



Since 1923

TORONTO FIELD NATURALIST

Number 634 March 2018



White-tailed deer. Photo by Teresa Moore

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Mission Statement:

Toronto Field Naturalists connects people with nature in the Toronto area. We help people understand, enjoy, and protect Toronto's green spaces and the species that inhabit them.

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IT'S YOUR NEWSLETTER!

We welcome contributions of original writing (between 20 and 500 words) of nature observations, especially in the Toronto area. We welcome reports, reviews, poems, sketches, paintings and digital photos. Please include "Newsletter" in the email subject line or on the envelope. Please re-name digital photos with subject and your name. In the accompanying email include location, date and any interesting information associated with the photograph.

Submissions deadline for April issue: March 2

NEWSLETTER COMMITTEE

Kathleen Brooks, Jenny Bull, Vivienne Denton, Karin Fawthrop, Nancy Fredenburg, Elisabeth Gladstone, Judy Marshall, Lynn Miller, Toshi Oikawa, Jennifer Smith, Wendy Rothwell (editor). Printing and mailing: Digital Edge Printing & Media Services Ltd.

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MEMBERSHIP FEES

	ONLINE NEWSLETTER	MAILED NEWSLETTER
YOUTH (under 26)	\$10	\$20
SENIOR SINGLE (65+)	\$30	\$40
SINGLE	\$40	\$50
SENIOR FAMILY (65+)	\$40	\$50
FAMILY	\$50	\$60

No HST. Tax receipts issued for donations.
TFN does not give out its membership list.



TFN is on Twitter and Facebook! Got something interesting to share? We'd love to get your photos and insights on TFN activities, Toronto nature events and interesting nature news. Just email media@torontofieldnaturalists.org and be sure to include what your photo is and where it was taken. To read posts, go to www.torontofieldnaturalists.org and click on Twitter or Facebook.

TFN MEETINGVISTORS WELCOME

Sunday, March 4, 2:30 pm (Social, 2 p.m.)

Ethics in Wildlife Photography

Speaker: Mark Peck, ROM, Dept of Natural History, will talk about digital photography, crossing the line into nature fakery and non-ethical behaviour.

Emmanuel College, Room 001, 75 Queen's Park Cres E. Just south of Museum subway station exit, east side of Queen's Park. Accessible entrance second door south on Queen's Park. Elevator inside to the right. Room 001 is one floor below street level. **For information:** call 416-593-2656 up to noon on the Friday preceding the lecture.

Share your thoughts about this lecture on social media, hashtag #TFNTalk

Upcoming lecture:

April 8, Moths of Thickson's Woods, Phil Holder of the Matt Holder Environmental Education Fund

TFN OUTINGS

- TFN events are conducted by unpaid volunteers.
 - TFN assumes no responsibility for injuries sustained by anyone participating in our activities.
 - Children and visitors are welcome at all TFN events. Children must be accompanied by an adult.
 - If you plan to bring children in a stroller, be aware that there may be steps or other unsuitable terrain.
 - Please do not bring pets.
 - To get to outings on time, check TTC routes and schedules (www.ttc.ca or 416-393-4636).
- Check for any schedule disruptions on weekends and allow extra time if necessary.**
- Outings go rain or shine: check the weather by calling 416-661-0123 so you will know what to wear.
 - Wear appropriate footwear for walking on trails which may be muddy, steep or uneven.
 - *Please thoroughly clean your footwear before each outing to avoid spreading invasive seeds.*

The Toronto Field Naturalists wish to acknowledge this land through which we walk. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca and, most recently, the Mississauga of the Credit River. Today it is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to be on this land.

Share your favourite walk photos on social media, hashtag #TFNWalk.

- Sat
Mar 3
10:00 am **EARL BALES PARK – Nature Walk**
Leader: Stephen Smith. Meet at the corner of Bathurst St and Timberlane Blvd. Walk through the south end of Earl Bales Park looking at reforested fields and natural regeneration. We'll practise identifying trees, shrubs and other plants in winter conditions.
- Thurs
Mar 8
10:00 am **LYNDE SHORES AND CRANBERRY MARSH, WHITBY – Waterfowl**
Leader: Stephen Kamnitzer. Meet at the Lynde Shores Conservation Area parking lot, 1285 Victoria St W, Whitby. For more information visit cloca.ca/con_areas/CAlyndeshores.php. A 3-4-hr walk. Bring lunch and coins for parking fee. By car take 401 east to Salem Rd S (exit # 404), drive 1 km to Bayly St (RR 22), then east (left) on Bayly St for 3 km to the conservation area. For those without a car, a GO train leaves Union Station at 8:48 am arriving at Ajax GO station at 9:31 am. Contact Stephen 416-733-0840 (home), 647-924-0840 (cell) or stephen.kamnitzer@rogers.com to arrange for him to pick you up at Ajax GO station.
- Sat
Mar 10
10:00 am **CENTENNIAL PARK – Nature Walk**
Leader: Claire Bergeron. Meet outside LCBO at Burnhamthorpe Mall. From Islington subway station take Burnhamthorpe bus #50 to Old Burnhamthorpe Rd just past Renforth Rd bus stop. Cross the street to the mall. A 2-hr circular walk. Washrooms available at the Conservatory (approx 20 min from beginning of walk).
- Tues
Mar 13
10:00 am **HUMBER BAY PARK EAST – Waterfowl and early spring migrants**
Leader: Anne Powell. Meet at the southeast corner of Park Lawn Rd and Lake Shore Blvd W for a circular walk on mostly unpaved surfaces, mainly flat. Bring binoculars. Morning only.
- Sat
Mar 17
10:00 am **LESLIE STREET SPIT – Birds**
Leader: Bob Kortright. Meet at the entrance to the spit at Leslie St and Unwin Ave for a circular walk. Bring binoculars and lunch.
- Sun
Mar 18
2:00 pm **GARRISON CREEK – Lost Rivers**
Leaders: Richard Anderson and others. Meet at the northwest corner of Christie St and Bloor St W near Christie subway station. A 2.5 km linear walk on city streets and park paths following the section of lost Garrison Creek from Christie Pits to Queen St, ending at Trinity Bellwoods Park. A joint outing with Toronto Green Community.
- Thurs
Mar 22
1:30 pm **A WALK IN OLD YORK – History and Architecture**
Leader: Ed Freeman. Meet at the northeast corner of King St and Church St for a circular walk on mostly paved, mainly flat surfaces. No washrooms. We will walk from St James Cathedral east to Frederick St, south to the Esplanade and back to St James. Bring curiosity.

Sat Mar 24 10:00 am	PINE HILLS CEMETERY – Nature Walk Leader: D Andrew White. Meet at the parking lot at 625 Birchmount Rd. A 2-hr walk around the cemetery starting along the southern side. Bring lunch. The focus will be spring tree identification. We shall also look for animals such as the family of foxes that frequents the area.
Wed Mar 28 10:00 am	COLONEL SAMUEL SMITH PARK – Birds Leader: Doug Paton. Meet at the southwest corner of Lake Shore Blvd W and Kipling Ave for a circular walk. Bring binoculars. No washrooms. Morning only.
Sat Mar 31 1:30 pm	A COOL WALK ALONG THE HUMBER – Nature and History Leader: Ed Freeman. Meet at the southeast corner of Eglinton Ave W and Scarlett Rd. We will walk south along the Humber River to the Old Mill and Bloor St W. Bring icers if conditions warrant.

COTTONWOOD FLATS MONITORING PROJECT, 2018

Last year, 26 TFN members participated in the Cottonwood Flats Monitoring Project (CFMP), a partnership between TFN and the City of Toronto's Urban Forestry, Natural Environment and Community Programs. With the project about to gear up for spring, we're hoping to discover even greater enthusiasm in the TFN community this year!

CFMP provides exciting opportunities for TFN members to actively engage in citizen science and make positive contributions to nature in the city. From April to October we'll conduct two vegetation surveys and six bio-monitoring sessions to expand and enhance the robust

inventory of animal and vegetation biodiversity we documented last year. Other events may include stewardship activities such as invasive species removal and native planting, site tours and social walks.

We hope you will choose to participate in the CFMP. Volunteers with a host of different skills and levels of experience are required, so all are welcome! Please email volunteering@torontofieldnaturalists.org (with "Cottonwood" in the subject line) to let us know you are interested or to learn more.

Jason Ramsay-Brown

CFMP Call for Volunteers	
Role	Duties
Site Ambassadors	Talk with the public about the TFN and CFMP.
Photographers	Photograph plants, birds and other animals, as well as project activities. Must have their own equipment.
Bird ID	Identify bird species during monitoring sessions.
Plant ID	Identify plant and tree species during monitoring sessions and/or vegetation surveys.
Observers	Provide an extra set of eyes/hands or other assistance to team.

Did you know?

The digital edition of our newsletter is delivered several days before the print copy hits the post. That's a lot of extra time to look over outings! To get yours, make sure the TFN office has your email address.

TFN Board Nominations Invited

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

Please send your suggestions to the Chair of the Nominating Committee, c/o the TFN office (see contact information on page 2).

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

PRESIDENT'S REPORT

It was with great pleasure that I heard TFN members Anne Purvis and John Wilson deliver deputations to the City's Parks and Environment Committee (PEC) at City Hall on January 18. These were in support of making Toronto Islands Toronto's first officially-designated bird sanctuary under the Federal Migratory Birds Act. John Wilson was later interviewed by Gill Deacon on CBC radio. See Anne's report below for the outcome. I believe the deputations presented by Anne and John made a material difference to its success. Both were well-informed, persuasive and delivered with obvious passion.

This brought home to me TFN's potential in making Toronto a nature-friendly city. We have among our members the talent and enthusiasm that, properly organized and harnessed, could make a real difference. Anne Purvis, as chair of the TFN Environment Committee, has already made an impressive start. The on-line petition in support of the Toronto Island Bird Sanctuary effort (<https://www.change.org/p/make-toronto-islands-a-bird-sanctuary-under-the-migratory-birds-act>), launched with Jason Ramsay-Brown's technical assistance, attracted over 4,000 signatories and was mentioned at the City Hall meeting.

Meanwhile, at the adjacent Tommy Thompson Park, the TRCA plans to establish a safe east-west connection between Leslie Street and the Outer Harbour Marina Road as part of the Martin Goodman Trail. This fenced, multi-use trail (minimum width 20 feet) would nibble away a significant slice of the Baselands, an area of great ecological significance. These plans have not yet been finalized. We hope that reason will prevail and a less destructive option will be chosen.

Finally, my thanks to all of you who ventured out on TFN walks on the days of record low temperatures earlier this winter. Steve Smith's outing to Taylor Creek Park on January 6 was the coldest January day on record, but what a great day for those brave enough to join him! It was a morning of brilliant sunshine with not a breath of wind. The park was, not unexpectedly, deserted and serenely peaceful. There were numerous signs of life: fresh deer, coyote, rabbit and mouse tracks everywhere, and red-tailed hawks soaring overhead. Days like that remind me how fortunate I am to be a TFN member.

Charles Bruce-Thompson
president@torontofieldnaturalists.org

ENVIRONMENT ACTION UPDATE

- The TFN petition and Jan 18th Deputations to the Parks and Environment committee to make the Toronto Islands a bird sanctuary under the Migratory Birds Act were successful. TFN got coverage in the Toronto Star, the Metro and on CBC. Toronto City Council passed the following motion on January 31st, by a vote of 34 to 3: *"City Council request the Federal Department of Environment and Climate Change and the Federal Department of Natural Resources to consider the Toronto Islands for designation as a Bird Sanctuary, under the Migratory Birds Act, and the enacting of appropriate regulations for the protection arising from such a designation and to consult with the City of Toronto and Waterfront stakeholders on the request."*
- A very hopeful document about Humber Bay Park called the Strategic Urban Forest Plan was circulated by Anne Powell. It is reassuring that the TRCA and City are prioritizing issues of native species, pollinators and threats of invasive species in Humber Bay Park.
- The Friends of Rouge National Park contacted TFN about support for an initiative to move the proposed Nature Centre to the east side of Meadowvale Rd, adjacent to the zoo parking lot. For more information contact larrynoonan@rogers.com
- Several of our members attended a meeting hosted by the City about a trails concept plan for Lambton Woods. Contact greentoronto@toronto.ca
- On Jan 20th a group of TFN hikers counted 22 off-leash dogs in Taylor Creek Park. Margaret McRae phoned 311 and contacted Councillor Janet Davis, who arranged for a bylaw officer to ticket in the park the following Saturday.

Anne Purvis,
Chair, TFN Environment Committee

MONTHLY MEETING REPORT

What makes a Heritage Tree?

The Case of Toronto's Red Oak.

February 4, 2018

Edith George, Heritage Tree Advocate, and Peter Wynnyczuk, Arborist and Executive Director of the Ontario Urban Forest Council (OUFC)

Edith George has had a lifelong love of trees and is a member of the Ontario Urban Forest Council, founded in 1953. Her specific interest is in their project: the Ontario Heritage Tree Alliance's toolkit for identifying, protecting and preserving Heritage Trees.

In her talk she used as an example the Nicholas' Great Red Oak, weighing it against the criteria set forth in the OUFC toolkit:

- its local rarity within Toronto's Black Oak Savannah is fair (4/5)
- its planet rarity remains fair (4/5)
- its diameter at breast height establishes its age at between 250 to 400 years (5/5)
- its health and integrity are excellent (5/5)
- its appearance is magnificent, majestic (5/5)
- its form is the perfect conformation of a red oak (5/5)

The cultural significance of this tree is national. It is an aboriginal remnant, adjacent to the 4,000-year-old Toronto Carrying Place trail. The acreage belonged to the Gardiner family, whose nearby residence was Rivermede. The Gardiners have made many contributions to Canada in sciences and the arts, earning four separate family members the Order of Canada. After WWII their land was subdivided. Soldier Michael William Nicholas bought the plot for his home because of the tree. His daughter, Arlene, married a Doane (Sharon Temple and the 1837 Rebellion) and remained there, caring for the tree. It was completely undamaged by the ice storms of 1998 and 2013 (5/5). This tree is a genetic survivor of climate change and, as such, is highly valuable.

Peter Wynnyczuk then told of how the devastation of Dutch elm disease in the 1960s also caused devastation amongst foresters, resulting in the establishment of the Ontario Tree Council, later the OUFC. He described the cultural value of groves, such as at Parkwood in Oshawa, and hedges, such as the Osage orange hedge in Caledon. But the tools of individual tree protection were the main thrust of his extremely dense and informative talk.

The highest level of protection is ownership by a land trust, conservation authority or municipality. Easements on title delegated to any of these bodies provide the next best safety net.

The Toronto Ravine and Natural Features bylaw provides protection with jurisdiction shown on the City of Toronto Mapping website: <https://goo.gl/MjAo4M>

The TRCA has jurisdiction related to top of bank and watercourse proximity.

The City of Toronto Single Tree bylaw applies to all trees over 30 cm at breast height administered through Toronto Forestry. Heritage trees listed on the Forest Ontario website have greater recognition through Toronto Forestry under the Tree bylaw.

Part IV of the Ontario Heritage Act allows recognition for a tree that meets one of nine criteria. Planning and zoning bylaws can be enacted to apply to tree protection and recognition. Planning policies can act to mirror the intent of the Tree bylaw.

Edith provided a stirring template for cultural recognition of trees. Peter gave a 'nuts and bolts' picture of the technicalities of tree protection with Provincial, City and Conservation Authority policies and legislation.

Madeleine McDowell

For more information about the Ontario Urban Forest Council visit <http://www.oufc.org>



Nicholas' Great Red Oak in all seasons

TORONTO WILDFLOWERS: LOCALLY RARE WOODLAND MUSTARDS

The Brassicaceae (Cruciferae) or mustard family includes about 340 genera and 3,350 species. Family members are throughout most of the world but are concentrated in the north temperate region. Crop plants include cabbage, cauliflower, broccoli, mustards, radish, rapeseed, turnip and many others. In addition to species used for human consumption, the family provides forage and fodder crops and ornamentals. TFN's *Vascular Plants of Metropolitan Toronto* (1994, 2nd ed.) listed 48 species occurring in Toronto, most introduced but about 12 native. One species was previously discussed in the TFN newsletter (2013 February). A characteristic of the family is having flowers with four sepals and four petals arranged in a cross (cruciform); hence the alternate family name.

Locally rare woodland mustards include *Cardamine douglassii* (purple cress) and *C. pensylvanica* (Pennsylvania bitter-cress). Both species occur in moist forested areas and flower in May or June. *C. douglassii*

grows up to 30cm tall and has terminal racemes of pale purple flowers up to about 20 mm across. It was recorded in Downsview Dell, Smythe Park and Lambton Woods (all Humber watershed). Its full range, according to the U.S. Department of Agriculture (USDA) database, is Ontario and most of the eastern half of the U.S.

C. pensylvanica grows up to 60 cm tall and has flowers only 4 mm wide. To distinguish it from introduced species with small white flowers may require "keying in" with the aid of a good field guide. *C. pensylvanica* was reported by TFN in Lambton Woods (Humber), at Wilket Creek (Don) and in the Rouge valley. Its full range is all of Canada except Nunavut and all of the U.S. except Arizona.

Finding and photographing new occurrences of these two *Cardamine* species is something to report to TFN.

Article and photos by Peter Money



Purple cress (*C. douglassii*)



Pennsylvania bitter-cress (*C. pensylvanica*)

2017 Ontario Nature Conservation Awards

Nomination Deadline: March 26, 2018

Ontario Nature Conservation Awards recognize excellence by honouring individuals, groups, government agencies and corporations who have worked to protect Ontario's nature. Awards are published in the fall issue of ON Nature.

For descriptions of the awards and nominating procedures, see https://www.ontarionature.org/act/conservation_award/index.php or email info@ontarionature.org or phone 416-444-8419

Did you know?

The digital edition of our newsletter allows you to click to visit the websites we mention. No more tediously typing out web addresses! To get yours, make sure the TFN office has your email address.

TFN NATURE IMAGES EVENT

Here is a small sample of images displayed by some of TFN's talented nature photographers at S Walter Stewart Library on Saturday, February 3rd. See also front and back covers and Anne Byzko's photo on page 12.



Margaret McRae shared photos from TFN outings including this beautiful fringed gentian at Taylor Massey Creek.



Martin Chen photographed this praying mantis on a TFN outing at G Ross Lord Park.



Wendy Rothwell's photos of native wildflowers in High Park included this winter image of wild bergamot.



Jim Hoad's presentation included this dramatic photo of tundra swans at Aylmer, Ontario.



Frank Miles' sightings at Carden Plain included this delightful eastern bluebird.



Lynn Miller's theme was "Why I like winter!" This scene was at TFN's Jim Baillie Nature Reserve.



Teresa Moore shared a variety of exciting nature sightings including this baby goldfinch.



Nancy Anderson and Val Singh displayed their creative art – painting and mixed media by Nancy; fretwork and carving by Val.



Among Anne Byzko's duck photos was this image of a wood duck in High Park enhanced by the reflection of fall colours.

TFN SPECIAL PROJECT REPORTS

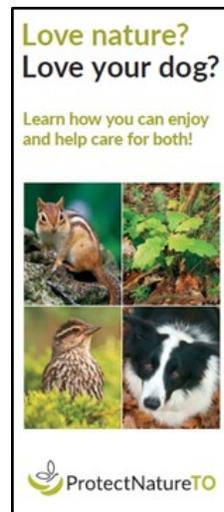
ProtectNatureTO by Sharon Lovett

ProtectNatureTO is an umbrella group advocating protection of wildlife and natural areas across the City of Toronto. Toronto Field Naturalists was a founding member of PNTTO just two years ago. Today 18 nature-based organizations in Toronto are affiliated with PNTTO, all sharing concern for the protection of Toronto’s natural heritage. PNTTO is grateful to TFN for the 2017 Special Project funding that helped us establish a website and create a logo. The website, designed by Charles Iscove and several dedicated volunteers, will help us to communicate more effectively with City of Toronto staff, councillors, other organizations and the public. The website (<https://www.protectnatureto.org>) presents our vision for a green sustainable city where natural places and the wildlife that depend on these habitats are protected and managed responsibly for the long term.

The website provides information on Toronto’s biodiversity and the threats it faces, including those from invasive species and disturbance from off-trail people, dogs and bikes. It also provides links to background information and documents related to these issues. The

website gives an overview of legal protections for wildlife at the municipal, provincial and federal levels. To be effective this legal framework needs to be supported by careful planning and management, public education and meaningful enforcement.

We hope the “What You Can Do” feature will help create a “culture of compliance” and promote responsible use of our natural areas. Our newly revised brochure on how to practise low-impact dog walking, *Love nature/Love your dog*, may be downloaded from the website.



Surveying for Moths in High Park by Richard Aaron, High Park Moth Study

The High Park Moth Study was started in May 2016 by a group of earnest volunteers interested in documenting the abundance and diversity of moth species in High Park.

The funding we received last year from Toronto Field Naturalists allowed us to greatly expand the scope of the study. A portion was used to acquire equipment that enabled us to survey habitats remote from electrical outlets. This included low-wattage ultraviolet lights, rechargeable batteries, battery chargers, specially-designed free-standing sheets and a sturdy wagon. We were also able to purchase custom-built light traps, powerful mercury-vapour bulbs, hundreds of feet of

extension cord, cord reels and timers. When employed, the light traps are connected to an electrical outlet at dusk and allowed to run all night. The following morning, all moths nestled within the traps are identified, recorded and released unharmed.

Our 2017 season ran from April to October, for a total of 30 survey sessions. Thanks in large part to our new equipment, we were able to add 138 new species to the High Park moth list, bringing the current total to 764. One of the study's long-term goals is to record 1,000 species for High Park. To this end, the equipment acquired with the help of TFN will continue to be put to good use for years to come. As one by-product of this study, several of our members have conducted moth nights for other groups and contributed to bioblitzes, thus helping to foster an appreciation for this under-appreciated group of organisms.

TREE OF THE MONTH: KENTUCKY COFFEE-TREE, PART II

Kentucky coffee-tree (KCT), *Gymnocladus dioica*, bears our best example of a bipinnate leaf, analogous to taking a pinnate leaf like that of an ash, hickory or black locust and replacing each leaflet with a whole pinnate leaf. If you draw a line around the tips of the outer leaflets of one of these leaves, you will have encircled an area larger by far than that of any other native tree leaf. Even just the total surface area of the numerous individual leaflets of a single leaf also exceeds the leaf area of any other native tree, despite the underwhelming dimensions of each leaflet. These impressive leaves have been likened to “throwaway branches” blocking a great deal of sky and intercepting its sunlight with a minimum investment in wood, though they require very stout twigs to support them.

The rapid growth promoted by the wide-spreading leaves is somewhat remarkable given that KCT has one of the shortest growing seasons among all our trees. The buds swell, followed by the expanding leaves, at the tail end of the spring awakening, contributing strongly to a weak statistical and biological association between compound leaves and retarded phenology. At the other end of the growing season, KCT’s leaflets are among the first to yellow (beautifully) and then drop in the autumn, followed fairly quickly by the slender secondary rachises on which they were borne, but not by the petioles and their extensions in the primary rachises. These, reinforcing their throwaway branch designation, initially cling stiffly to the tree in a thin spreading halo before gradually releasing through the autumn and winter, the last ones brought down finally in late winter snowfalls. Their cumulation covers the lawn or other ground with a thin, interwoven mat of half-metre whips that are tricky

to rake and, despite their thin texture, highly resistant to decay. Planter beware.

The winter outline resulting from KCT’s coarse twigs is especially gaunt, an unmistakable sparse canopy of thumb-sized (or larger) branchlets. In female trees, these are accompanied by the dark brown flags of the pods, borne straight out from the tips of the twigs and later contributing another decorative element to the winter lawn. The male inflorescences are also terminal. Just as in the females with their fruits, each year the tips of the twigs die. Growth the following year is resumed by a nearby lateral bud, resulting in the obviously crooked twigs of sympodial growth in which there is no straight-line continuity of shoots from year to year. The twigs are also unusual in having a wide rich reddish brown pith rather than the commonplace white. Surprisingly for such coarse twigs, the buds are tiny, little domes sunken in silky pits and stacked above one another in superposed pairs or trios rather than as the more common single axillary bud.

The bark begins to roughen earlier than in most trees, ultimately becoming light grey and fairly finely ridged and furrowed, with weakly interlacing, interrupted ridges between shallow narrow furrows. This is how it looks in the splendid old specimen south of the Ontario Legislature just outside the northeast entrance to Queen’s Park subway station. To me, however, the bark is at its most handsome in younger adult trees, perhaps 10-30 cm in diameter. At this stage, the bark opens in side-attached long strips, somewhat like those of sugar maple but much thinner and contributing to the rich array of green, yellow, chestnut and grey areas associated with exuberant bark development.

Overall, despite a few quirks, Kentucky coffee-tree makes a fine and handsome addition to our streetscape that also abounds in biologically instructive features.

James Eckenwalder



Bipinnate leaves of Kentucky coffee-tree, Allan Gardens, Sept 2016.

Photo: Ron Dengler.

Bark of young Kentucky coffee-tree.

Photo: James Eckenwalder

CHILDREN'S CORNER

Winter Survival of Extreme Sleepers

Try it for yourself!

1. Curling Up while Asleep

What you need: Two towels the same size, a large elastic band, a clothes dryer and a chair.

1) Put the towels into a clothes dryer at high heat for five minutes.

2) Roll the first towel lengthwise into a noodle, coil it into a spiral shape and secure it with the elastic. Hang the other towel over the chair. Wait for five minutes.

3) Feel the towel hanging over the chair. Uncoil the other towel, shake it out and feel it too.



Which towel is warmer? Why do you think sleeping animals curl up?

You could repeat this experiment putting the rolled up towel into a box. Is it any warmer?

Why do you think animals find a hole to sleep in?

2. Blood Anti-freeze

What you need: two jars the same size, water and maple syrup.

Half-fill one jar with water and half-fill the other with maple syrup. Put them in the freezer overnight.

In the morning, which is frozen; which is still liquid?



How could an animal's blood be kept from freezing when it gets very cold in winter?

For explanations, see page 15.

By Anne Purvis

Reference: *Animals Hibernating*, Pamela Hickman, Kids Can Press, 2005.

Attention Junior Naturalists! Visit TFN online (<http://www.torontofieldnaturalists.org/kids/>) to view fascinating nature videos, download brain teasers, print nature scavenger hunt sheets, and get inspired to explore nature in our city.

Teens: Apply for the 2018 Young Ornithologists Workshop!

This workshop at Long Point Bird Observatory near Port Rowan, August 4-13, provides hands-on training in field ornithology. Activities include bird monitoring and banding, birding trips, and hands-on natural history and scientific activities. Six of Canada's most promising ornithologists between the ages of 13-17 will be selected to attend and receive the Doug Tarry Bird Study Award to cover on-site expenses. **Applications are due April 30.**

For information see <https://goo.gl/SCieeB> or email lpbo@birdscanada.org.

EXTRACTS FROM OUTINGS LEADERS' REPORTS

Christmas Bird Count for Kids, Jan 6. Leaders: Anne Purvis and Bob Kortright. We met at the Church of the Resurrection and played a game simulating a bird-watching expedition. The kids searched for pictures of birds we might see on the walk and ticked off on a checklist if they knew the bird. If not, they could search the name at an information station. We drove to the foot bridge/viewing station west of Leslie Street Spit where hundreds of waterfowl had gathered in a patch of open water. We saw redheads, buffleheads, an American coot, hooded mergansers, a lesser scaup, goldeneye, a black duck, gadwall and mallards. A cardinal flew by. The kids found a mallard head and realized how dangerous it was for the birds to be restricted to such a tiny unfrozen patch of water. Back at the Purvises we enjoyed good fellowship and a chili lunch, and viewed Anne's collection of bird skins and wings. A wonderful day!



Male hooded merganser. Photo: Anne Byzko

Twigs, Tracks and Winter Weeds, Taylor Creek and East Don, Jan 13. Leader: Anne Purvis. Starting at Cullen Bryant Park, we looked at tree and shrub twigs: sycamore, white pine, white spruce, cottonwood saplings, oak, and basswood with its bright red buds. Among the shrubs we noted sumac, elderberry, and red osier and gray dogwood. In the creek valley there were lots of mouse and rabbit tracks. We also saw Joe-pye-weed, long-headed anemone, goldenrod and vervain shedding their seeds. We found a round goldenrod gall that had been drilled by a woodpecker. On the north side of the creek, we saw wild parsnip, motherwort and lots of Japanese knotweed in fruit. After passing under the parkway, the winter stalks of field flowers predominated – chicory, evening primrose, mullein, cinquefoil, tansy, teasel and Jerusalem artichoke. The pathway was lined with alder covered with tiny seed-bearing cones. We identified a catalpa and a walnut tree. Huge chunks of ice, which had been carried down-stream by the swollen river, had scraped bark off the exposed roots and lower trunks of trees on the opposite bank. The revealed wood was glistening orange in the sun. A red-tailed hawk soared above and we heard chickadees calling.

Earl Bales Park, Jan 16. Leader: Peter Heinz. Seven participants with the Deaf-Blind Adventurers enjoyed a two-hour walk of the upper level of the park beginning at the ski chalet. We experienced the feel of the chair lift and sounds of children skiing. The walk along the path overlooking the new storm water ponds gave us a chance to discuss the value of connected greenspace through an urban setting. We felt the names engraved on the Holocaust Memorial and reflected on people less fortunate than ourselves. The participants had varying degrees of vision and hearing loss and each had an intervenor to provide them with the visual and auditory information for our surroundings. It was a good feeling to share with others what we so often take for granted, and I look forward to doing it again.

Winter Birding, Taylor Massey Creek, Jan 20. Leader: Glen Hamilton. At the wetland pond we observed some white-breasted nuthatches and a few chickadees. A red-tailed hawk was spotted flying down the creek and another was heard. There were numerous robins about, some already into their spring calls. A male downy woodpecker was busily pecking away at various insects and we heard what might have been a group of common redpolls along the hydro corridor. Off-leash dogs far outnumbered the species counted but it was a very pleasant outing on a warm January thaw day.

Lower Don Trail, Jan 25. Leader: Vivienne Denton. On a bright sunny winter day we passed a number of Task Force to Bring Back the Don plantings from the 1990s including woodland and wetland plantings in Riverdale Park and Chester Springs Marsh on the Don Trail. We were interested to see how they had variously fared over the past 25 years, and also noted recent improvements, plantings and art installations on the trail. Waterfowl sightings included three common mergansers, a red-breasted merganser and mallards. A red-tailed hawk flew from its perch on a hydro pylon, and we saw chickadees, two downy woodpeckers, goldfinches, a starling and numerous robins, some feeding on sumac berries.



Lower Don in winter. Photo: Vivienne Denton

WEATHER (THIS TIME LAST YEAR)

March 2017

The fever that had prevailed most of the past year finally broke and, from March 10-15, Toronto experienced the most marked colder-than-normal spell since April 2016. This was occasioned by a big blob of bitterly cold air that was finally able to accumulate in the Arctic in the first part of the month after a winter of freakish warmth there. It gradually worked its way south and eastward bringing sporadic record low temperatures from the Arctic islands to northern Florida. Mould Bay in the Canadian Arctic bottomed out at an incredible -54.7° on March 4th – an all-time record low recorded for this location. By the 16th, Jacksonville, Florida reported a minimum record for the date of -2.2° . In between, Toronto was affected by the open Great Lakes and had no snow on the ground from the mild earlier winter. A sharp 6-day cold spell was far from record-breaking. We also barely got the edge of the massive snow storm that hit the East Coast from the 13th to the 15th.

As a result, March was cold: the first colder-than-normal month in Toronto since the previous April. The monthly mean temperature of -0.5° at Pearson Airport and $+0.3^{\circ}$ downtown was below that of February and about 1° below normal. The minimum temperature of -12.5° downtown on the 11th-12th was the coldest reading of the winter, though as cold waves go, it was relatively feeble. Unlike the East Coast, we did not get much snow. The storm of the 14th-15th brought barely 3 cm, although

there was blowing snow with high winds. Monthly snowfall totals were just 3.2 cm downtown and 6.8 cm at Pearson Airport. We got a lot more rain, so total precipitation of around 70 mm was about 15 mm above normal.

Winter 2016-2017

This winter was a mild but fairly long one, with cold and snow arriving in early December. In spite of some spectacular interruptions, there was winter weather well into March and even a bit of snow in early April (not unusual). Because December and March were near to or slightly colder than normal, the winter averages were just 2° or so above normal and not record-breaking. Downtown had an average of 0.1° for December to February and 1.6° for November to March. So it was about a degree colder than 2016, mostly because of the difference in December. Total seasonal snowfall (covering the period into early April) was well-below normal with 65.2 cm downtown and 82.7 cm at Pearson Airport, but far from record-low. This was because of above-normal snow in December and only slightly below-normal snow in February. But only mid-December to the beginning of January had snow cover that lasted more than a couple of days. Once one got north to cottage country, however, the snow pack from December persisted into late March.

Gavin Miller

Q&A: ICE CRYSTALS

Question: *This morning I was admiring the amazingly beautiful ice formations on my window. Then I began to wonder: Why do they form patterns that look like ferns or feathery?*

Wendy Rothwell



Answer: Frost forms on glass that is below the frost point of the air next to it. (Higher humidity and/or higher temperature allows condensation before freezing into a coating of ice.) The water vapour molecules can deposit (desublime) either directly onto the glass or onto dust or ice crystals already on the glass. Streaks or scratches in the glass act as nucleation sites for initial ice crystals to form.

The ice crystals are then preferred sites for additional water vapour to be deposited, causing them to grow in a manner similar to that of a snowflake, but in two dimensions. So usually the crystals grow in spikes oriented at 60 degrees from the scratch that formed the initial crystals – hence the shape of a feather or fern.

Ice crystals on glass can grow much bigger than a snowflake because they are static, not jostled and broken as snowflakes are.

Bob Kortright

IN THE NEWS

Whitby is now a “Bee City”

Whitby has been declared a “Bee City” by Bee City Canada. It is the 10th Bee City in Canada; Toronto also has this designation. A Bee City is one that officially adopts the Bee City Canada Resolution, which includes protecting pollinators and their habitat through action and education. Whitby’s plans include planting pollinator-friendly gardens in new and existing parks, promoting awareness during International Pollinator Week, and creating a recognition award for private property owners who install pollinator gardens. Bee City Canada: www.beecitycanada.org
News article: <https://goo.gl/Gx3qQv>



Young deer. Drawing by Eva Davis

Too much road salt

Real-time tracking of water quality has allowed researchers to better understand how road salt is affecting waterways, and it’s not good news. Credit River salt levels, after road salting episodes, have reached or exceeded ocean levels.

In urban areas the waterways continue to stay above safe levels even after spring runoff due to salt accumulation in the soil and groundwater. Large bodies of water are affected too. Lake Simcoe’s salt level has increased fivefold since the 1970’s. High salt levels can kill sensitive species and suffocate fish. Information: <https://goo.gl/orpEL4>

Deer poaching in the GTA

Evidence of a deer being killed and removed from Lynde Shores Conservation Area has prompted an investigation into the incident. Hunting is illegal in GTA conservation areas and for good reason. This law not only protects the animals that live there, but also the hikers, photographers and other nature lovers that visit the area. Poaching is a contemptible act, reviled by both conservationists and legitimate hunters. Information: <https://goo.gl/S5j1GP>

Lynn Miller

COMING EVENTS

If you plan to attend any of these events, we recommend that you contact the organizing group beforehand to confirm time and place.

Jim Baillie Memorial Bird Walks – Toronto Ornithological Club (www.torontobirding.ca)

Aimed at the intermediate birder, but beginners also welcome. Free to the public. Sun, Mar 4, 9 am to late afternoon. Toronto to Burlington Lakeshore – waterfowl, geese, swans. Leaders: Garth Riley and Kai Millyard. Meet at the Humber Bay East parking lot (south of Lake Shore Blvd W at Park Lawn Rd). We will drive between hotspots (carpooling available).

Toronto Entomologists’ Association (www.ontarioinsects.org)

Sat, Mar 24, 1-3 pm. Student Symposium. Room 432, Ramsay Wright Bldg, U of T (25 Harbord St). Graduate students, senior undergraduates and postdoctoral fellows will present talks and posters.

ROM Wildlife Photographer of the Year 2017 (www.rom.on.ca/en/wpy)

To March 18. The exhibition showcases category finalists and winners of the competition through 100 breathtaking photographs.

Cultural Heritage Landscapes : A revisiting of 20th century landscapes through the paintings of Clara Harris

Sat Apr 7. Historic Lambton House, 4066 Old Dundas St. Doors open 12 noon. Panel Discussion 2-4 pm. Victoria Lister Carley, Landscape Architect and Pleasance Crawford, Landscape Design Historian. Free admission. Tea and coffee provided. TTC: #55 Warren Park bus from Jane subway station. Information: Madeleine McDowell at 416-767-7633.

Nature Sketch Club – Robert Bateman Foundation (www.naturesketch.org)

April to June. Instructor: Alan Li. Classes children (9 sessions \$200) and adults (3 sessions \$71). For more information, email info@naturesketch.org

KEEPING IN TOUCH

I am excited to have received my first newsletter from TFN. I recently took this photo of a red-breasted nuthatch at Hilton Falls in Campbellville. Hoping to attend my first TFN event soon!

Katherine Cheng



I recently had a very nice visit with Eva Davis in Brampton. She is 98 years young and talked a lot about TFN hikes, newsletters and helping with the newsletter.

Karin Fawthrop

Ed. Eva was a long-time and prolific contributor of nature writing and artwork to the newsletter. She served on the editorial committee for many years.



Diana Karrandjas sent us this thought-provoking poem with her membership renewal.

Most Intelligent Species!

“We are the Greatest!” was their refrain.
 “Just look at the size of our marvellous brain!
 We have split the atom and conquered disease,
 Cloned a human and oil-rigged the seas.”

“Yes, we are so smart that we know it all.
 We can humanize pigs and grow a cow tall.
 We can calculate distance in faraway space,
 Conquer the stars from an orbiting base.”

“Some of that’s true and some of it’s not,”
 Thought the all-knowing watcher, “but look what they got.”
 “They poisoned their water and poisoned their air.
 They stripped their protection from UV’s bright glare.”

“They once had it all, but they didn’t take care.
 They plundered and pillaged, and that wasn’t fair.
 Wasn’t fair to the ‘others’ who tried to exist.
 Considered as ‘dumb,’ they were struck from the list.”

But nature is nature and will have her way.
 She’s not just cute puppies and lambs in the hay.
 She is typhoon, tornado and virus and germ.
 She is syphilis, earthquake, iceberg and worm.

They had wiped out the ‘others’ and razed all the trees.
 They thought they could rule the planet with ease
 But that takes a smart one, far smarter than they,
 And what challenges nature will soon fade away.

Diana Karrandjas © 2002

FOR READING

The Plant Messiah: Adventures in search of the world’s rarest species

by Carlos Magdalena, 2017

The author, who was born in Spain, is employed by Kew Gardens in London, England. His work includes traveling to many parts of the world to help with restoration programs. This book contains a strong conservation message plus lots of excitement as he helps propagate the last individuals of various species. Travels to Peru and Australia and searches for new water-lily species make the book difficult to put down. Happy reading!

Helen Juhola

Explanations from page 11

- 1: The coiled towel stayed warmer because less of the surface area was exposed to the cool air. Animals sleep in a tight ball to prevent heat loss.
- 2: Animals such as frogs almost freeze solid in the mud in winter. Their liver produces a sugar called glucose which enters their blood and stops it from freezing.

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Female snapping turtle covering her eggs. Photo by Frank Miles