



Since 1923

TORONTO FIELD NATURALIST

Number 668 May 2022



Chipping Sparrow. Photo: Marianne Cruttwell

REGULARS

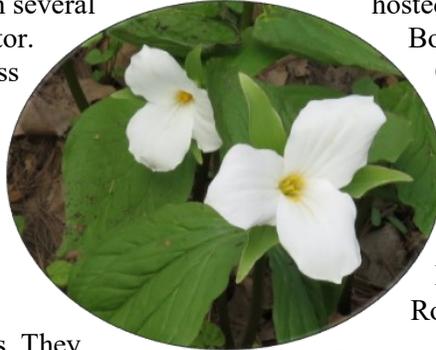
About TFN	4
Extracts from Outings Reports	19
For Reading	14
Junior Naturalists	9
Keeping In Touch	19
Lecture Notice	20
Lecture Report	5
President's Report	2
TFN Lecture Information	3
TFN Outings Information	3
Weather (This Time Last Year)	17

FEATURES

Report of the Nominating Committee	3
Membership Renewal	4
Toronto Island Master Plan	6
Wildlife Disturbance	7
Bird Behaviour: Nesting	10
Making Nature a Priority	12
Toronto Nature Stewards	12
A Win, a Loss and a Campaign Ahead	13
Trees of the Month: Serviceberries	15
Volunteer Profile: Joan Lewis	16

PRESIDENT'S REPORT

With spring comes competition. Robins spar for the best nesting territory; cardinals vie for attention from the highest branches; even turtles jostle for space on sunning logs. But spring also puts cooperation on display, albeit with less drama. Once we begin to look, cooperation – within and between species – is evident everywhere in nature. Little birds mob raptors, for example, often with several species joining forces to drive off a predator. Forest trees support each other, even across species, with transfers of nutrients and water through remarkably sophisticated root-fungal symbioses. Similarly, plants of all kinds have evolved “rewards” for animals that either pollinate them or spread their seeds. Many of our spring flowers such as bloodroot, violets and trillium rely on ants to disperse their seeds. They have evolved seeds with attachments called “elaiosomes” that are irresistible treats for ants. At least 11,000 species of plants have evolved elaiosomes, Wikipedia tells us. Evidently cooperation is an effective strategy.



Cooperation has fascinated me throughout my term as TFN president, not just in the sunlit meadows and ravines but also in the rough and tumble world of urban nature advocacy. The sheer number and diversity of partnerships that TFN engages in over a typical year is astonishing. Some are informal: our Lecture team often invites allied groups to join the audiences of TFN lectures; an email to friends is often all that's needed. Other partnerships are more formal with contracts, such as our stewardship partnership with the City at Cottonwood Flats. (Learn more the evening of May 19, when Jason Ramsay-Brown will update us on the exciting projects underway at Cottonwood Flats – see below.) Pre-pandemic, TFN

walks often partnered with Lost Rivers, and we look forward to resuming the tradition. Our advocacy routinely leans on the expertise of allied groups like Ontario Nature and Toronto Environmental Alliance for guidance and, for its part, TFN may write supportive letters for very local groups. Our outreach talks have recently been hosted by groups as varied as the Toronto Botanical Garden, Heritage Toronto and the Canadian Centre for Victims of Torture. Our most stalwart volunteers have their own informal cooperative networks: many are also active with Toronto Wildlife Centre, FLAP, TOC, Todmorden Wildflower Preserve, LEAF, Toronto Nature Stewards or Rotary and garden clubs.

It can be overwhelming at times, to be tied into so many cooperative networks; to keep answering new inquiries and setting up new meetings with groups we have only just discovered. So why cooperate? The fact is that loose partnerships and seemingly random acts of cooperation allow a small group like TFN to amplify our impact, not just a bit, but enormously. They enable TFN, with neither staff nor advertising budget, to reach audiences that would otherwise be inaccessible. They allow us to leverage our volunteer power and experience to restore ravine lands and influence policy on land use. Perhaps TFN has been unwittingly emulating the seed dispersal strategies of trilliums and bloodroot, using irresistible treats like guided walks, great lectures and newsletters, and capable stewardship volunteers to promote the cause of nature. If so, how clever to be learning from flowers!

Ellen Schwartzel
president@torontofieldnaturalists.org

Lecture

Restoring Cottonwood Flats in the Don Valley

Thursday, May 19 at 7 pm on Zoom

Join Jason Ramsay-Brown, Author of *Toronto's Ravines and Urban Forests*, as he shares the story of Cottonwood Flats: its industrial past, TFN's ongoing citizen science project partnering with the City of Toronto, and the long-term restoration hopes for this site.

Zoom link: <https://us06web.zoom.us/j/86240037852?pwd=dSt0WnV5ZjRHRnYxTHFwTEpmejZUZz09>
Dial in by phone: +1 647 558 0588 Canada Meeting ID: 862 4003 7852
Passcode: 234047

MEMBERSHIP

Please note that memberships expire on June 30.

To ensure receipt of your September newsletter, it is important that you renew your membership by following the procedure described on page 4.

TFN OUTINGS

We are continuing our practice of offering “Members Only” outings posted on our website. To restrict numbers and facilitate contact tracing should the need arise, members must pre-register for each walk they wish to attend. This facility opens on the website five days before the date of each walk. Only members who have registered will be allowed to participate.

Masks are no longer mandatory on TFN walks but we will support requests from walk leaders for participants to wear masks. Before registering, please carefully review all guidelines on the web page and note any stipulations specific to that walk.

We continue to publish monthly walks lists in the “Members Only” section of our website.

TFN LECTURES

We continue to conduct the TFN Lecture Series 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 speaker, who will present a 45-minute lecture with accompanying visual materials and then answer questions from the audience.

See information about this month’s lecture on the back page. To join the meeting, visit the “Members Only” section of our website to access this link.

If you prefer, you may dial in to the May lecture by phone as follows:

+1 204 272 7920 Canada
Meeting ID: 817 9693 8776
Passcode: 466378

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

TO ACCESS THE "MEMBERS ONLY" SECTION VISIT:

<https://tfngo.to/private>

The password was delivered in the email notifying you that the newsletter is available online.
If you have misplaced the password you can request it by emailing
membership@torontofieldnaturalists.org.

REPORT OF THE NOMINATING COMMITTEE

The nominating committee recommends this slate of nominees to the Board for the year 2022-2023:

President: Zunaid Khan

Vice President: TBD

Past President: Ellen Schwartzel

Secretary-Treasurer: Fatima Abrar

Directors:

Due to retire in 2023: Donata Frank, Jessica Iraci, Diana Wilson, Lynn Miller, Anne Purvis

Due to retire in 2024: Philip Jessup, Lillian Natalizio, Laren Stadelman

TFN by-law No. 1, Section 5(g) provides that “any three members may submit, in writing, to the Secretary-Treasurer by July 15 the name of a candidate accompanied by the written consent of the nominee. Such nominations shall be published in the September issue of the newsletter and the names of such nominees shall be added to the list of candidates submitted by the Nominating Committee.”

Nominations should be sent to the TFN office, 2 – 2449 Yonge St., Toronto, ON, M4P 2E7.

According to TFN by-law No.1, Section 5(b), “If an election is required it shall be by ballot mailed to all members. Ballots may be mailed to the auditor or deposited at the Annual General Meeting prior to the commencement of the meeting. The ballots will be tabulated by the auditor who shall announce the results.”

MEMBERSHIP RENEWAL

Membership fees for 2022-23 are due by June 30.

To renew, go to the “Renew Your Membership” page on TFN’s website, <https://tfngo.to/renew>. You may renew online, paying by credit card or PayPal, or print the form and send it to the TFN office along with your cheque.

If you have an email address, please be sure you have advised us so we can give you online access to the Newsletter – a benefit even to those who choose to receive a paper copy. The online version is available a week or more before mail delivery.

If we don’t have your email address, we will send you a membership renewal form by mail.

MEMBERSHIP FEES

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

No HST. All members with email address receive digital newsletters. There is a surcharge of \$25 for those who prefer a printed mailed newsletter*.

*** If you elect the paper version of the newsletter, it is critical that we receive your renewal by July so we can include you in the order submitted to our printer.**

ABOUT TFN

TFN is a charitable, non-profit organization.

BOARD OF DIRECTORS

President, Lectures: Ellen Schwartzel

Past-President, TFN Archives: 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: Diana Wilson, Donata Frank, Jessica Iraci

NEWSLETTER

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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

Submissions deadline for Sept issue: Aug 1

CONTACT US:

Telephone: 416-593-2656

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

Email: 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.

LECTURE REPORT

The Tip of the Iceberg: Discoveries in the World of Mycology and its Important Role in our Past, Present and Future.

April 3, 2022

Kathy Vatcher, Mycological Society of Toronto

Kathy Vatcher is passionate about mycology. “The study of mycology has something for everyone. Anyone interested in the future of our planet should have an interest in mushrooms.”

Without fungi all life in the forest would soon be buried under a mountain of dead plant matter. Fungi are nature’s great decomposers and recyclers. Kathy quoted David Suzuki: “They eat death and in doing so create life”.

It’s only since 1967 that mushrooms have been seen as different from plants. With DNA sequencing the number of species has skyrocketed. While 144,000 fungi have been described and named, there are an estimated 2.2 – 5.0 million species. (For background see *The Fifth Kingdom* by Bryce Kendrick.)



Fossils of fungi have been found that are as tall as trees. After the Cretaceous–Paleogene extinction event, fungi and lichen survived and thrived on the dead plant matter in the dark cool climate. For eons, we have depended on fungi for the health of our world. The mummified body of the iceman, Otzi, is over 5300 years old. He carried a medical mushroom to control bleeding and a tinder mushroom for fire on a leather thong. We have long depended on fungi for food and medicine.

The life cycle of fungi varies. The typical mushroom releases spores that may be as small as a single cell. The spore produces a germ tube which grows and makes fine filaments known as hyphae. Compatible hyphae merge and create fertile mycelium or spawn. The mycelia strands spread and can form a vast mass. The mushroom is simply the fruiting body of the mycelium.

Fungi are classified as Parasites, Saprophytes or Mycorrhizal. Mycorrhizal fungi are the largest group. They develop symbiotic or mutually beneficial relationships with trees and other plants and are the mainstay of a healthy “Wood-Wide Web.” Common Mycorrhizal Networks (CMN) are underground networks that connect individual plants. The mycelium exchanges

moisture, sugars, carbon, nitrogen, and other nutrients and minerals with the trees. Suzanne Simard’s book *Finding the Mother Tree: Discovering the Wisdom of the Forest* explores the interrelationships of this forest ecology.

Fungi were used in medicine even before Otzi carried his birch polypore. Kathy estimates that half of the world’s most valuable medicines come from fungi (penicillin, cyclosporin (immunosuppressant), etc.).

Ethnomycological studies show psychoactive mushrooms have been used for thousands of years. Some fungi produce hallucinogenic drugs such as Psilocybin (magic mushroom) and LSD. Modern scientific research into the use of hallucinogens was occurring in the 1950s and 60s. By the 1970s, with the “war on drugs” and the criminalization of LSD, there was little research done despite many advocating further study. This has now

changed. Institutions like Johns Hopkins Psychedelic Research Unit are testing psilocybin to help with addictions, depression, PTSD, Alzheimer’s, cancer, and other conditions. Conventional mental health treatments do not work for all. The integration of psychedelics into the treatment can lead to a fundamental shift in therapies.

Traditionally, fungi helped humans as a food rich in fibre and protein, and as leavening and fermentation agents. We are now exploring new ways to use fungi as a renewable resource with the development of mushroom leather, packing materials and mycoarchitecture. With the move to green funerals, biodegradable caskets (Living Cocoons) and burial suits to hasten decomposition have been designed. Mycofiltration can be used to treat contaminated water. Paul Stamets, author of *Mycelium Running: How Mushrooms Can Help Save the World*, experimented with a mycopesticide that kills termites and carpenter ants.

The most exciting example of new uses for fungi is mycoremediation. One third of all plastic waste is now in our soil. We can use fungi’s natural decomposing habit to degrade pollutants, remove wastes and eat plastics. Oyster mushrooms are plentiful and have been shown to reduce *E. coli* and break down hydrocarbons. MycoMats or fungal mats using mycelium can degrade the pollution of oil spills and detoxify soil with no side effects.

Fungi can save the world!

Nicola Lawrence

You can listen to this lecture at:
<https://tfngo.to/april2022lecture>

TORONTO ISLAND MASTER PLAN (TIMP)

You will have heard that the City is conducting a Master Plan process for Toronto Island Park with considerable input from both park users and park service providers. The scope is large and wide-ranging (but doesn't include the airport or bridge access). Ideas presented are many and varied. Encouragingly, many park users have emphasized the value of greenspace and the importance of the natural environment on the Island.

TFN has been very actively speaking up for the remarkable biodiversity of Toronto Islands as part of this Master Plan process. Led by our president Ellen Schwartzel, TFN is a key member of a Toronto Island Biodiversity Working Group that has both summarized the island's biodiversity and has also recommended principles for protecting this natural heritage for future generations. You can access the principles [here](#), and you can email your municipal councillor that you would like to see these principles incorporated into the Toronto Island Master Plan.

A *few* of the topics that have been discussed are:

- improved access to and on the island including better year-round ferry service and transportation between Ward's and Hanlan's such as the "tram" and multi-point bike rentals.



- better protection of dune areas within Environmentally Sensitive Areas (ESAs) from trampling by using boardwalks, cedar rail fencing and seasonal closures.
- clean-up and reduction of the footprint of the Works Yard. (Older TFN members will remember this as an issue that TFN was involved in 50 years ago!)
- opening up the ESAs behind the Works Yard and Muggs Island. (These areas were originally closed due to lobbying by TFN and others. New access could be controlled by use of boardwalks.)

Upcoming are discussions on "Environment and Stewardship." As I write in mid-April, none of the ideas presented is set in stone, budgeted for or worked out in detail. I'm hoping that, rather than presenting detailed plans such as exact routes through ESAs, the final report will present principles for undertaking such planning. While some of the ideas being discussed may come about within a few years, some will likely be in the 5, 10, to 20-year and even longer timeframe.

The final Plan will be presented later this year. In the meantime, watch for and participate in any surveys about particular aspects of the Island Park that may still be conducted online.

Jenny Bull

For more information:

<https://tfngo.to/torontoislandmasterplan>

Hanlan's Beach ESA, taken in June

From back of photo: i) Lake Ontario, ii) foredune, the youngest dune, formed by blowing sand from the beach (which is hidden by the young cottonwoods growing on the dune), iii) inter-dune panne, iv) back dune (older dune). Behind camera, cottonwood-red osier dogwood-shrub willow swamp.

To read more about dune pannes, see

<https://tfngo.to/ontparkspannes>

MESSAGE FROM THE EDITOR

Thank you to all who have generously contributed articles, images, reports, book reviews and nature stories to the newsletter this past year. And thank you, members of the newsletter committee, for the care you give to ensuring an accurate and attractive publication.

I wish you a happy summer enjoying nature. Please remember to share your experiences with fellow members. Submit your stories and photos to: newsletter@torontofieldnaturalists.org

Wendy Rothwell

WILDLIFE DISTURBANCE: WHY NOW AND WHY DOES IT MATTER?

Wildlife sightings and photographs can evoke a sense of wonder and delight, educate, and lead to a life-long love of nature and commitment to conservation. However, more and more I am encountering wildlife disturbance when visiting local parks, and I am hearing similar experiences from others. Just as more littering occurs in an area that is already littered, this troubling behaviour could increase further if it is seen as the norm. This article will briefly outline the nature and significance of wildlife disturbance and some of the major contributing factors.

My own viewing and photography practices continue to evolve as I learn more about this issue. Even if one is ‘merely’ taking advantage of a viewing or photography opportunity that someone else’s disturbance has set up, your participation can also cause harm and can encourage others to gather round and/or to initiate disturbance elsewhere. It has been argued that nonlethal disturbance by humans is analogous to predation risk and, while much is still unknown about species-specific impacts, some common forms and potential effects of disturbance are summarized in the table below.

The stresses from disturbance are occurring at a time when many species of wildlife are already very vulnerable. There are declines in many populations due to factors such as habitat loss, climate change, pesticide use, invasive species, pollution, reduced insect biomass, outdoor pets, and collisions with vehicles, buildings and power lines. Adding to these pressures are the increased numbers of park users, birders, photographers and other outdoor enthusiasts, especially since the onset of the pandemic. Many of these individuals have limited knowledge of the habitat requirements, normal behaviour, and stress behaviors of wildlife.

Yet another factor contributing to disturbance is the routine sharing of locations of wildlife, especially birds, on the internet through such forums as eBird, Listservs, Facebook groups, photo-sharing websites and other applications. The importance of comprehensive reporting for conservation efforts is noted by eBird and they do maintain a sensitive species list as well as guidelines for reporting sensitive species. However, users may not be familiar with the sensitive species list or guidelines.

continued on page 8

Forms of Disturbance *	Potential Harm
Approaching too closely Staying more than a few minutes Speaking loudly Presence of large groups Presence or actions that cause a change in behaviour	Stress, disrupted feeding and sleep, nest abandonment, flushing from cover, exhaustion, starvation
Vocalizing or playing calls, including prey calls	Stress, energy wasted chasing/fleeing from phantom intruders, predator exposure, time diverted from feeding, reduced number of offspring
Flushing from cover	Stress, disrupted feeding and sleep, exposure to predators, less energy to hunt and evade predators
Following	Stress, disrupted feeding and sleep, death from exhaustion or starvation
Removing nearby vegetation or nest material for better viewing	Stress, nest abandonment, death from increased exposure to predators, sun or cold
Walking off-trail	Reduced territory and nesting sites, exposure to predators, invasive species spread
Baiting with food or lures	Dependence, injury or death from bait wires, pins or lines; collision with nearby vehicles and power lines, habituation leading to killing of nuisance animals.
Presence near nest	Stress, nest abandonment, delayed feeding and growth of young, starvation
Using portable lights	Stress, nest abandonment, disrupted feeding and sleep

*A discussion of measures to mitigate disturbance is beyond the scope of this article.

WILDLIFE DISTURBANCE *continued*

Furthermore, the list may not reflect current species disturbance in a particular location if these concerns have not been reported to the administrators. Several other internet sites have adopted ethical codes and/or banned photos and locations of nesting sites and species at risk and any images obtained through baiting. It is hoped that these precautions will become universal.

Even without location reports, the proliferation of wildlife images on social media contributes to disturbance since views, likes and positive reviews of images serve as rewards for close-up 'action' shots – the types of photos more likely to have involved disturbance. Viewers often scroll through images on mobile devices and aren't drawn into a thumbnail unless it is a close-up image with isolation of the subject from the background. Similarly, judging criteria of nature photography competitions usually reward images with a nature 'story' and/or WOW! factor. Images showing wildlife from a distance in their habitat are often less favorably scored. Here too there are some signs of growing awareness of ethical photography practices. For example, the prestigious Canadian Association for Photographic Art requires nature competition entrants to read and comply with their nature ethics code and all submissions are reviewed by at least two judges for compliance.

Changes in cameras over time have also had an impact on disturbance. Equipment advances have meant that wildlife photography is no longer restricted to a small number of skilled professionals and naturalists operating in blinds or hides. Now medium-income amateurs can afford cameras that are able to shoot decent wildlife images and many outdoor enthusiasts also try to capture images of wildlife with their cellphones. Even before the digital age, the introduction of the single lens reflex camera transformed wildlife photography by allowing for the use of telephoto lenses. Then digital cameras brought much greater light sensitivity and fast shutter speed capability as well as continually improving noise reduction, optical quality, autofocus, and image stabilization. Perhaps most important, digital cameras allow for instant results and repeated and prolonged shooting without extra expense. With repeated shooting, even beginners can occasionally capture a good image.

An enhanced understanding of the nature, causes and effects of wildlife vulnerability and disturbance provides an opportunity for reflection by individuals and organizations. It is hoped that, together with the efforts of the TFN Wildlife Harassment and Ethical Nature Photography Working Group and other like-minded groups, this can lead to changes in attitudes, behaviours, and policy, and ultimately to better protection of wildlife.

Theresa Moore

To Learn More:

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- Zanette, L. Y. et al. (2011). Perceived predation risk reduces the number of offspring songbirds produce per year. *Science*. <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1025.6034&rep=rep1&type=pdf>

JUNIOR NATURALISTS

Exploring the Birdlife Around Us

As the weather starts to warm and the days lengthen, birds that have spent the winter in southern areas start their northern journey to nest and raise their young. Mid-May is peak migration season in Toronto, the time of year when you will see the greatest number of different species here and in surrounding southern Ontario — a great time to start birdwatching! May is also the month of The Toronto Bird Celebration, and TFN Junior Naturalists will be taking part in a hike in Tommy Thompson Park on May 14. (If you are interested, please pre-register for this program.)

Birding as an activity can be done either at home, in a park, or anywhere outside. If you are just starting out birding, there are a lot of helpful online resources and bird guides, such as *The Birds of Toronto*, part of the Toronto Biodiversity Series available online and through the Toronto Public Library (while copies last). Also the website <https://www.allaboutbirds.org/guide/search> is a great resource for identifying birds both visually and by their songs.

When you are starting, your eyes and ears are all you need. However, a pair of binoculars (or a monocular) is nice for distance viewing, and it is always a good idea not to get too close to birds, as this can cause them stress. A good rule for watching birds and other animals is, if the animal moves away from you, you have gotten

too close. It is also very important during the spring to keep your distance from nests. If you know the location of a bird's nest, try to avoid the area until the young have left.

While hundreds of birds will pass through this area, you can start your birdwatching with some more familiar birds, such as robins, House Sparrows, Northern Cardinals, Blue Jays, Black-capped Chickadees, Downy Woodpeckers, Red-winged Blackbirds and crows that you can see around the city, not to mention the mallards, Canada Geese and swans that frequent Toronto's lakeshore, ponds and rivers.



American Robin gathering nesting materials.

Photo: Zunaid Khan

While you are out birdwatching, consider making a nature journal. Try to notice and write down the bird's behaviour. Is it singing, foraging for food, preening (making sure all its feathers are in the proper place) or having a dust bath? A bird with twigs or grass in its beak is likely building a nest. Try to notice how it flies. Some birds, such as the Northern Flicker, fly in

an undulating wave pattern, up and down, while others fly straight; some group together in flocks while others are more solitary.

The most important thing is to have fun, respect the birds you are viewing, and get to know a little bit more of the wildlife around you.

Vanessa McMain

UPCOMING JUNIOR FIELD NATURALISTS PROGRAMS

Saturdays from 10 am to 12 noon

May 14 Join the Toronto Bird Celebration at Leslie Street Spit

June 11 Do some restoration ecology by removing invasives at Ashbridge's Bay

To pre-register, and to learn about COVID precautions for in-person programs, email Anne Purvis at juniortfn@torontofieldnaturalists.org

BIRD BEHAVIOUR - NESTING

Birds construct nests in order to shelter the eggs and hatchlings from the sun and poor weather. Some nests are built with a roof or an overhang, but most often birds choose a protected location. The nest needs to cushion the eggs yet be strong enough to support the brooding adult when she/he moves around in it. It also needs to be flexible so it can expand as the hatchlings grow. To provide protection from predators, it may be located in a hidden area or covered with materials to blend in with its surroundings.

Red-tailed Hawks favour the good view provided by the crowns of tall trees. Both the male and female hawk bring sticks and soft plant material to build or refurbish the nest. While the average nest is two metres in diameter and one metre deep, it may become much larger as it is added to each year.

The Ruby-throated Hummingbird builds a cup nest the size of half of a walnut shell in which to lay her two coffee-bean sized eggs. This little bird likes to build her nest high on a tree limb or in a shrub, located away from predators. She uses a variety of soft plant material, flakes of lichen, and glues it together with spider web.

Barn Swallows generally choose human-made structures such as eaves, rafters, the cross beams of barns or sheds. or the undersides of bridges. Occasionally they will re-use a nest if it is free of parasites. Both birds use their beaks to collect mud and mix it with grass stems to make small pellets. They first construct a small shelf on which to perch while they build up the sides of the nest. If they have chosen a wall, the nest is a semi-circular half-cup shape. If a horizontal surface has been selected, they will

construct a complete cup about eight cm in diameter and five cm deep. They carefully line this with grass and feathers.

The Baltimore Oriole weaves a pendant nest which dangles from outermost tree branches. These nests can be easy to spot in winter when trees are bare, but are safely hidden by leaves during breeding season. While the male might help to gather building materials, the female weaves her nest together with long grasses, twine and horse hair.

She lines this pouch with the “cotton” from cottonwood trees and other soft plant fibres, feathers and animal wool.

We learned about scrape nests from the December 2021 lecture about Piping Plovers. This shallow depression is favoured by killdeer, plovers and other shorebirds. The colouring of the eggs and the addition of sand or shells provide camouflage to protect the contents of these simple structures.

The male Marsh Wren uses strips of cattail, sedges and grasses from its wetland habitat to construct a dome-shaped nest with a small hole at its top and an enclosed cup at the bottom. The female lines it with strips of plant materials, feathers, cattail down and rootlets.

Many species of birds are cavity nesters. They may use holes in telephone poles, rock crevices or gaps under roofs in which to build nests. Some species, such as Bank Swallows, find dirt mounds or soft riverbanks to be

appropriate sites for digging burrows. Both sexes of the Red-breasted Nuthatch excavate a nest cavity in a rotten stump or snag. The male nuthatch smears resin globules from coniferous trees around the outside of the entrance while the female does the same inside the hole. This



Baltimore Oriole nest (above) and Barn Swallow nest with juveniles (below) both at Leslie Street Spit.*
Photos: Ken Sproule



continued on next page

*Ed note: In selecting photos to illustrate this article, careful consideration was given to meeting ethical standards. These are clearly cropped photos and there is no indication the birds were aware of the presence of the photographer, who was far enough away not to cause stress.

helps to keep out unwanted guests. Woodpeckers use their strong beaks to excavate holes in trees. These may be used by “secondary” cavity nesters such as bluebirds and Tree Swallows. Sometimes chickadees will re-use an old cavity nest if it is free of parasites. However, they often build their own nests. To keep the location of the nest secret, chickadees carry the bits of wood they excavate far away from the hole so that predators can’t threaten the new home.

Birds choose a great variety of locations for their nests. They are incredible engineers who work with just their beaks and claws!

Check out the events and activities for the month-long Toronto Bird Celebration (see below).

Jennifer Smith

Sources:

<https://www.birdsandblooms.com>

<https://www.allaboutbirds.org>

Secret lives of common birds by Marie Read c. 2005

HELP A BIRD IN DISTRESS!

Birds are very territorial in spring when they are determined to defend their nesting territories. To ensure safe nesting sites and sufficient food supplies for their young, both males and females may behave more aggressively than usual. You may see a bird attack a window or a car mirror because it thinks the reflection is a competing male. This behaviour may continue until the bird is exhausted.

You can help by “removing” the reflection. Cover the mirror, hang a cloth from your car window, or draw streaks of soap across the reflective surface. When the bird can no longer see its supposed challenger, it will usually return to normal nesting behaviour.

TORONTO BIRD CELEBRATION MAY 2022 *Celebrate the Return of the Birds!*

This month-long celebration run by Birds Canada will offer many exciting events (in-person and online) for kids and families, beginner and experienced birders.

We are pleased to announce that TFN will partner with other local nature-related organizations in promoting this celebration, and we encourage our members to participate.

Details of the events offered will be posted at <https://torontobirdcelebration.ca/> and there you will find an opportunity to subscribe to a mailing list to receive the Toronto Bird Celebration newsletter.



Cape May Warbler. Photo: Bill Cruttwell

2022 GREAT CANADIAN BIRDATHON

This campaign, Toronto’s first ever “Big Sit,” is a novel way of raising financial support for Birds Canada – Canada’s premier bird science and conservation organization. Rather than pursuing birds, participants are challenged to carefully watch birds all day in a single spot.

Justin Peter, a director on Birds Canada’s board, has undertaken to do this at Toronto’s Woodbine Park from 6 am to 6 pm on May 18, watching, listening to and counting birds. He has set a fundraising goal of \$3000, and is asking TFN members to support him in this challenge. To learn more, see [2022 Great Canadian Birdathon - Justin Peter's Great Canadian Birdathon - CanadaHelps](#)

MAKING NATURE A PRIORITY

The upcoming municipal election on October 24th is an opportunity for each of us to make nature a higher priority in the city of Toronto. Some key issues to consider are the poor state of the city's ravines (more funding is needed to restore and protect them), the diminishing amount of parkland per capita, and the fact the Environmentally Significant Areas in the city remain unprotected because there are still no management plans for them. These issues are becoming urgent and we need to ensure that more attention is paid to them. Let's use this opportunity to ask questions about these issues, take a careful look at politicians' platforms, and vote accordingly.

Toronto is a large city with many issues competing for government attention and funding. However, other major cities in North America and around the world have well-thought-out environmental plans, with dedicated agencies (and funding) to implement them. They prove that it is possible for a large city to make nature a higher priority than Toronto currently does. By asking politicians questions about these issues we can raise their awareness of them, and by voting with these issues in mind we can ensure that more attention is paid to them.

Stay tuned for the September newsletter to hear what the TFN advocacy team thinks should be done about these issues, and some questions that we can ask.

Diana Turchin

STEWARD YOUR FAVORITE RAVINE WITH TORONTO NATURE STEWARDS

An exciting new stewardship program in the City of Toronto is in its second year of a pilot that started in spring 2021. Imagine getting permission to tackle that dreadful infestation of dog-strangling vine or garlic mustard that has been gradually degrading your favourite park or ravine! Becoming a steward or Lead Steward with the newly-minted Toronto Nature Stewards (TNS) will provide just that opportunity.

Someone interested in becoming a volunteer Certified Lead Steward enrolls in the comprehensive training course developed by TNS. This equips them to lead a team of up to 10 stewards. A team of stewards works at a particular site usually at a set time on a weekly basis. There may also be occasional pop-up events when members of the public can register to give stewarding a try without an ongoing commitment.

My husband Jim and I love to birdwatch and hike at Ashbridge's Bay Park, but we were increasingly discouraged by the amount of burdock, dog-strangling vine and garlic mustard crowding out the native plant diversity. Last summer, we took the volunteer Lead Steward training and were part of a team to remove these invasives. It is an ongoing project but we think most of the burdock is gone!

The Lead Steward Certification program was offered this winter to more than 40 folks who would like to become Lead Stewards. They came from all over the city – from

'Friends of' and butterflyway groups, from TFN, garden clubs and Master Gardeners. Many came with a site in mind that they would like to obtain the City's approval to steward.



Lead Stewards picnic at Sherwood Park. Photo: Anne Purvis

The certification program was very informative and helpful. It involved attending five two-hour sessions on Wednesday evenings and going on a field trip to Todmorden Mills Wildflower Preserve. Participants were taught how to identify the ten invasive plant species the City has approved for removal through the program. Every participant learned how to do a Site Assessment, a Stewardship Plan and a Species Inventory. The training also

taught the capabilities and skills of leading a volunteer group, from recruitment, to safety, to tracking work logs.

A certified Lead Steward, upon graduating from this course, is ready to steer a stewardship team to remove invasive plant species for the restoration of the health of a particular ravine or natural area in Toronto. If you would like more information, to join a team this season or to take the Lead Steward training for 2023, please check out the website <https://torontonaturestewards.org/> or contact their Volunteer Coordinator at toronto.nature.stewards@utoronto.ca.

Anne Purvis

Facebook: [Toronto Nature Stewards](https://www.facebook.com/TorontoNatureStewards)
Instagram: [@torontonaturestewards](https://www.instagram.com/torontonaturestewards)
Twitter: [@naturestewards](https://twitter.com/naturestewards)

A WIN, A LOSS AND A CAMPAIGN AHEAD

Nature advocacy has its ups and downs. It demands passion to engage and patience for the long haul, as illustrated by the following snapshots of a few local nature disputes: a patch of wetland that has been spared from trampling; a stretch of ravine that has been clear-cut; and a set of municipal golf courses that will remain the exclusive realm of golfers – at least for now.

A Win

Last fall two local naturalists, Clyde Robinson and Noam Markus, galvanized community passion for a patch of wetland at Ashbridge's Bay. The site had begun to naturalize after flooding in 2017 and the City had seemingly supported that trend by controlling phragmites onsite and planting trees nearby. Biodiversity at the site grew quickly, with Killdeer and Savannah Sparrows among the many birds observed. Then in fall 2021, without any community consultation, the City installed a nine-hole disc golf game right on the wetland. Naturalists were in disbelief. Clyde and Noam launched a tireless letter-writing campaign requesting – and receiving – an onsite meeting in November, getting support from numerous naturalist groups including TFN, and asking many, many pertinent questions. After months of efforts they felt the City decision-makers had become unresponsive. In frustration, Noam wrote an opinion piece for the Toronto Star, and it was published March 15 2022. Within days, City staff advised Noam that the disc golf baskets would be removed. Hats off to Clyde and Noam for their persistence! Doubtless they will continue to advocate for longer-term restoration plans for the site.

A Loss

Improving GO train service along the mid-town east-west rail corridor is a high priority, so Metrolinx, the provincial transit agency, is adding a fourth rail line. Unfortunately, beloved stretches of urban nature are in the way, Small's Creek southwest of Woodbine subway station being a perfect example. On a TFN tour of Small's Creek last summer, we observed jewelweed in the wetland, witch hazel on the slope, and a small De Kay's snake near the path. The community around Small's Creek stressed that they supported transit improvements, but they asked for good faith consultation with Metrolinx on issues like minimizing tree loss and an ecological restoration plan. Many friends of nature, including TFN, wrote letters to Metrolinx.

City Council also supported the neighbourhood's concerns, and on February 3, 2022, City Council unanimously asked Metrolinx for alternative structural design approaches, a new wildlife crossing or pedestrian underpass and an ecological restoration and stewardship plan. But on February 8, Metrolinx began clearing about 260 trees at the site, as described in this Toronto Star article. Metrolinx's *pro forma* approach to consultation has been criticized by many groups encountering this agency, as noted in this recent Toronto Life article.

Work ahead of us

Toronto could add up to 200 hectares to its public parklands (an area bigger than High Park) by opening up its five City-owned golf courses to nature and compatible uses. Municipal golf lands offer a rare, low-cost way to add nature and parkland to our landscape. The city already owns the land. For generations those lands have been owned and maintained by the taxpayer but have been off-limits to the general public, dedicated solely to golfers and manicured lawns. Toronto has a rapidly-growing population and has not been able to grow its parklands to keep up. Indeed, the City's Parks Manager warned in June 2021, "A key trend identified in the Parkland Strategy is the declining provision of parkland per person over time." The pandemic has made this challenge far more acute, with unprecedented numbers of people flocking to local parks to de-stress. In the summer of 2021, City staff led a public discussion on opening the city's golf lands to nature, community gardeners, urban farming groups, hikers, cyclists and families just wanting to stroll through on a summer afternoon. TFN was active in a coalition asking for these changes.

Unfortunately, faced with a very vocal and well-organized golf lobby, City Council lost its nerve for greening the greens. On February 3, 2022, City Council voted not to make any major changes to its golf courses, despite staff recommendations by Parks, Forestry and Recreation to advance values like environmental stewardship, growing the urban forest, restoring natural areas and supporting public access on all of the city's golf courses. With the municipal election coming up October 24, we all have opportunities to ask our municipal councillors why they ignored very reasonable proposals of their own staff and decided against opening up golf lands to nature and to the public.

Ellen Schwartzel

FOR READING

A Garden for the Rusty-Patched Bumblebee: Creating Habitat for Native Pollinators Ontario and Great Lakes Edition
 by Lorraine Johnson and Sheila Colla.
 Illustrations by Ann Sanderson

Lorraine Johnson, writer of numerous books on gardening with native plants, and Sheila Colla, expert in bumblebees and other pollinators, have teamed up to create a unique book for gardeners who want to go beyond just adding native plants to their garden. This book combines plant recommendations specific to Southern Ontario with information on which pollinator species depend on them for nectar, pollen and habitat. It also clears up misunderstandings about native pollinators (particularly bees) using the latest in pollinator research.

One of the things I learned from this book is that not all pollen is created equally. Around 25% of bees have pollen-specialist diets so they rely on just one plant family or a single plant species. I didn't realize that the non-natives in my garden were lacking key nutrients needed for the reproductive and developmental success of native bees.

The authors see gardens as an important step in ensuring biodiversity, along with action from all levels of government. Creating a habitat garden with diverse native plants that provide food and shelter for native pollinators is something *individuals* can accomplish.

Although the bulk of this book is an extensive plant reference, it also covers what to look for when buying native species, how to choose plants for your specific area, what plants go well together, and much more. There are many lists and callouts for specific situations (e.g., Native Plants for Containers, or Nesting Sites and Overwintering Habitat for Native Bees) and a section on sample gardens. Plants are shown either by photos or by the clear and lovely illustrations of Ann Sanderson.

I loved this book. It gave me a better understanding of native plants and pollinators, and the difficulties they are having, and it's a great reference to help me choose the right plants for my garden.

Lynn Miller

Note: This book will be published May 21. You can pre-order it now from local bookstores.

Woman, Watching: Louise de Kiriline Lawrence and the Songbirds of Pimisi Bay by Marilyn Simonds

Marilyn Simonds (Pele Island Bird Observatory and Kingston Field Naturalists) explores the life of one of Canada's pioneering women in ornithology, Louise de Kiriline Lawrence (1894-1992). Louise's first husband was killed in the civil war in Russia. Her loss and

harrowing escape back to Sweden left little taste for continuing her life of privilege. She immigrated to Canada during the depression to work as a Red Cross outpost nurse near North Bay using a dog sled in winter to visit patients in the remote bush. Louise retired in 1939 to her "Loghouse Nest" built on Pimisi Bay and, encouraged by Percy Taverner, author of *Birds of Canada*, began banding birds.

She meticulously documented the behaviour of Red-eyed Vireos, woodpeckers and others, and could be found with a cushion pinned to her shirt so she could sit and observe for hours in the buggy forest. As an award-winning nature writer, her contribution was so highly appreciated that she became the first Canadian woman Elective Member of the American Ornithologists' Union. Marilyn brilliantly illuminates Louise's relationships with her network of friends, family and fellow birdwatchers and the growth of ornithology in the postwar era through letters and personal reminiscences.

Nicola Lawrence

Green Birding – See More Birds and Protect the Environment at the Same Time, by R. Gregson, 2013

Birding usually starts with appreciation of the beauty of a bird. But it often develops a competitive dimension that can lead to a lot of driving to see rare birds or flying to expand your life list. But it doesn't have to. Given what the burning of fossil fuels is doing to the planet, Richard Gregson, then President of Bird Protection Quebec, urges us to consider birding only by bicycle and on foot. He acknowledges that some (myself included) argue that using public transit is emissions-free since it would be running whether we use it or not. In addition, including public transit in green birding makes it a more reasonable choice for those who live in areas not close to good birding habitat and for those who do not cycle. Not all of us can live close to the lakeshore, a great ravine or other parkland, but we have public transit that gives us excellent access to these very places.

Beyond avoiding fossil fuel consumption in our birding, the author tries to show the value in repeatedly birding the same spots throughout the year. As many of us have found over the last two years, doing so leads to the realization that some birds hang around the same spots for an entire season or year, and some nest in the same spot year after year.

All the basics of birding are covered – optics, notetaking, software for recording sightings, etc. He also describes how to develop a garden that is attractive to a large variety of species, and encourages readers to get involved in citizen science which can include research in your own birding patch. Inspiring!

Bob Kortright

TREES OF THE MONTH: SERVICEBERRIES (*AMELANCHIER* SPP.)

Serviceberries (also known as Juneberries, Saskatoons and shadbushes) are among our most beautiful native woody plants in flower and tastiest in fruit, but they are also, perhaps, our second most headache-inducing group for taxonomists. Their notorious taxonomic intractability due to chromosome doubling, promiscuous hybridization, and asexual seed production ensures that they can have no one single “correct” classification. Thus different taxonomic treatments have accepted anywhere from four to about thirty species in North America as a whole. Falling somewhere in between, the most recent comprehensive classification, published as part of *Flora of North America* (FNA), <http://floranorthamerica.org/>, accepts ten species of serviceberries as native in Ontario. Of these, eight either remain shrubs or occasionally becoming modest-sized trees.

The other two species are almost always trees that may reach 15 m or more and, along with hybrids between them, may be found in the wild and in cultivation in Toronto and vicinity. Downy serviceberry (*Amelanchier arborea*) is confined to the deciduous forest zone and the southern half of the mixed forest in Ontario, while smooth serviceberry (*A. laevis*) is much more widespread here, extending also throughout the northern half of the mixed forest and east to west across the province in the southern portion of the boreal forest.

These two serviceberries are most readily distinguishable in early and late spring, while in either early flower or mature fruit. Flowers and fruits of smooth serviceberry are larger on average, but the most obvious difference between the two presents itself during the brief period when the flowers and leaves are emerging from the buds. The young leaves are folded along their midribs, then gradually unfold and flatten as they and the flowers enlarge. As expected, given its common name, downy serviceberry’s green emerging leaves are densely hairy beneath (the outside of the folded leaf), and remain so well into the opening of the flowers, before unfolding and shedding most of their down. Young leaves of smooth serviceberry, in contrast, are red, hairless or only sparsely hairy beneath, and open up much more quickly before flowering gets well underway. Good luck trying to distinguish them later, in the summer, fall or winter.

These two species are the earliest-flowering of our showy, insect-pollinated trees, beginning in late April, even earlier than their shrubby relatives. Their pure white flowers completely cover the trees and attract a wide range of non-specialist, early-flying bees and flower-flies. The elongate racemes terminate the majority of leafy twigs and bear up to 15 long-stalked flowers, each with five strap-shaped petals up to about 20 mm long and

7 mm wide. Since these flowers are very similar to those of the shrubby species, pollinators make no distinctions among them, so much cross pollination and hybridization ensues – one source of our difficulties in classifying the group. Many of the tree serviceberries sold in garden centres (often under incorrect botanical names) are derived from hybrids between downy and smooth serviceberries. Known as apple serviceberry (*A. xgrandiflora*), they are recognizable by falling between their parents in their red-blushed, slightly hairy emerging leaves that open and flatten somewhat irregularly.

Glorious while in flower, the petals drop in just a few days but are then succeeded by juicy, dark or brownish purple pomes (“berries” with the structure of an apple). However, we have little chance of enjoying any of these delicious fruits because, as they approach and reach ripeness, they are quickly stripped by a succession of eager

birds including Cedar Waxwings, Northern Cardinals, and American Robins. The apple serviceberry in my yard is usually staked out and fiercely defended for a good part of each day by one to several robins who make flying sorties to pick off individual pomes as they reach the peak of ripeness. Only when they are sated can the other fruit-eating birds and grey squirrels have a go, this collective assault eventually leaving only seeds that germinate with abandon the next year. If you purchase a tree to observe this kind of food fight, however, please be aware that some apple serviceberry cultivars are sterile hybrids (probably because they have three sets of chromosomes rather than two or four) and are grown primarily for their showy display of flowers.



Apple serviceberry flowers and red-blushed, slightly downy leaves.

Photo: James Eckenwalder



Immature fruits not yet eaten by birds and fully unfolded mature leaves.

Photo: Ken Sproule.

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VOLUNTEER PROFILE: JOAN LEWIS

Spending time outdoors and engaging with nature has been a theme of Joan Lewis' life. She has fond memories of spending time in nature as a child growing up primarily in Oshawa, Ontario, and of spending time in Nova Scotia with her grandfather, a leading Canadian ornithologist. Joan initially studied natural resources management and also worked in cartography, but returned to university to complete a degree in Occupational Therapy after a life-changing car accident in 1975. Joan joined TFN about three years ago, after retiring from a career as an Occupational Therapist at the Centre for Addiction and Mental Health, to continue pursuing her lifelong interest in nature.

The Occupational Therapy profession focuses on how people interact with their physical and social environments. In part, Occupational Therapists look for ways to adapt environments so individuals might pursue the things they want to do, regardless of their circumstances. Soon after joining TFN, Joan applied this professional mindset to TFN's activities. She joined our walks committee and worked with committee members to advance the accessibility perspective in the walks program. Each outing leader is now required to complete a form that assesses the accessibility of the route, including a description of the surface material, ruggedness of terrain, slope and the presence of features such as steps, seating or accessible washrooms. This information has become a standard feature of TFN's outing descriptions. Having this information in advance reduces the psychological barrier to participation and may help members feel more confident that they will be able to participate. These



assessments reveal that TFN outings are accessible to varying degrees. Many are wheelchair accessible in good weather. Joan notes that the enhanced route descriptions are also a valuable resource for people who want to plan outings independently if they're not able to schedule their time to coincide with TFN's guided walks. Joan now uses the route descriptions to screen routes for outings she plans to go on with her friends or family.

Joan finds spending time in natural places energizing and inspiring, an uplifting antidote for anxiety and depression. She says she "feels more connected to the universe when she's in natural environments." She also very much enjoys the educational aspects of guided walks offered by TFN, as "lifelong learning is a joy in itself."

The pandemic made it more difficult for Joan to spend in-person time with her family, including many young great-nieces and -nephews who share her love of nature and spending time outdoors. She is looking forward to more family gatherings in 2022.

Joan has appeared on the *Nature Now* radio show at Ryerson University to discuss nature accessibility. She points out that, as Canada's population ages, accessibility is an increasingly important factor in the public's ability to access nature. While acknowledging that there can be a "psychological leap" involved with using a mobility device, Joan is passionate about encouraging people to use whatever device or tools will help them to pursue the activities they enjoy, including nature outings. This, says Joan, "makes such a difference in improving or maintaining quality of life."

Tracy Garner

SERVICEBERRIES *continued*

In fall, the small leaves, smallest among all our native forest hardwood trees, put on a very fine display of rich fiery reds and purples, often with patterns surrounding the midrib.

Downy and smooth serviceberries join the small minority among our forest trees, including beech and blue-beech, that long retain smooth, thin, grey bark, though the largest individuals become shallowly and irregularly ridged and furrowed. The apparent lack of protection against cold that this entails makes one wonder how smooth serviceberry can survive in the brutal winters of the southern boreal forest, which none of the other three smooth-barked species come anywhere near.



Apple serviceberry smooth and rough bark. Photo: James Eckenwalder.

WEATHER (THIS TIME LAST YEAR)

May 2021

May brought near-normal temperatures overall coupled with very dry conditions. The monthly average was 14.4° downtown and 13.6° at Pearson Airport, both exactly the same as the 30-year mean. Total precipitation was 20.7 mm downtown and 21.8 mm at Pearson. This was barely one third of the long-term average (about 75 mm) and it was the driest May since 2005. There were no thunderstorms. Cumulative springtime precipitation deficits were also notable, with just over half the total normal precipitation recorded March to May. Downtown had a total of 117.4 mm (normal 202.7 mm), which made it the driest spring since 1971 (103.9 mm). Pearson had a March-to-May total of 123.0 mm (normal 200.7 mm), the lowest since 2012.

These averages and totals, however, conceal the fact that May was all over the place weather-wise. It featured chilly conditions for the first twelve days, followed by a heat wave, then a return to cold weather and even some of the latest snow observed in Toronto near the end of the month. Persistent dryness was the only nearly-consistent feature. Dry conditions were conducive both to daytime heating and radiative cooling at night, so the daily maxima averaged slightly above normal and the daily minima slightly below normal.

The cold weather early in the month was not record-breaking. The heat wave broke a couple of daily records; notably 33.3° at Pearson was the hottest for any May 25th (as was the 30.8° downtown). The cold and snow that came just three days (!) later was the most anomalous weather. Rain falling into moderately cold but initially very dry air caused evaporative cooling, and daytime temperatures were in the range of 4°. Wet snow mixed in during the middle of the day throughout the Toronto area. Pearson reported 0.2 cm, its latest measurable snowfall on record. Traces of snow have been observed as late as June 4th, 1945 at Pearson and downtown on June 1st, 1945 as well as June 4th, 1859. This episode, though the occasion of consternation among Torontonians, was actually beneficial in that it was the only significant precipitation that fell all month, helping to relieve or delay the worsening drought situation. The cold snap did not involve frost, as temperatures actually rebounded once the rain and snow were over.

Spring Summary

The spring (March to May) was warmer and drier than normal. Temperatures were about one degree above normal, largely due to persistent early spring warmth offset by fluctuating conditions in May. It was the warmest spring since 2012. One result of the late snow on the 28th is that the 2020-2021 snow season total only

became complete then. Seasonal snowfall at Pearson was 122.0 cm, moderately above normal.

June 2021

June was a relatively hot, humid month with a gradual increase in precipitation following the very dry spring. It was the fourth warmest June on record downtown with a mean temperature of 21.5°. The three warmer Junes were 2005 (22.8°), 1919 (22.5°), and 1949 (22.3°). At Pearson Airport the mean monthly temperature at 21.8° was higher than downtown, and it was the second warmest June on record after 2005 which had a mean of 22.6°.

Rainfall was close to normal with 79.8 mm downtown and 80.0 mm at Pearson. These values are within 2 mm of the 30-year average. Much of the month remained in semi-drought conditions with frequent but light showers. The intensity of the showers gradually increased with over 20 mm falling on the 29th.

Hot conditions prevailed early and late in the month, with extended dry heat over the first week and a few days of more humid weather at month-end. There was a relatively cool period around the middle of June that had overnight temperatures drop below 10° in outlying suburbs (e.g. 8.4° at Buttonville and 8.8° at Pearson on the 23rd). The highest temperatures were not extreme – 33.8° at Pearson on the 6th and 32.2° on the 28th. Downtown reached 32.4° on the 5th and 32.6° on the 28th. These are well within the range of normal experience in Toronto.

The same, however, could not be said of far western Canada. An unprecedented heatwave hit B.C. and Alberta on June 26th-29th and must be mentioned in this generally Toronto-centred weather summary. Canada set new national records on three consecutive days at Lytton B.C.: 46.6°, 47.9° and an unbelievable 49.6° on the 27th through 29th. These temperatures worldwide are generally reached only in the U.S. desert southwest, around the Persian Gulf, in the Algerian Sahara and in northern India. Canada's previous record was 45.0° during the Dust Bowl in August 1937 at Middale and Yellow Grass in Saskatchewan. The day after the 49.6° heat record, a wildfire struck Lytton and burned it down.

It was unusual that B.C. and southern Ontario were both experiencing heat at the same time. Usually, the atmospheric circulation wave pattern supports heat in one and coolness in the other. In late June, the relative coolness was in the central and southern United States with record heat to the west and oppressive but less extreme humid heat to the east.

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WEATHER *continued*

July 2021

July was a humid but relatively cool month, with temperatures about one degree below the long-term average and rainfall roughly 50% above average. The monthly mean temperature was 21.7° downtown and 21.4° at Pearson Airport. Current normals are 22.5° and 22.0° respectively, while this month was around the average for the 1980s. One unusual fact was that, for the first time since 1976, July was cooler than June at Pearson. The hot weather out west continued, but below the freakish mid- to upper 40s recorded in B.C. in late June. Temperatures were kept a bit lower because of extensive cloud cover and a couple of relatively strong cool spells. On the 31st, temperatures dropped to 11.0° at Pearson and 10.4° at Buttonville – the lowest July readings in six years. On the 8th and 9th, daytime temperatures failed to reach 20°. On the other hand, warm to hot weather that did occur was accompanied by very high humidity (as well as frequent thunderstorms). The hottest day was the 6th, when Pearson recorded a high of 33.2°. On July 15th, a tornado warning was issued for the northern GTA, and a tornado did materialize in Barrie destroying a number of homes. (It was less severe than the one that struck at the end of May 1985.)

A small amount of rain data was missing on the 20th, but estimated monthly totals were 103 mm downtown and 122 mm at Pearson. Normal rainfall for the month is about 75 mm. These were the highest totals since the blockbuster year of 2013 which included record flash floods and a total of over 180 mm. There was no serious flooding this year. Toronto's vegetation, which had been set back due to dry conditions in the spring and *Lymantria* caterpillars that defoliated many trees, recovered and became luxuriant and jungle-like.

Another unusual situation was the co-occurrence of forest fire smoke drifting in from northwestern Ontario and further west with high humidity and intermittent rains. The period from the 18th to 21st was particularly smoky.

August 2021

August brought the hottest weather of the summer. After a cool start, there was an extended period of oppressive conditions lasting from the 7th to 30th, albeit with a short break on the 14th-16th. This period featured no extreme temperatures; the hottest day of the month was the 26th which had a high of 32.7° both downtown and at Pearson Airport (a few locations got a degree or so higher, e.g., Georgetown attained 34°). However, the muggy weather was more or less continuous, sustained by a tropical air mass from the Gulf of Mexico. There were nine days with highs at or above 30° downtown and 12 such days at

Pearson. Dew point temperatures – the best measure of humidity – were generally above 18° for most of the month and often above 20°. Dew point is the temperature at which saturation would occur causing fog to form. Hence, a 20° dew point means the air mass would form fog if cooled to 20°. Any value above 15° or 16° would feel humid to most Ontarians.

With such an extended period of heat (even though absolute temperatures were not extreme) August 2021 was close to record-warm. The downtown weather station has a 182-year record, and August ranked third (after 2016 and 1959) with a mean temperature of 24.1°. Likewise, at Pearson, the monthly mean of 23.8° was tied for second place with 1959. The lowest temperatures were reached on the 2nd and 15th, generally in the 12° to 13° range.

Despite the humidity, rainfall was spotty and, in some places, downright scanty. Tropical systems such as Fred stayed south of our area, which remained under high pressure influence until some instability began late in the month. There were severe thunderstorm watches on the 26th and 29th as a cooler air mass attempted entry into southern Ontario. The storms were local. Downtown recorded only 11.6 mm (as opposed to the normal 68.3 mm). This was the sixth-driest August on record, and the driest since 1935 which had 11.4 mm. Pearson fared better with 57.4 mm, much closer to normal.

Summer 2021: June to August

This summer was a very hot one in Canada, with the GTA being no exception. Although July was relatively cool, June and August more than made up for it. The mean temperature was 22.3° at Pearson Airport and 22.4° downtown. This was one degree above normal downtown and one and a half above at Pearson. It was the 4th hottest on record at Pearson. The top four summers at Pearson have occurred since 2005, the combined result of global climate change and an increased urban heat island as Toronto expanded. Downtown, with its longer record and much earlier urbanization, had its eighth hottest summer. Five of these have been since 2005, but three occurred in the mid-20th century.

Summer precipitation featured dry conditions in early June and (for much of the GTA) in August. This was partially offset by frequent rains in July. Downtown recorded 194.4 mm. The 30-year (1992-2021) June to August average is 221.3 mm. At Pearson, the summer total was slightly above average with 259.4 mm. Downtown was somewhat droughty by the end of August. The 12-month period from September 2020 to August 2021 had just 611 mm, the driest 12-month period since late 2016.

Gavin Miller

EXTRACTS FROM OUTINGS LEADERS' REPORTS

Betty Sutherland Trail, Mar 18. Leader: Zunaid Khan.

We walked along the Don River where there was lots of melting snow, ice and fast moving water. We examined trees planted last year as part of the joint program between the Federal Government and the TRCA, and discussed work the City has been doing along this section of the Don River Trail to improve water quality and prevent flooding associated with storm surges. We observed and discussed the impacts of removal and spraying by the City of invasive species including dog-strangling vine and buckthorn. Bird sightings included Red-winged Blackbirds, American Robin, Canada Geese, Mallards, House Sparrows, Northern Cardinals, Red-tailed Hawk, Belted Kingfisher, crow and gulls.

Centennial Park, Mar 23. Leader:

Lillian Natalizio. Despite the very unspring-like weather, we saw a few signs of spring including crocus leaves beside Elmcrest Creek and silver maple flowers opening. More exciting was the prolonged and up-close sighting of a Red-tailed Hawk as it unsuccessfully attempted to take a mink running along the creek. We followed the creek upstream, then turned east into the hickory woods which were relatively quiet. The younger plantation to the north was a different story – full of trembling aspen and silver or Freeman maples that have already opened their buds – and



Silver maple flowers, Centennial Park.
Photo: Lillian Natalizio

alive with countless robins and numerous Red-winged Blackbirds and grackles. We proceeded west and southwest across the park to the still-frozen ponds, and into the maple and beech woods where a few mosses were fruiting. At this point we started seeing a Turkey Vulture riding the winds. Towards the end of our walk we saw a few pussy willows starting to flower.

Mount Pleasant Cemetery, Mar 26.

Leader: Ellen Schwartzel. We began our walk under a cluster of umbrellas, sheltering from a light rain. Our first stop was the ravine entrance to Yellow Creek, an important natural corridor for wildlife. Most trees were still dormant, allowing us to compare winter shapes, buds and bark texture — the gangly branches of the Kentucky coffee tree contrasting with the graceful curves of horse chestnut. Silver maples were just beginning to open their deep red buds. We reflected on how maples typically bear either all-female or all-male flowers, but sometimes change sex from year to year. Polygamadioecious is a mouthful! We wondered about inter-species tree communications in an

arboretum of over 500 tree species. Pussy willows were budding at several gravesites. Cardinals, nuthatches and Blue Jays called nearby and a hawk circled overhead. A raven high above made liquid raven sounds. Blue patches of sky and sun had returned by the time we parted.

KEEPING IN TOUCH

It's so interesting when a chance sighting gives us a glimpse into the lives of wild creatures. On March 1st we saw two Common Ravens from afar with their beaks poking a pile of fur, which turned out to be a dead raccoon. One of them pulled off a big wodge of fur and passed it over to the other. This fuzzy mouthful was then celebrated by the raven hopping up onto some stacked picnic tables nearby.

All About Birds says that, after the main nest support is built, the female raven makes an inner "cup" from smaller twigs which is sometimes "lined with...fur". After the ravens left, we inspected the raccoon. It didn't appear to have any wounds but we could see there was about four square inches of missing fur on its side.

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TFN LECTURE

Sunday, May 8 at 2:30 pm

See page 3 for information about lectures via Zoom

Restoration of the American Chestnut in Ontario

Ron Casier, Chair of the Canadian Chestnut Council, will speak about the Council's efforts to preserve the unique "Canadian" American Chestnut genome and breed a blight-resistant American Chestnut for ecological and economic restoration.



Upcoming lectures:

- Sept 11: Urban Bees and Biodiversity, Scott MacIvor
- Oct 2: Microplastics in our Environment, Chelsea Rochman
- Nov 6: Butterflies, Jessica Linton