and cause disease in animals. Sections of the book profile the fungi that inhabit our homes, our bodies, our farms and our forests, and deliver understanding of how to manage the inescapable relationships we have with the fungi that surround us.

Bob Kortright

ABOUT TFN

TFN is a volunteer-run non-profit nature conservation organization.
We connect people with nature in the Toronto area, helping them to understand, enjoy, and protect Toronto's green spaces and the species that inhabit them.

NEWSLETTER

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

Submissions deadline for April: March 1

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If you have misplaced the password you can request it by emailing membership@torontofieldnaturalists.org.

TFN LECTURES

Each year TFN offers eight free Zoom talks by noted experts, exploring everything from nature in the city to global environmental issues. Talks are presented Sunday afternoons at 2:30 pm, from September to May, with audience discussion time. Talks are usually 45 minutes in length. Visitors are always welcome. TFN Members have access to recordings of past lectures on the "for Members" web page.

Learn about this month's lecture on the back page. For the Zoom link, visit the Lectures page of our website. If you prefer, you can dial in to the March lecture by phone:

Dial in: +1 647 374 4685 Canada Meeting ID: 841 7244 0643 Passcode: 587049

FOCUS ON NATURE – WEATHER

The December challenge for TFN's Photography Group was Weather. This image, entitled *Freeze – Thaw,* was submitted by Lillian Natalizio.

I was intrigued by the effect that a week of mild temperatures and rain had on the frozen surface of the pond. Ice had partially melted beneath leaves and twigs that had fallen onto the surface, creating depressions for them to sink into. The falling rain also left the ice with a rough, leathery texture.

I knelt on the edge of the bank to get the low angle and set the aperture at f/9, with the lens at full zoom of 200mm. I later cropped out excess negative space, and applied some noise reduction to compensate for the high ISO.

Lillian Natalizio

If you would like to join the Photography Group, email photography@torontofieldnaturalists.org.

TFN LECTURE

Sunday, March 5 at 2:30 pm

See page 15 for information about lectures via Zoom

Eastern Coyote – Successful Eco-Influencer

Lesley Sampson, Co-founding Executive Director, Coyote Watch Canada, will share insights into the behaviour, ecology and family life challenges of coyotes, as well as human misconceptions about this vital keystone species. She will also explore ways to apply salient science, humane and effective best practices to minimize human-coyote interactions.

Upcoming lectures:

Apr 2: Ontario Turtle Conservation Centre: Fieldwork and Program
April DeJong, Research Coordinator, OTCC

May 7: Underground invaders: Centuries of Non-native Earthworms and the Recent Arrival of "Jumping Worms."
Dr. Michael J. McTavish, Postdoctoral Research Fellow, Smith Forest Health Lab, U of T