



TORONTO FIELD NATURALIST

Number 682 February 2024



American Ermine. Photo: Marlene Duhig. See page 3.

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PRESIDENT'S REPORT

Happy New Year everyone. I hope you and your family had an enjoyable holiday season.

I am very happy to announce that Lynn Miller has accepted the role of vice-president, and will be the next president of TFN when my term ends at our AGM in October 2024. Lynn is a long-time member of TFN and has served on the board for 14 years. She is actively involved with TFN through stewardship, recruiting volunteers, as part of our digital team, and working at promotions and outreach. She also plays a key role in our annual Nature Images Show and in TFN's photography group. The board and I look forward to supporting Lynn when she takes on the role of president.

One of my favourite TFN events, which takes place this month, is our Nature Images Show. Please be sure to join us on Saturday, February 3rd from 1:30 to 3 pm and see what our talented members have to share. The show will be broadcast using Zoom. See below for access information.

We continue to celebrate our 100th anniversary, so look for more centennial-inspired walks as well as some special events from our other committees. We hope to do a few more events before the celebrations conclude at the end of June 2024. Stay tuned to our *Members Only* website in the spring for details.

I hope everyone has been able to get out and enjoy nature in the last couple of months. A warmer fall and mild start to winter have resulted in many interesting observations in

our green spaces. Although many people like the warmer weather, I for one find it rather disturbing. However, it does present the opportunity to study how these changes are impacting nature. Fall bird migration has been quite interesting, with sightings of warblers well into December, including Yellow-rumped and Orange-crowned Warblers. Please take time to enjoy what nature has to offer. For a list of our upcoming guided member outings please visit: <https://members.torontofieldnaturalists.org/members-only/walks/>.

Our outings committee and walk leaders continue to provide members with a great selection of guided outings. To ensure that we are able to continue to do so, we are always on the lookout for volunteers to assist us. If you would like to learn more about opportunities to help with outings or other TFN programs, please join us on Tuesday, February 20th at 7 pm for a special interactive panel presentation on volunteering opportunities. See page 3 for details.

For younger members of your family, don't forget about our great Junior Naturalists program, which is free for children between the ages of 6 and 14. You can learn more about this at: <https://tfngo.to/juniornaturalists>.

Let's get outside, enjoy nature, and remember to speak up for nature when the opportunity arises so that we can preserve its beauty for all to enjoy.

Zunaid Khan

Nature Images Show

Saturday, February 3, 2024 from 1:30 to 3 pm

Enjoy an afternoon of photos, videos, art and stories at our annual Nature Images Show, to be held virtually over Zoom. TFN members will present images taken on outings, hikes, trips, stewardship sessions, and just about everywhere else nature flourishes!

Zoom access: <https://tfngo.to/natureimages2024>



Common sunflower.
Photo: Margaret Hall

PHOTOGRAPHY AWARD WINNER

Congratulations to Marlene Duhig, a member of TFN's photography group, who was recently honoured as Novice winner of the *Lance Gitter Natural Things* competition at the Toronto Digital Camera Club. This prize is awarded for the best aggregate score of each member's three highest scoring images. Marlene's submissions included these two stunning photos; the third appears on the front cover of this newsletter.



American Lady Butterfly. Photo: Marlene Duhig



American Goldfinch. Photo: Marlene Duhig

VOLUNTEERING WITH THE TFN A SPECIAL PANEL PRESENTATION

Tuesday, February 20th, 2024, at 7pm

This interactive panel presentation will focus on volunteer opportunities with the TFN. A panel of TFN group leaders will do short presentations on their group's activities and what's involved with joining them. Then we'll open the meeting for questions from the audience. Groups presenting will be advocacy, communications, Junior Naturalists, lectures, newsletter, outreach, stewardship, walks and wildlife protection.

TFN is an all-volunteer charity, so we rely on members to create our programs and keep the organization running. If you are thinking of volunteering, or just want to hear how things get done, please join us for this special presentation.

The link to this Zoom meeting will be found on the Lectures page of our *Members Only* website: <https://members.torontofieldnaturalists.org/members-only/lectures/>

LECTURE REPORT

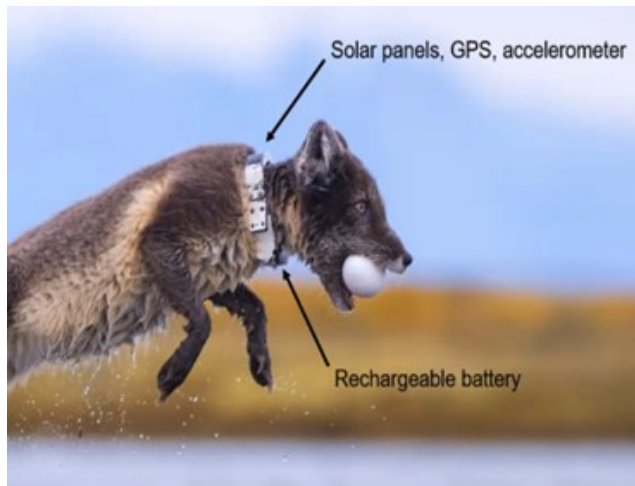
Wildlife Research in the Canadian Arctic:
Arctic Fox, Arctic Hare, Arctic Biodiversity

Dec 3, 2023

Dr. Dominique Berteaux, Professor of Ecology and Canada Research Chair on Northern Biodiversity at the Université du Québec à Rimouski.

Dr. Berteaux's talk, covering his research on Arctic foxes at Bylot Island, Arctic hares at Alert and Arctic biodiversity, included spectacular photographs of the Arctic.

Dr. Berteaux takes groups of four students to conduct research for three months on Bylot Island where approximately 115 Arctic fox dens are monitored by automatic cameras. The research team captures Arctic foxes, completes various measurements and then tags each fox for identification and tracking purposes.



Arctic fox in summer with goose egg in its mouth.

Photo: MSc student Louis-Pierre Ouellet

The teams collaborate with Indigenous peoples, using their traditional knowledge to formulate research ideas. For example, having learned that Inuit people had seen Arctic foxes traveling across the sea ice in winter, the team used GPS tracking data to understand that they travel an average of 51.9 km and up to 76.5 km each day to other islands including Greenland. Lemmings are the foxes' main source of food, but they also consume geese, other birds and seals in winter.

Dr. Berteaux and his students work with the Canadian Military at Alert, which is close to the North Pole. Alert has three mandates: intelligence (radio surveillance), Arctic sovereignty, and supporting science. Like most animals in

the far north, Arctic hares are not afraid of humans. They are captured and tagged for research purposes. Research has revealed that Arctic hares migrate in the winter from Alert to Lake Hazen, which has more vegetation. Arctic hares have one litter of from two to nine babies, called leverets, each year. The mother suckles them every 18 hours, and they spend the rest of the time hiding alone. Arctic hares sometimes travel in large groups of 100 or more.



Arctic hare feeding leverets.

Photo: Postdoctoral Fellow Sandra Lai

One research objective is to establish a baseline of vegetation around Alert. The researcher locates a quadrant of space a few metres square and conducts an inventory of the vegetation. Nails placed in the ground mark the area for purposes of future comparisons. This is important to identify long term effects of changes in the environment.

One of the most interesting areas of research involve understanding Arctic Biodiversity and how species are connected. Dr. Berteaux collaborates with scientists from other countries studying different species, and they have worked together to create the Arctic Biodiversity Assessment (<http://www.arcticbiodiversity.is/>). Conversations with Indigenous peoples indicate they now observe important changes due to climate warming and other stressors.

Peter Smith

This lecture can be viewed on the *Members Only* website.

TFN OUTINGS INFORMATION

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

Winter Plant Identification at Todmorden Mills – Trees, Shrubs and Herbs

Leader: Stephen Smith

Saturday, February 3, 11.30 am

Wilket Creek at Toronto Botanical Garden

Leader: Ellen Schwartzel

Saturday, February 24, 1 pm

Meeting Point: the pedestrian bridge by the parking lot at Todmorden Mills, 67 Pottery Road. Parking is free.

Walk Details: A 2-hour, 1-km circular walk over mostly unpaved, somewhat uneven, flat surfaces with stairs and gentle slopes. The walk can go longer if people wish.

Walk Description: We will walk along the trail and through the meadow, learning how to identify trees, shrubs and herbs that can be seen in winter. There is a wide variety of species to see. The trail is mostly level but we'll be off the trail at times. The trails will probably be covered by snow and ice; if so, grippers are recommended. This walk is a joint outing with the Todmorden Mills Wildflower Preserve Committee.

TTC: From Broadview subway station, walk north on Broadview Ave to Pottery Rd. Then walk down Pottery Rd to Todmorden Mills.

Washrooms: Available at the beginning.

What to bring: Binoculars, notepad, camera, plant ID app or reference book, warm clothes, winter boots.

Walk Leader's Cell Number: 416-707-2164



Maple twig in March. Photo: Jenny Bull

Meeting Point: in front of the glass doors of Toronto Botanical Garden, 777 Lawrence Ave E, at Leslie St.

Walk Details: A 2-hour, 3-km circular walk over mostly paved flat surfaces with some steep slopes and stairs

Walk Description: We will walk southwards alongside Wilket Creek and then retrace our steps back to the TBG parking lot and main building. The walking path is paved, but may be covered in snow and ice. This is an opportunity to see Wilket Creek and the valley lands in late winter. We may see hawks overhead and overwintering robins. We may also see skunk cabbage sprouts and flowering Chinese witch hazel. TBG Visitor Centre and Garden Shop are open Saturdays, 10:30 am to 4:30 pm. Café is closed in winter. TBG's Weston Family Library is open weekends from noon to 4 pm.

TTC: From Eglinton subway station, 54A Lawrence bus east to Leslie St at Lawrence Ave East.

Washrooms: Available at beginning and end of walk.

What to bring: Binoculars, snacks, ice grippers. Boots with good grips, warm winter layers and hats are all helpful. Walking sticks may help too.

Walk Leader's Cell Number: 647-463-5562



Skunk cabbage. Photo: Jason Ramsay-Brown

“THEN AND NOW” G. ROSS LORD PARK WALK

G. Ross Lord Park, Reservoir and Dam are located near Finch Avenue West and Dufferin Street. The park was created in 1972 to help with flood control in the area, and was named after Dr. G. Ross Lord, former Chairman of the Toronto and Region Conservation Authority.

This photo was selected from the slide archives and we believe it was taken in close proximity to the reservoir and dam.



G. Ross Lord, 1985. Photo: Robin Powell

Below is a photo taken this summer in close proximity to the location of the original photo.



G. Ross Lord, 2023. Photo: Zunaid Khan

G. Ross Lord Park Walk – Nature and Heritage

Saturday, February 17th at 10 am

Walk Leader: Zunaid Khan

Meeting point: The north side of Finch Ave W at Wilmington Ave.

Walk Description: A 2.5-hour circular walk along mostly even and unpaved surfaces with gentle slopes.

Walk Details: From the meeting point we will walk across the dam to the point where we believe the original photo from the archives was taken. We will explore the trails around the reservoir before heading into the park to explore what nature has to offer.

Washrooms: Not available

TTC: Subway Line 1 to Finch station. Then take the Finch #36 bus to Wilmington Ave (stop ID 3623).

What to bring: Beverages, snacks, binoculars and/or camera.

Dress for weather conditions, wear sturdy shoes or boots with good traction and bring grippers in case of icy conditions.

I look forward to seeing you on this walk.

Zunaid Khan

Great Backyard Bird Count February 16-19, 2024

The GBBC is an annual international four-day event that engages birdwatchers of all ages in counting birds to create a real-time snapshot of where the birds are. Anyone can participate, from beginners to experts. It's free, fun and easy!

Spend time in your favorite places watching birds – then tell us about them! In as little as 15 minutes, notice the birds around you. Identify them, count them, and submit your observations to help scientists better understand and protect birds around the world. If you already use eBird or Merlin, your submissions over the four days will count towards GBBC.

For information on how to participate, visit: <https://www.birdcount.org/participate/>

EXTRACTS FROM OUTINGS REPORTS

Humber Arboretum, Nov 9. Leaders: Lynn Short, Jim Graham, Kay Yuen (shepherd). This walk introduced some participants to the Humber Arboretum for the first time. We explored the new switchback trail, recently constructed to repair damage from a washed-out gully. Some restoration planting was evident at the end of this trail – many large Manitoba maples have been removed, some logs left on the ground and some trunks left standing (but girdled) for habitat. We saw interesting acorn caps from the large bur oak near the river (West Branch of the Humber). We walked through the forest, which has been designated an ESA (Environmentally Significant Area), and identified trees, including American beech, sugar maple, black maple, ironwood, bitternut hickory, and choke cherry in the understory. At the end of the walk, we looked at the large dawn redwood and its companion plants, the sweet ferns growing under it. Participants were invited to return to the Arboretum frequently to see it in changing seasons.

Milne Hollow and Moccasin Trail Park, Nov 10. Leader: Zunaid Khan. On a beautiful fall morning we enjoyed a leisurely walk along the East Don River. We discussed the history of Milne Hollow and the stewardship work being done in this area. We then followed the East Don River trail through meadows, forested areas and wetlands to a bridge across the river, which led to the

Rainbow tunnel. We explored Moccasin Trail Park, specifically the wetland area around a stormwater pond. We then followed the river south through Charles Sauriol Conservation Area. Observations included robins, Black-capped Chickadees, Downy Woodpeckers, Hairy Woodpecker, Dark-eyed Juncos, Cooper's Hawk, Red-tailed Hawk, Mallards and a DeKay's brown snake.

Todmorden Mills Wildflower Preserve, Nov 14.

Leaders: Zunaid Khan and Charles Bruce-Thompson. This being mid-November, the wildflower preserve didn't have any flowers on display, but there was still plenty to see. We discussed how the area was once almost totally shorn of vegetation, used as an industrial dump and generally mistreated and mismanaged. From this unpromising start, beginning in 1990, the preserve's stewardship team has gradually returned the area to something like its former splendour before Europeans

arrived. We saw some unusual, for Toronto, plants such as buttonbush, bladdernut and spicebush that thrive in the many damp seepage zones that characterize the preserve. A pair of mallards was seen paddling around the oxbow pond. We heard juncos everywhere but failed to see a single one. We spotted Northern Cardinals, American Goldfinches, Red-tailed Hawk and a crow.



American bladdernut, Todmorden Mills, Nov. 2014. Photo: Ken Sproule

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Ontario Reptile and Amphibian Atlas

Ontario Nature is thrilled to announce the official release of this highly-anticipated publication – the result of a decade of dedicated community science.

Between 2009 and 2019, thousands of participants engaged in this monumental community science project, which averaged 30,000 new observations annually. The atlas dataset draws from 500,000 expert-vetted observations by more than 12,000 contributors. Ontario Nature's newly released publication synthesizes this wealth of data, presents key findings and sheds light on the pivotal role the atlas has played in advancing the field of herpetology. You can view this publication online at <https://tfngo.to/on-reptiles-amphibians>, review some highlights at <https://tfngo.to/atlasstorymap>, or purchase a hard-copy version at <https://tfngo.to/buy-on-reptiles-amphibians>.

Ontario Nature's website also contains a *Reptile and Amphibian Field Guide* containing "Everything you need to know about Ontario's frogs, toads, turtles, snakes and salamanders": [Reptiles & Amphibians in Ontario \(ontarionature.org\)](https://ontarionature.org)

TORONTO'S RAVENS: A TWO-PART FEATURE OF *TORONTO NATURE NOW*

One well-kept TFN secret is our terrific weekly radio show: *Toronto Nature Now*, created in partnership with CJRU Radio of Toronto Metropolitan University, and launched pre-pandemic. A secret no longer! Over coming months, this space will showcase past gems of *Toronto Nature Now*, with links to the full treasure-house of 180-plus [audio episodes](#), to savour at your leisure. Each episode invites a guest speaker to mix nature facts, insights and whimsy in a short, accessible format, usually less than 15 minutes.

Toronto's ravens were the first creatures featured by *Toronto Nature Now*. In his two-part musings on these extraordinary birds, our very own Charles Bruce- Thompson set a high bar for subsequent episodes to aspire to. Ravens are quite distinct from crows, of course, and in *Ravens Part 1*, Bruce offers useful hints to distinguish the two species, should you be lucky enough to spy a black silhouette hunkered on a high tree branch in Toronto. Then Bruce goes one better, by imitating the call of each bird – a memorable moment, captured in audio. Bruce illustrates how ravens and other corvids show a remarkable intelligence, revealed in play and social behaviours. Ravens used to be common in our area, but their decline went hand in hand with regional declines in forested habitat. Nor were they helped by human prejudices, which viewed ravens as pests and birds of ill-omen. The sorry fact that Toronto's last raven was shot in 1870 – at a location that should have been a safe haven – speaks volumes for the ethical norms of the time.



Ravens on Snake Island, Feb 2018. Photo: Jenny Bull

Ravens Part 2 offers the cheering observation that ravens have lately returned to our city and are indeed nesting in places like Tommy Thompson Park. Broadly speaking, ravens are a sort of comeback kid, spreading southward and back into more urban habitats as forested lands recover in eastern North America. This good news bucks the larger trend of disappearing bird species, and is evidence that Toronto's habitat restoration efforts are on a worthwhile track.

To round out his sketch of ravens, Bruce recommends the book *Mind of the Raven*, authored by award-winning naturalist Bernd Heinrich in 1994.

TFN's radio show has not (yet) featured crows. Until that gap is filled, TFNers will surely enjoy this [audio reading](#) of Ernest Thompson Seton's 1898 story *Silverspot, the Story of a Crow*. According to Seton, Silverspot wisely led and kept safe a clan of about 200 crows in the Castle Frank area of Toronto in the 19th century.

To dip deeper into the family of corvids generally, including crows and magpies, readers are encouraged to try *Corvus: A Life with Birds*, a 2008 personal account and non-fiction book by Esther Woolfson.

Next time in this space, watch for a diverting description of *Duckweeds and Microbes* – Episode # 127 of *Toronto Nature Now*.

Ellen Schwartzel

UPCOMING JUNIOR NATURALISTS' EVENTS

Please join us for the TFN Juniors program with children/grandchildren aged 6-14 yrs. We meet one Saturday each month from 10 am to 12 noon. An adult must remain with their children for the duration of the program. Once registered, you will receive invitations to our monthly events with detailed instructions on the location and activities.

Register here: juniortfn@torontofieldnaturalists.org

Events for Winter 2024 include:

- Feb 10 'Behind the Scenes at the ROM' with Entomologist Antonia Guidotti. Numbers are limited for this free event. Register promptly if you are interested in insects.
- Feb 17 (Tentative) 'Birding around the world at Metro Zoo'. We'll tour pavilions focusing on birds from other continents. We hope to arrange a discounted admission charge.
- Mar 16 Identify evergreens and investigate last year's nests in the East Don Parklands.

JUNIOR NATURALISTS

Winter Survival

When you go outside in the winter, a warm coat, mitts, hat and boots help protect you from the cold, but have you wondered how the wildlife that live in Ontario year-round survive in the winter?

In the fall, birds and other animals spend most of their time eating food to gain weight. This is stored as fat, which helps insulate the animal during the cold weather. Fat stores are also metabolized (broken down by the body to gain energy) during times when food sources are scarce, or if the animal hibernates.

Also, like our warm clothes, mammals in the winter will grow longer, thicker fur to insulate them from the cold. Birds fluff up their feathers, creating little pockets of air that help to keep them warm. Shivering also helps birds maintain their body temperature.

Wildlife will also change their diet during the winter. Robins eat mostly insects and worms during the spring and summer. However, during the fall and winter they switch to berries and fruit. Foxes are omnivores, eating a varied diet including insects, eggs and berries. However, during the winter they switch to being carnivores. Deer will switch to twigs and leaf buds, as the leaves they love to eat aren't found in winter.

Animals can avoid the cold by creating nests/dens (chipmunks), congregating in a hibernaculum (garter snakes), burrowing underground (bumbees), in leaf litter

(ladybugs), in the mud surrounding wetlands (frogs), under bark (beetles), or inside plants (goldenrod gall flies).

Some mammals, like groundhogs, prefer to just skip winter, so they hibernate! Their breathing, heartbeats and body temperature are greatly reduced. Other mammals, such as raccoons, go into torpor (a lighter form of hibernation) in which their metabolism still slows, but they wake up, eat, and move about frequently.



Above: Robins feeding on buckthorn berries in winter.

Below: Deer looking for twigs and leaf buds to eat.

Photos: Ken Sproule.



Reptiles and amphibians also have their own type of hibernation, called brumation. Their metabolism slows, but the animal stays conscious and occasionally wakes to drink (but not eat) and moves about. In some species of amphibians, such as wood frogs, high levels of glucose in their cells protect them like antifreeze while the frog freezes solid under the leaf litter.

Some insects spend the winter in a state of suspended animation called a diapause where the metabolism of eggs and pupae completely stops. Adult mosquitoes go into a state of temporary dormancy, and become active once warmer temperatures return.

All animals find a way to get through the winters, and people can take hints from them! I know I'll be hibernating a bit, wearing thick socks and jackets, snuggling under big blankets, and drinking hot cocoa!

Vanessa McMain

EXTRACTS *continued from page 7*

Then and Now – Lambton Park, Nov 16. Leader: Zunaïd Khan. From James Gardens we followed the Humber River through Lambton Woods and into Lambton Park. We discussed work the TRCA has done along Black Creek from Smythe Park as it feeds into the Humber, and flood remediation work they will be doing along Black Creek east of Jane Street. We also discussed restoration work being done by the City of Toronto in this area. After crossing the bridge over the Humber into Lambton, we stopped to talk about TFN connections to the area, in particular the photo from our slide archives taken by Robin Powell in 1976 – one of the photos from our *Then and Now* photo project as part of the 100th Anniversary celebration. We noted the old growth trees found in Lambton Park that were highlighted in our October lecture on *Old Growth Forest in Ontario*. Bird sightings included robins, goldfinches, Mallards, Canada Geese, Northern Cardinals, Black-capped Chickadees, Red-tailed Hawk, crow, Downy Woodpeckers and Blue Jays.



Walk in Necropolis Cemetery. Photo: Kathy Chung

Necropolis Cemetery and Riverdale Farm, Nov 18. Leader: Ellen Schwartzel with Kathy Chung, (shepherd). A brilliantly sunny November morning heightened the charms of Cabbagetown's residential streets, including the red brick and gingerbread-trim frontages and the many blue historical plaques. Other than a handful of dog walkers, we had St. James Cemetery and the Necropolis much to ourselves. A few oaks still retained their stiff brown leaves. We noted this year's bumper crop of acorns and wondered how it might affect Toronto's squirrel population. Managers of the Necropolis seem to be adding helpful new tree ID signs to supplement their online arboretum guide. As the walk leader, I made only one cringe-worthy tree misidentification, but luckily no one noticed. Over 50,000 people have been buried at

the Necropolis, each with their own compelling story. We had time to reflect on just a few notable souls.

At Riverdale Farm, we looked in on the contented brown pigs and heritage chickens. Some of us shared memories of caged tigers and bears displayed at this site many years ago. We agreed that social norms about animal welfare continue to evolve.

Cherry Beach and Villiers Island, Nov 22. Leader: Charles Bruce-Thompson. We walked from Tommy Thompson Park to the Unwin Ave Bridge, where we saw Redheads, Red-breasted Mergansers, Gadwall, Buffleheads and Common Goldeneyes. This bit of lakeshore is severely degraded with a lot of garbage and an overwhelming profusion of invasive species. We learnt that a recently formed stewardship group was working to restore a portion of the area – an uphill task! We proceeded up Cherry St to look at progress being made by the Port Lands Flood Protection Project. We paused at the new Cherry St South Bridge to look at massive limestone boulders being placed to form the banks of the new mouth of the Don. Beneath our feet was a plug preventing water from the Inner Harbour entering the very impressive newly constructed river bed. There's another plug at the Don Roadway keeping out water from upriver. A passing group of workers told us that these plugs would soon be removed and the new course of the Don would flow freely to the south of what would then be Villiers Island. We observed the extensive planting and landscaping on the banks of the future river, where we saw a female American Kestrel preening on a bare tree trunk that might have been there for that very purpose. Returning along Villiers St we heard, and then saw, a Northern Mockingbird on a utility pole.



American Kestrel preening at Cherry Beach.
Photo: Lillian Natalizio

HISTORIC PROFILE: DR. JOHN MURRAY SPEIRS

Before researching this article, I thought I had a reasonable sense of who Dr. J. Murray Speirs was, and the importance of his contributions to the naturalist community. I was privileged to have been regaled with a few stories by his grandson, Miles Hearn, on TFN walks over the years. In back issues of our newsletter, I had tripped across sightings and stories sent in from *Cobble Hill*, the home in Altona Forest he shared with his wife and fellow TFN Member, Doris Huestis.^[1] My Friday mornings at the TFN office often found me poking through books to which he had contributed: *A Naturalist's Guide to Ontario*, *The Illustrated Natural History of Canada*, and *Life Histories of North American Birds* to name a few. All in all, I now know this was a paltry introduction to one of Ontario's most influential naturalists.

Speirs joined TFN as a teenager, mere months after the official formation of "the club" a century ago. When our Junior Naturalists program was formalized in 1934, he served as its first president. Over the following decades, war, marriage, travel, and occupation would cause him to spend time in a variety of far-flung locales. Yet his association with TFN was near constant. When TFN offered lifetime memberships for sale (1960-1979), the Speirs family picked one up. His last significant contribution to the TFN newsletter can be found in our [April 1989](#) issue, although a *Keeping in Touch* column from [Sept 1998](#) proves he remained an avid reader long after that. Although I know of some folks who have come close, if there is a member with a longer-standing relationship with TFN than Dr. Speirs, I haven't encountered evidence of such.

Those who knew Dr. Speirs personally have often described him as a "naturalist's naturalist" – deeply knowledgeable and very passionate about every aspect of our natural world. To quote artist Barry Kent MacKay, "He was an educator, and his whole thing was to take people out into nature and help them understand what they

were seeing. Any time you saw something, an insect or a plant, he would know its scientific name and all about it and its relationship to the other things you were seeing."^[2]

Speirs' professional and educational experiences support MacKay's observations. He earned his Master's in mathematics and physics at University of Toronto (U of T) in 1938 with his thesis *Fluctuations in the Number of Birds in the Toronto Region*. After completing a term of service as a meteorologist with the Royal Canadian Air Force during WWII, he completed a Doctorate in ichthyology from the University of Illinois (1946) under the renowned ecologist, Dr. Charles Kendeigh. He then spent decades as a professor of zoology at U of T. But it is for his ornithological interests that he is perhaps most well-known:



Photo by: Phill Holder from *Ontario Birds*,
December 2000 (Vol 18. No 3)

"My interest in birds dates back to age 5, when an older brother obtained, as a prize for excellent violin playing, a copy of Neltje Blanchan's BIRD NEIGHBOURS ... With this book I was able to identify a ruby-crowned kinglet that was passing through our Toronto garden during migration. This accomplishment was much praised by parents and stimulated other identifications and I was hooked on 'birding'."

TFN Newsletter,
#403, April 1989

In his formative years with TFN, his approach to birding was somewhat atypical compared to that of his peers. The Royal Ontario Museum currently holds nearly 500 bird specimens collected by Stuart L. Thompson, TFN President from 1927-28. Speirs, on the other hand, rejected the idea that formal verification of species was only reliable after harm had come to our feathered friends. Instead, Speirs relied on a near-perfect knowledge of bird calls, a skill so finely honed, it is said, that he could identify species, sex, and maturity of most of the birds he heard. Further still, he was notoriously skilled at mimicking these calls, able to summon nearby birds with just a whistle.

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FOR READING

Darwin Comes to Town: How the Urban Jungle Drives Evolution

Menno Schilthuizen, 2018

Menno Schilthuizen, Professor of Evolution and Biodiversity at Leiden University, gives a fascinating account of how humans, especially in cities, are affecting other life forms, from birds and mammals to insects, fish and plants. He discusses his own research as well as that of other scientists around the globe, and his visits to many of them. What they find is evolution in progress.

Far from heavy going, the book is sprinkled with personal anecdotes, wit and humour, while the author explains complex processes in easily understood terms. For those who want to delve more deeply, he provides extensive endnotes and a lengthy bibliography.

Noise, pollution, light, habitat fragmentation and alien species all drive changes in both the lifestyle and

physiology of organisms. Some species are genetically more predisposed to adapt to urban life than others, and can do so with surprising speed. Schilthuizen frequently points to the role of citizen scientists and of museum specimen collections, which often include submissions from amateurs.

He believes that “an awareness of the exciting evolutionary processes going on in cities is so crucial for the quality of urban life” that we should apply “Darwinian rules to urban greening – not in a destructive way by weeding out those species that actually hold the best cards”. Some accepted beliefs should be reconsidered in the light of new realities and discoveries. New opportunities will continually arise for urban dwellers to play important roles, within local environmentally focused groups and individually.

Darwin Comes to Town offers readers much food for thought. It is available from book dealers and the Toronto Public Library.

Marilynn Murphy

HISTORIC PROFILE *continued*

Around the time he joined TFN, Speirs began keeping detailed notes regarding his observations in nature, a practice he continued for the rest of his life. These notes are now in the possession of the Thomas Fisher Rare Book Library at U of T – some 20 boxes (3.5 linear metres) of daily bird journals and records, first and last sightings records, and research notes for some of his books and articles (CA OTUTF MS COLL 00387).

Speirs was a habitual co-founder of naturalist organizations both great and small: the Ontario Federation of Naturalists (now Ontario Nature), the Toronto Ornithological Club, Thickson’s Woods Land Trust, the Pickering Field Naturalists, the Wilson Ornithological Club, and others. For those groups of which he played no role in founding, I’ve yet to hear of one he wasn’t a member of at some point in his life.

A lifetime spent as an educator, advocate, volunteer, academic, conservationist, and contributor earned him awards and recognition of the highest order. In 2000

alone, he was named a Distinguished Ornithologist by the Ontario Field Ornithologists, was given a Lifetime Achievement Award by the City of Pickering, and was appointed to the Order of Canada. However, to me, his most deserving honour came in 1995 when a section of Altona Forest was dubbed the J. Murray Speirs Ecological Reserve, to commemorate the Speirs family’s donation of nearly three hectares of land from Cobble Hill.

Dr. Speirs was born April 7, 1909 and died in his sleep on September 3, 2001 at the age of 92.

Jason Ramsay-Brown

[1] The remarkable Doris Huestis deserves a similar profile all her own so, I did not even try to do her justice in this article.

[2] <http://www.billgladstone.ca/obit-j-murray-speirs-2001/>

TREE OF THE MONTH: SWEETGUM (*LIQUIDAMBAR STYRACIFLUA*)

Both parts of sweetgum's scientific name, as well as the "gum" part of its common name, refer to the copious fluid (a fragrant balsam called storax) that flows from trees of this species (and a few close relatives). This resin, "American storax," has been included in the official U. S. Pharmacopeia since 1925 for its medicinal qualities and, perhaps contrary to the intent of that document, has also been used by tobacco companies to flavour cigarettes. The latter practice refers to flavouring tobacco, but Aztecs didn't have cigarettes. Pre-Columbian Aztecs flavoured the tobacco they smoked in pipes with sweetgum resin, which they called xochicotzotl. Since sweetgum only grew in cloud forests, well above and away from the Valley of Mexico where the Aztecs lived, they obtained the resin as part of the tribute they exacted from people in conquered areas that produced it. Storax is mostly composed of cinnamic acid (guess where that name comes from) and related chemicals, which readily convert to styrene in the exuded resin. In turn, the styrene molecules naturally coalesce into polystyrene as the resin hardens and weathers into amber. Amber of this composition, unchanged and attributed to sweet gum, is found in deposits on both sides of the Cretaceous/Paleocene boundary (about 65 million years ago) in the mid-Atlantic coastal plain and Montana in the United States. This stability in the environment does not bode well for the millions of tons of artificially produced polystyrene plastics, including Styrofoam, that escape our recycling streams.

Curiously, though the leaves also contain a lot of resin, its composition is very different from that of the stem resin just discussed and derives from a completely different chemical pathway in the tree. Instead of phenols, like cinnamic acid, the leaf resin is dominated by terpenoids, just like those in the resins of pines and other conifers. This is the fragrant, sticky, difficult-to-remove stuff

bathing your car when you park beneath a sweetgum tree whose leaves are infested with aphids.

The loose leaves are similar in appearance to those of maples though they are quite unrelated, but there is no confusing the trees themselves because sweetgum leaves are individually attached in a spiral arrangement rather than in opposite pairs as in maples.

Although the leaves are typically five-lobed, they range from three- to seven-lobed and there is much variation in the number and coarseness of teeth along their margins from leaf to leaf, even on the same tree. This can make individual fallen leaves a little confusing.

The fiery red (to orange or purple) fall colouration of the leaves gives sweetgum its most important alternate common name, red gum. This strong fall colour is one of the main reasons that the tree is popular in cultivation outside of its native range even in areas, like California, not generally noted for autumn splendour. Like most fall-colouring species, however, the vibrancy of the change is highly dependent on weather conditions and our local showing of sweetgum this past fall was not particularly spectacular.

Sweetgum is among our small group of unrelated trees that develop cork ridges along their twigs. Unlike in hackberry, these do not persist as a feature of the trunk bark in sweetgum, which is more conventionally ridged and furrowed than the topo-map bark of that more commonly encountered tree. The ridges begin to form in the second year on at least some twigs and point to particularly active regions of cork cambium, though the exact stimuli for this enhanced activity may not be obvious.

continued on next page



Autumn leaves from one tree with three, five and seven lobes.



Twig with cork ridges.
Photos: Ron Dengler



Fruit ball with seeds.

WEATHER (THIS TIME LAST YEAR)

February 2023

Rather cold weather at the beginning of the month rapidly yielded to a return of the unseasonably mild conditions that prevailed most of the winter. Thus, February contrasted with January because of its wide temperature swings.

We had our most intense Arctic blast of the winter at the beginning of the month, but it lasted only three and a half days. The core of the cold passed slightly to our north and east, affecting areas from northern and central Ontario through Quebec and into New England. Nonetheless, all stations in the Toronto area dropped into the -20s on the 3rd-4th. Downtown dropped to -20.5° , and Pearson Airport to -21.8° . Outlying areas such as Buttonville Airport (-24.5°) and King City (-26.9°) got considerably colder. But from the evening of the 4th to the 20th there was a surge of warm air, peaking at a high of 15.3° downtown and as high as 16.0° in Oakville. The final week of February brought a return to seasonably cold,

wintery conditions, with abundant snowfall – more on that in a moment.

The long duration of warmth meant that February was about 1.5° to 3° above normal, with a monthly mean of -1.3° downtown and -1.4° at Pearson. This made the winter of 2022-23 (December to February) the seventh warmest on record downtown.

Precipitation in February followed the above-normal trend. Downtown had 68.9 mm (30-year average is 57.2 mm), and Pearson had 73.3 mm (30-year average is 53.7 mm). The snow that had come at the end of January rapidly melted after the initial cold snap, and the middle part of the month had bare ground. Heavy rain fell on the 9th. However, the last week brought notable snowfalls on the 22nd-23rd, 25th, and 27th-28th. Monthly snowfall totals ended up being very close to normal with 28.9 cm at Pearson. Snow cover was continuous from the 22nd on, reaching 17 cm at Pearson on the 23rd.

Gavin Miller

TREE OF THE MONTH *continued*

Once sweetgum trees mature, the fruits are one of their most characteristic features. Like those of unrelated American sycamore and other plane trees, they are large, dense balls up to 4 cm across at the end of a long, slender stalk at least twice as long as the diameter of the ball. The structure and appearance of the balls, however, are completely different from the fuzzy soft ones of sycamore.

They are woody and hard, spiky all over, with much larger fruits (individually similar to those of somewhat related witch-hazel) packed together cheek-to-cheek and each releasing one or two winged seeds, accompanied by much more numerous, tiny aborted ones. The good seeds are wind-dispersed by a completely different mode than the hair-tufted, parachuting, fruit segments of sycamore. As with sycamore, the fruits persist into the winter but retain their integrity and size after seed release, not shrinking down to a small hard core. Thus, when you find them lying on the ground after they finally fall, they remain their prickly selves.

Sweetgum is a “near native,” found naturally in the Mississippi embayment and coastal plain of the southeastern United States north to southern Ohio and around the vicinity of New York City, but also jumping down to the cloud forests of southern Mexico and Central America. Although coveted for its fall colour, historically its hardiness in Toronto has been fairly marginal, but it has increasingly been planted successfully here in recent years. While the classic locality for sweetgum in Toronto is Mount Pleasant Cemetery, if there is one in a park near you, just don’t park underneath it.

James Eckenwalder



Sweetgum tree in Mount Pleasant Cemetery.

Photo: Ron Dengler

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.

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NEWSLETTER

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

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

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

Submissions deadline for March: Feb 1

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TFN LECTURES

Each year TFN offers eight free 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. They are usually 45 minutes in length followed by discussion. Visitors are always welcome. TFN Members have access to recordings of past lectures via our *Members Only* website.

Learn about this month's lecture on the back page.

You may join the February lecture via Zoom. The link will be posted on the Lectures page of TFN's *Members Only* and public websites. If you prefer, you can dial in to the lecture by phone:

Dial in: 1 647 374 4685 Meeting ID: 852 1120 8893 Passcode: 497035

Wildlife Photographer of the Year 2023

Exhibit at the ROM until May 26, 2024

Each year, aspiring photographers of all ages and skill levels submit tens of thousands of images in the annual international *Wildlife Photographer of the Year* competition organized by the Natural History Museum in London, UK. One hundred remarkable images from this year's competition – the best of the best – are currently on view at Royal Ontario Museum.

FOCUS ON NATURE – ANIMAL BEHAVIOUR

The November challenge for TFN's Photography Group was Animal Behaviour. This image of an unusual sighting was submitted by Marianne Cruttwell.

While walking in Milliken Park I heard persistent tapping near the pond and spotted a female Downy Woodpecker in the phragmites. It was the first time I had seen a woodpecker in phragmites, and I watched it move around quickly from one stem to another pecking to find food. As it came closer to the walkway, I had a clear view of the bird and was able to get a picture of it in the tangle of phragmites stems with my Nikon Coolpix point and shoot camera.

It is always interesting just to observe the behaviour of animals, but I was happy to be able to capture a picture for our photography challenge.

Marianne Cruttwell



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

TFN LECTURE

Sunday, February 4 at 2:30 pm

Via Zoom. See page 15 for information

Wetland Restoration in Toronto: 30 Years of Experience



Aerial view of Tommy Thompson Park

Ralph Toning, Associate Director, Restoration and Resource Management, TRCA, will share theory and practical considerations behind restoration of urban wetland sites, with a focus on Tommy Thompson Park.

Upcoming Lecture:

Mar 3: (Zoom only) ***Toronto Ravine Strategy***

Wendy Strickland, Project Manager, City of Toronto's Ravine Strategy.