

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 2564



The Regional Municipality of Durham Information Report

From: Commissioner of Planning and Economic Development
Report: #2024-INFO-67
Date: October 25, 2024

Subject:

Durham Environment and Climate Advisory Committee's Nomination for the Lake Simcoe Conservation Authority (LSRCA) Conservation Awards, File A01-37

Recommendation:

Receive for information.

Report:

1. Purpose

1.1 The purpose of this report is to provide an update on the Durham Environment and Climate Advisory Committee's (DECAC) nomination for the Lake Simcoe Region Conservation Authority (LSRCA) Conservation Awards, and that DECAC member, Geoff Carpentier, was the recipient of the George R. Richardson Award of Honour in 2024.

2. Background

2.1 In June 2022, the committee submitted a nomination to the Lake Simcoe Region Conservation Authority (LSRCA) Conservation Awards, supporting its member, Geoff Carpentier, for the George R. Richardson Award of Honour. This award is presented to one recipient each year to recognize lifetime environmental achievement. DECAC's submission was brought forward to the 2024 round of nominations.

- 2.2 The LSRCA Conservation Awards aim to recognize individuals, groups, and businesses for environmental protection and conservation efforts in the Lake Simcoe Watershed. The program has five award categories, including: Healthy Water, Healthy Land, Healthy Community, the Ernie Crossland Young Conservationist Award, and the George R. Richardson Award of Honour.
- 2.3 The role of DECAC is to provide advice to the Region on environmental and climate-related matters. The Committee also has a role in implementing and participating in community outreach programs and stewardship that support environmental awareness and appreciation, as outlined in the 2024 DECAC Workplan.

3. Previous Reports and Decisions

- 3.1 In January 2024, Council considered DECAC's 2023 Annual Report, 2024 Workplan and Terms of Reference through Report #[2024-P-2](#).

4. Lake Simcoe Conservation Authority (LSRCA) Conservation Awards

- 4.1 On October 8, 2024, the LSRCA held its Annual Conservation Awards Ceremony, where it announced the 2024 award recipients. DECAC member, Geoff Carpentier, was the recipient of its most prestigious award, the George R. Richardson Award of Honour.
- 4.2 Mr. Carpentier has dedicated over 50 years of his professional and personal life to environmental conservation, including a successful career with the Ministry of Environment overseeing safe pesticide use and environmental protection, teaching a number of environmental courses at various institutions, and publishing several books and articles in periodicals. Since retiring, he continues his dedication to the environment by running his own environmental consulting company. He is an international nature guide, photographer, and lecturer for various institutions, and continues environmental education through regular contributions in newspapers, journals, and magazines. He also sits on a number of environmental boards and is a member of local environmental organizations and advisory committees including DECAC. His projects and accomplishments are summarized in Attachment 1.
- 4.3 A [video](#) dedicated to Mr. Carpentier was prepared by the LSRCA and presented at the Awards Ceremony. The video features members of DECAC highlighting his achievements and contributions to the environment.

4.4 The LSRCA Conservation Awards occur annually, celebrating the awards recipients, referred to as “Watershed Heroes”, with members of the community, elected officials, and environmental leaders from around the Lake Simcoe Watershed. By celebrating environmental success stories, the LSRCA aims to inspire others to conserve and protect Lake Simcoe and its watershed.

5. Relationship to Strategic Plan

5.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:

- a. Goal 1: Environmental Sustainability’s objective: To protect the environment for the future by demonstrating leadership in sustainability and addressing climate change.

6. Conclusion

6.1 DECAC is pleased that its nomination was successful in the 2024 round of the LSRCA Conservation Awards and congratulates Mr. Carpentier for his achievements and dedication to environmental conservation.

6.2 Information on all awards recipients in the other categories is available on the [LSRCA Conservation Awards webpage](#).

6.3 DECAC member Keiko Lui is commended for volunteering her time to prepare the nomination package. Additionally, DECAC Chair, Jay Cuthbertson, and members Keiko Lui, Ozair Chaudhry, and Bryan Widner are thanked for their involvement in the event, including participating in the filming of the award video and attending the event on behalf DECAC.

7. Attachments

Attachment 1: LSRCA Conservation Awards Nomination Package

Respectfully submitted,

Original signed by

Brian Bridgeman, MCIP, RPP, PLE
Commissioner of Planning and
Economic Development

Dear Lake Simcoe Region Conservation Authority Conservation Award committee:

On behalf of The Durham Environmental Advisory Committee, it is our great pleasure to nominate Geoff Carpentier for the George R. Richardson Award of Honour. Please accept for consideration our nomination package for the 2022 LSRCA Conservation Awards.

After considering the various awards you offer, we feel that Geoff is most deserving of being recognized for a lifetime of environmental achievement as his ongoing actions and initiatives have had a long-lasting and positive impact on Lake Simcoe's watershed health and quality.

For over 45 years, Geoff has carried out many different conservation focused projects such as loon surveys, waterfowl surveys, shorebird surveys, upland game bird surveys, Christmas Bird Counts and breeding bird studies – all of which have included in part LSRCA lands.

Since 2005 (17 years), Geoff has been an active contributor to Cornell's eBird project for more than 75 sites within LSRCA boundaries. Geoff contributes bird sightings data, trip summaries, photos and sound recordings, and has become a regional reviewer for eBird and is responsible for validating sightings of rare or unusual species. eBird *“transforms your bird sightings into science and conservation....with real-time data about bird distribution and abundance”*. The data is used by academia to develop protocols to enhance and protect the environment.

Professionally, Geoff worked at the Ontario Ministry of the Environment (MOE, or now MOECP) for 35 years, working in York, Durham, Kawartha Lakes, and Simcoe Counties in all field facets to protect the environment. When he oversaw the pesticides program in these areas, at a time when they were most widely used, he ensured the public and industry was educated in the safe and proper use of pesticides, and oversaw investigations into possible harm caused to the environment due to pesticide misuse. Later, Geoff oversaw other protective provincial programs to develop regulations and best management practices to protect species at risk and other species not already protected by legislation; he also oversaw the MOE programs to assess and approve various industries, processes and landfills to ensure environmental protection (air, water, sewage, waste) were in place. Many of the facilities and processes were located on LSRCA lands.

Personally, Geoff has lived in the Lake Simcoe watershed for over a decade where he and his wife manage their 1.5 acre property as an eco-friendly site. It is home to a registered 200-year-old Heritage Tree, a small meadow and pollinator garden of native plants, and a pond that supports many breeding herptiles and insects. He builds nest enclosures for turtles which frequently nest in their yard and has 8 bird boxes and a bat box onsite. He is currently developing a second meadow and has encouraged several of his neighbours to do likewise

Since retiring from public service, Geoff has become an environmental consultant undertaking many projects related to breeding bird studies, many of which are in LSRCA boundaries; he has also become a professional guide leading tours that include LSRCA lands and frequently speaks to nature-focused and community associations about nature and how to protect it.

In addition to his post-retirement career, Geoff is consistently actively engaged in his community, sharing knowledge and information through articles, and nature talks and walks. Geoff does two litter cleanup routes within LSRCA boundaries, and he is part of his Church's (located within LSRCA boundaries) Green Team.

For the past 10 years, since 2012, Geoff has contributed as a writer to The Scugog and Uxbridge Standard Newspaper's bi-weekly nature column; as well, he has been editor and writer for the North Durham Nature Newsletter (based in LSRCA boundaries) since 2013, dealing with all aspects of natural history, including several site-specific articles about places and wildlife in the LSRCA watershed. Not only is he editor and writer for that newsletter, but Geoff is also a founding member of The North Durham Nature Club and served as a director on its Board of Directors from 2013 to 2018.

In 2015, Geoff was appointed by Council to the Scugog Environmental Advisory Committee (SEAC, jurisdiction includes LSRCA lands) where he continues to serve as a member and as a Chair for at least 4 of the seven years.

Before that, in 2012, Geoff was appointed the Durham Environmental Advisory Committee (DEAC, jurisdiction includes LSRCA lands), and has served as its Chair for the past 4 years to this day. Although outside LSRCA lands Geoff was also Chair and member of the Ajax Environmental advisory Committee.

Geoff's demonstrated commitment, dedication, and passion for protecting and conserving the environment for future generations, and the profound impact he has had on the Lake Simcoe Watershed throughout his many projects and initiatives, deems him the most deserving recipient of the George R. Richardson Award of Honour.

Should you have any questions or require further information, please do not hesitate to contact Aneesah Luqman, DEAC Staff Liaison, at Aneesah.Luqman@durham.ca or 905-668-4113 ext. 2546.

Sincerely,

The Durham Environmental Advisory Committee

Biographical Outline

Geoff is a specialist and expert on birds and mammals, with a particular interest in local nesting and migrating birds in the Kawarthas and nearby areas including Durham Region and the Lake Simcoe Watershed. While ornithology is his primary interest, he is well versed in all aspects of Ontario's flora and fauna and has more than 50 years of experience in the field.

Geoff has dedicated his professional and personal life to environmental conservation. During his career with the Ministry of the Environment (now MOECP), Geoff oversaw a myriad of programs that included proper pesticide use, species at risk, and various facets of environmental protection. He also taught a number of courses at various post-secondary institutions on environmental topics, including environmental protection and pesticides and their impacts on birds and other wildlife, as well as on bird watching. Geoff is a published author of several books, and is a regular author and editor of a number of ongoing publications (see list under Honours section of this nomination package).

Since retiring, he has continued to dedicate his time to preserve and protect the environment, and manages his own consulting company that specializes in environmental site assessments, breeding bird studies, and species at risk. He is also an international nature guide, photographer and lecturer for various organizations, and continues his work on environmental education through regular contributions in various newspapers, journals, and magazines. Geoff also sits on a number of boards, a member of local environmental organizations, and sits on various municipal committees that work within the Lake Simcoe Watershed or within the LSRCA jurisdiction, including the Durham Environmental Advisory Committee where he is currently the chair for the fourth consecutive year.

For a detailed list of projects and accomplishments, please see the "Details (Letter of Support)" and "Honours" sections of this nomination package.

Honours

Related Work Experience:

2005 to present: International nature guide, photographer and lecturer for:

Avocet Nature Services [Australia, New Zealand, India, Nepal, Belize, Guatemala, Venezuela, Bolivia, Brazil, Argentina, Chile, Mexico, USA, Canada]
Peregrine Adventures [Antarctica, Falklands, South Georgia, Iceland, Spitsbergen & Greenland]
Clipper Cruises [Alaska & Russia, Antarctica, Falklands, South Georgia]
Quark Expeditions [Antarctica, Falklands, South Georgia]
Quest Nature Tours [Taiwan, Cuba, Borneo, Galapagos]
Nature Colombia [Colombia]
One Ocean [Canada's Northwest Passage, Antarctica, Costa Rico, Panama, Mexico]
Ontario Field Ornithologists [Canada]
Toronto Ornithological Club [Canada]
Pickering Naturalists [Canada]
Federation of Ontario Naturalists [Canada]
Trent University & Parks Canada [Canada]

2006 to present: owner and principal of consulting company *Avocet Nature Services*. Specializations include: environmental site assessments; breeding bird studies, site characterization studies, and impact studies at solar and wind farms with a focus on avian breeding birds and Species at Risk (Ontario).

1973-2006: Ontario Ministry of the Environment - District Manager and Special Projects Coordinator. Held multiple positions with focuses on all aspects of Ontario's environment and its protection. Roles included biologist, pesticides specialist (managing impacts in part on avian species in agricultural, rural and urban centres) and manager working in the fields of environmental policy and legislation, hazardous contaminants, waste management, air and water pollution, compliance, inspection, approvals and strategic planning.

1970: Canadian Wildlife Service – Interpreter and Naturalist – Parks Canada. Conducted numerous avian surveys (e.g. upland game birds and migratory bird studies) and taught park visitors about birds and mammals on guided walks and during interpretive talks and ran youth interpretive program.

Education:

B.Sc. (Hons) – University of Guelph – zoology and biological sciences, including ornithology, botany, ichthyology and entomology. 1969-73

Teaching Experience:

1995-97 - Georgian College, Orillia. Taught courses in environmental protection and pesticides including impacts on birds and other wildlife

1987-99 - Sir Sandford Fleming College (Peterborough, Cobourg and Lindsay campuses). Taught courses in environmental protection and pesticides

including impacts on birds and other wildlife

1970-80s - Trent University & Peterborough County Board of Education – taught courses in bird watching

Publications (selected):

Antarctica – First Journey, Geoffrey Carpentier, 2009. Hidden Brook Press, Brighton, Ontario (357 pages)
The Mammals of Peterborough County, Geoff Carpentier, 1987. Orchid Press, Peterborough, Ontario (125 pages)
Pesticides Manuals - IPM and Aquatic Vegetation Control, G. Carpentier, 2010. Queen's Printer, Ontario (287 pages)

Author and/or Editor:

North Durham Nature Newsletter – editor and author (2013-present)
Orchid – (Newsletter of the Peterborough Field Naturalists – editor and author (1975-86 approx.)
OFO News (Newsletter of the Ontario Field Ornithologists) – editor and author (1985-1993) and Editorial Team & Book Review Editor (2012 - present)

Contributing Author for:

The Atlas of Breeding Birds of Ontario - contributing author
Birdfinding Guide to Canada - contributing author
Ontario Birding News – contributing author & book reviews
Bird Watcher's Digest - contributing author & book reviews
Ontario Birds - contributing author & book reviews
Canadian Field Naturalists - contributing author & book reviews
Birder's Journal – contributing author & book reviews
Toronto Field Naturalists Newsletter - contributing author & book reviews
Ontario Birding News - contributing author & book reviews
Pickering Field Naturalists Newsletter - contributing author & book reviews
Durham Region Field Naturalists Newsletter - contributing author & book reviews
Aquatic Plant Management Society Journal (USA) – contributing author
Birds of Nunavut – contributing author

Newspaper and Magazine Columns:

Angler and Hunter - contributing columnist – birds and mammals
After Fifty - weekly newspaper column – birds and nature
The Scugog and Uxbridge Standard newspaper – bi-weekly nature column (2012-present)

Board Memberships - Current and Past:

Ontario Field Ornithologists - President 3 times, Board of Directors for 11 years, founding member and Newsletter Editorial Team
Peterborough Field Naturalists - President 3 times and Board of Directors for 14 yrs.
Federation of Ontario Naturalists/Ontario Nature - Board of Directors for 3 terms
Bird Studies Canada – Chair and Trustee for 5 terms, Board of Directors for 3 terms
North Durham Nature Club - Board of Directors, Newsletter Editor and founding member (ongoing)
Toronto Ornithological Club – Board of Directors

Other Organizations – Ongoing Commitments:

Scugog Lake Stewards – resource
Lakeridge Citizens for Clean Water - resource
Pickering Naturalists - member in good standing
Audubon Cooperative Sanctuary System of Canada (ACSSC) - advisory committee

Municipal and nature-focused activities:

Ajax Environmental Advisory Committee (chair) – 4 terms
Durham Region Environmental Advisory Committee (chair) – 3 terms (ongoing)
Greenbank Public Liaison Committee – citizen member

Citizen Science projects (selected):

Loon Watch & Marsh Monitoring projects - Bird Studies Canada (BSC)
Ontario Breeding Bird Atlas (Regional Coordinator) – 2 projects (1981-1985 and 2001-2005)
Gallinaceous Gamebird Surveys – Canadian Wildlife Service (CWS)
Shorebird Surveys for Canadian Wildlife Service (CWS) in southern Ontario and James/Hudson Bay
Atlas of Nearctic Shorebirds – data contributor
Egret and Cormorant Breeding Surveys - CWS
Waterfowl surveys – CWS and MNR

Citizen Science projects (selected) - continued:

Hawk Monitoring for Hawk Monitoring Association of North America - Hawk Mountain, Beamer and Cranberry Hawk Watches
Ontario Coordinator for the Great Backyard Bird Count – BSC
Ontario Nest Records Scheme - contributor for 35 years
Ontario Bird Records Committee - contributor for 25+ years
Goose Banding Project - Hudson Bay Lowlands in cooperation with Ohio Dept. of Natural Resources
Hudson Bay Lowlands Habitat Assessment Study (MNR)

Baillie Bird-a-thon fundraiser - participant - 30+ years - twice proclaimed Celebrity
Birder for Ontario Field Ornithologists
Loggerhead Marsh Survey for MNR - coordinator
Rare Breeding Program (Ontario) – BSC
Owl Breeding Survey (Ontario) – MNR

Geoff Carpentier

LSRCA Award Nomination

Attachment 1 – Photos

(Photos can be made available in other formats upon request (e.g. JPEG, PNG, etc.) – please contact Aneesah.Luqman@durham.ca)



Geoff Carpentier, head shot



Geoff leading a North Durham Nature walk

Geoff Carpentier

Example 1: Counting Nesting Birds, Walk Softly, April 2021

Example 2: Heritage Trees, Walk Softly, February 2020

Example 3: 10 Fun Ways to Help You (and Kids) Love Winter, January 2018

Example 4: North Durham Nature Newsletter, Volume 7, No. 2, Co-written and edited by Geoff Carpentier

Walk Softly Counting Nesting Birds

GEOFF CARPENTIER



Every spring, I get excited as the birds start to return to Ontario from South and Central America. Life is emerging everywhere!

Even though nature sometimes seems to conspire against them with cold snaps following sunny days, birds persist. Fire, rain, wind, predators, agricultural and industrial activities, cars, cats and inadvertent human disturbance all work to thwart this important annual breeding cycle. But they must breed, and they will, if they didn't breed every year; there obviously wouldn't be any birds!

Studying the breeding behaviour, successes and failures of nesting species is an important activity because scientists can determine the health of the environment, both here and on their wintering grounds.

This year was the start of the 3rd Ontario Breeding Bird Atlas, and it will run until 2025. Wait a minute, what is an atlas? I thought that was a book of maps? Well, it sort of is, but in this context, an atlas is a form of 'mapping breeding success' over a period of time, following set protocols, where birds are the subject of interest.

This is an incredibly intensive breeding bird survey which will involve thousands of volunteers across Ontario, tens of thousands of volunteer hours and hundreds of thousands of bits of data. The participants will try to find every breeding bird in all of Ontario, during this 5-year study. The entire province is subdivided into bite-sized chunks, generally 10x10 km squares in the south and 100x100 km squares in the far north. This

ensures concise coverage can be undertaken and impacts assessed, on a local basis, in a microcosm, rather than more broadly across all of Ontario, in a generalized manner.

Many organizations, such as: Birds Canada, the Canadian Wildlife Service (Ontario Region), Ontario Field Ornithologists, Ontario Nature and the Ontario Ministry of Natural Resources and Forestry will bring this project to fruition. Once the project is complete in 2025, a report will be prepared to celebrate its success.

This is the third such atlas. The first was undertaken during 1980-1985, and the second during 2001-2005. With this type of history, one can realistically compare how our birds are doing over a long period of time.

Is development helping or hindering them? Which species are doing better? Worse? Unchanged? Are there trouble zones we could/should be protecting? So much can be learned from this citizen's science project.

Breeding success will be defined in one of three categories: possible, probable or confirmed. Obviously, 'confirmed' is preferable, as it shows a species is definitely breeding in an area. Still, there is merit in the other categories, particularly for rare and hard-to-find species.

One of the risks of this intensive study is, some birds may inadvertently be negatively impacted, as zealous birders try to 'confirm' breeding. So please remember, the well-being of the bird is far more important than

trying to find a nest! As noted above, the atlas has mechanisms built-in which are non-intrusive when it comes to trying to confirm breeding. If you do find a nest, it is always better to resist the temptation to look into the nest. Please don't separate the vegetation for a better view, stand too close, be noisy or do anything else which might disturb the breeding birds! Just stand back, watch, listen and observe the behaviour. Usually it will reveal what's happening.

I am co-leading the Atlas project in Durham Region with Glenn Coady of Whitby, so, if you'd like more information, or more importantly, want to be a part of the birding team, which will do the study in Durham Region, please let me know, at avocetnatureservices@gmail.com.

No, you do not have to be an expert birdwatcher, you just have to be aware and ready to learn, to assist with this important project. Even if you just want to submit incidental findings, such as a nest on your property, please let me know, so the data can be recorded and entered into the provincial database. Every bit of data counts!

Geoff Carpentier is a published author, expedition guide and environmental consultant. Visit Geoff on-line at www.avocetnatureservices.com and on LinkedIn and Facebook.

Walk Softly

GEOFF CARPENTIER

Heritage Trees



As Ontario continues to develop more and more land, not only does the extent of our forests get diminished, but also the quality. Long gone are the days where we could proudly look at 100 foot tall trees and proclaim their bounty and their beauty. Now they are an exceedingly rare sight anywhere in eastern Canada.

I am fortunate to live on a property that has one majestic tree still standing. As a long-time member of the Scugog Environmental Advisory Committee, I have always been interested in the health of our forests, so when we had spokespeople from Forests Ontario come to speak at one of our meetings, it enthralled me. Was my tree significant enough to include in their provincial registry? Time would tell.

According to the Forests Ontario website (www.forestsontario.ca), the Heritage Tree Program collects and tells the stories of Ontario's unique trees. Launched in 2009, in partnership with the Ontario Urban Forest Council, the program brings awareness to the social, cultural, historical and ecological value of trees. For a tree to qualify, it needs to be associated with a historic person or event, or be growing on historically significant land. The tree's prominence within the surrounding community and/or it also takes its use as a historical landmark into account, as are its form, shape, beauty, age, colour, size, rarity, genetic constitution and other distinctive features.

So, with this in mind, I did some research and found out that the original patent owner of the lands where I live was James Neville (1811), who sold the entire parcel to William Henderson in 1852. Then the south half was sold (where the tree is located) in about 1860 to Robert Stretton, after whom the historic community of Strettonville (later known as Strattonville) was

named. In 1929, ownership passed to Mr. Webster, whereby it then was occupied by the Adams family during the Depression and finally sold in 1964 to Larry Doble who developed the community in which I now live. Located just to the north of my property is the former town of Strattonville. The area near my home is steeped in history. The linkages to history helped me convince Forests Ontario and the representatives of their Heritage Tree Program to recognize my tree as a Heritage Tree! If you go to their website, my tree appears as:

Heritage Tree Number: HT-2018-236-247.
SPECIES: Sugar Maple
Age: 200 years. Height: 22 m. SPREAD: 33 meters.
Circumference: 368 cm.

The accompanying online story is:

This Sugar maple is located on the ancestral lands of the Mississauga First Nation. It was a sapling in the forest that covered this area known as Reach Township, when it was surveyed in 1809.

The area became known as Reach Township in the early 1800s, when Colonel Reach slowly transformed the landscape. In 1811, the 200-acre parcel of Lot 1, Concession 8 where the Sugar Maple can be found was patented to James Neville. The property was later divided in 1815, with the north half of the lot sold off. Until 1821, the tree continued to grow in the south half with no settler development surrounding it.

During the decades that followed, the surrounding landscape experienced rapid clearing for farm and agricultural use. Despite the frequent changes in ownership, and the transformation of the acreage, they left the Sugar Maple untouched, and it still stands to this day at the estimated age of 200 years!

I also learned that these majestic trees often were used to replace surveyor stakes as property markers. So it is likely my tree was planted originally to define the southeast boundary of the parcel originally surveyed by Neville.

If you would like to nominate your own tree as a candidate for this program, please visit the following website: (www.forestsontario.ca).

What a joy it is to see this wonderful historical monument every time I look out my bedroom window! May it stand for another 100 years!

Geoff Carpentier is a published author, expedition guide and environmental consultant. Visit Geoff online at www.avocetnatureservices.com and on LinkedIn and Facebook.

Feb 6, 2020



Walk Softly

GEOFF CARPENTIER

10 Fun Ways to Help Kids (and You) Love Winter

My wonderful kids are all grown up and some have kids of their own now. That got me thinking that I'd like to share a few ideas about how you can amuse yourselves, your kids and your grandkids this winter, while focusing on the outdoors and nature.

So here are a few things you might consider doing outside this winter.

1. Put up a bird feeder and, better yet, add a wildlife cam. See the wonders of nature up close, through the eyes of children and the camera lens. Make it fun by keeping a diary of all the birds and animals you see. Maybe start a scrap booking project, where you encourage the kids to either draw the animals they see or find a picture of each one and glue it in the book, and add a fun fact about each. Maybe you can help them download a photo from the animal cam and use that in their scrapbook?

2. Build a snow castle or fort. It can be as big or as little as you like, as fancy or as plain as you want, but make sure it's safe and won't collapse on them. Help them design and build it, but let their own creativity lead, you might be

surprised how great their ideas are! Making ones with open tops are much safer than ones with roofs.

Build a slide from the top of the fort out onto the lawn, by spraying the slide with water. If you have some leftover cardboard lying around, use that to make the slide or add features to the fort, won't that be fun?

3. And while you're building snow forts, maybe add a snow sculpture, like a deer, a rabbit, a frog or a bird made out of snow. This will teach kids about art and nature at the same time. Encourage them to make the feature as scientifically accurate as possible. Make it last even longer by freezing it with some water after it's completed.

4. Make snow bubbles: Every kid has a bottle of bubble making fluid. Go outside and blow bubbles. They'll freeze solid in no time if it's cold enough, and can be picked up and studied. See how the light changes as you look through them at different angles!

Continued on page 11.

Continued from page 7.

5. Visit an Animal Shelter or, better yet, volunteer to walk a dog when you're there. Do this for a day, a week or all year. The animals will love it and you'll be helping the staff, animals and your kids immensely. But be careful puppies can be addictive!

6. Visit a nature exhibit at a local museum, or go to an aquarium or zoo. While you're there, try to learn something about each animal you see. Take notes in your diary (see #1 above) and learn even more when you get home.

7. Take a nature hike. Collect pine cones, twigs and sticks, and learn how they look in comparison to what they look like in other seasons, and then use them to make crafts later on. Maybe you will find a used bird nest as they're much easier to spot at this time of year. It's okay to bring it home and then try to identify what bird made it and learn something about that bird.

8. Study animal tracks in the snow and see if you can figure out what made them. Was it a mouse, rabbit, squirrel, deer, or something even more exciting? Learn something about each animal you identify.

9. Help others. Volunteer to help kids learn something about nature or give a talk to a local nature club, Beavers, Scouts, Girl Guides, etc., if you have the expertise. Make sure you take your kids along so they can learn and share the adventure with you.

10. Go on an outing with North Durham Nature and learn from the experts about birds, mammals, insects, plants and so much more. (www.northdurhamnature.com)

So there you have it. Make this winter the best ever for you, your kids and your grandkids!

Geoff Carpentier is a published author, ecotour guide and environmental consultant. Visit Geoff online, at www.avocetnatureservices.com and on LinkedIn and Facebook.



Heritage Tree

Text and photo by Geoff Carpentier

I am fortunate to live on a property that has a 200 year old Sugar Maple tree still standing, but some months ago I wondered if anyone cared. Was my tree significant enough to be included in the provincial registry administered by Forests Ontario (www.forestsontario.ca) that collects information about Ontario's unique trees?

Launched in 2009, in partnership with the Ontario Urban Forest Council, the program brings awareness to the social, cultural, historical and ecological value of trees. In addition to other factors (e.g. form, shape, beauty, age, colour, size, rarity and genetic constitution) for a tree to qualify, it must be associated with an historic person or event, or be growing on historically significant land.



After doing some research I discovered that the original patent owner of the lands where I live was James Neville (1811), who sold the entire parcel to William Henderson in 1852. In about 1860, the south half, where the tree is actually located, was sold to Robert Stretton, after whom the historic (but now gone) community of Strettonville (later known as Strattonville) was named. In 1929, ownership passed to Mr. Webster and finally the land was sold in 1964 to Larry Doble, who then developed the lands on which I now live. The former town of Strattonville is located just to the north of my property. So the area near my home is steeped in history.

After extensive consultation, Forests Ontario and the representatives of their Heritage Tree Program recognized my tree as a Heritage Tree! If you go to their website, my tree appears as:

HERITAGE TREE NUMBER:

HT-2018-236-247

SPECIES : Sugar Maple

AGE: 200 years

HEIGHT: 22 m

SPREAD : 33 meters

CIRCUMFERENCE: 368 cm

The accompanying online story is as follows:

“This Sugar maple is located on the ancestral lands of the Mississauga First Nation. It was a sapling in the forest that covered this area, currently known as Reach Township, when it was surveyed in 1809.

The area became known as Reach Township in the early 1800s, when Colonel Reach slowly began to transform the landscape. In 1811, the 200-acre parcel of Lot 1, Concession 8, where the Sugar Maple can be found, was patented to James Neville. The property was later divided in 1815, with the north half of the lot sold off.

Until 1821, the tree continued to grow in the south half with no settler development surrounding it.

During the decades that followed, the surrounding landscape experienced rapid clearing for farm and agricultural use. Despite the frequent changes in ownership and the transformation of the acreage, the Sugar Maple was left untouched and still stands to this day at the estimated age of 200 years!”

I also learned that these majestic trees often were used to replace surveyor stakes as property markers. So it is likely my tree was planted originally to define the southeast boundary of the parcel originally surveyed by Neville.

If you would like to learn more about the program or nominate your own tree as a candidate for this program, please visit (www.forestsontario.ca).

What a joy it is to see this wonderful historical monument every time I look out my bedroom window! May it stand for another 200 years!

A bit of info about the Sugar Maple



Sugar Maple (*Acer saccharin*) – This native species can be found throughout southern Ontario and the northeastern USA. It is a long-lived (up to 400 years) tree with a

single main trunk. Towering to heights of 35 meters, it forms an integral part of many southern Ontario mixed forests. The tiny yellow flowers appear at the end of short filamentous stalks, while the seeds are borne on the typical maple key that “helicopters” them to new planting locations. The leaves are three to five-lobed and show the typical orange/red colouration in the fall.

Who doesn’t love maple syrup? Well, if you do, you must appreciate this lovely tree as it produces the sap that makes this tasty condiment!

Note: photo page above re the Sugar Maple is from Princeton Field Guide “Trees of Eastern North America” by Nelson, Earle and Spellenberg, 2014.

Did you know that the Sugar Maple is the maple featured on our Canadian flag?

Secret Garden

The Barton Trail

*Photos and text by Derek Connelly
except Red-bellied Snake photo
by Geoff Carpentier*

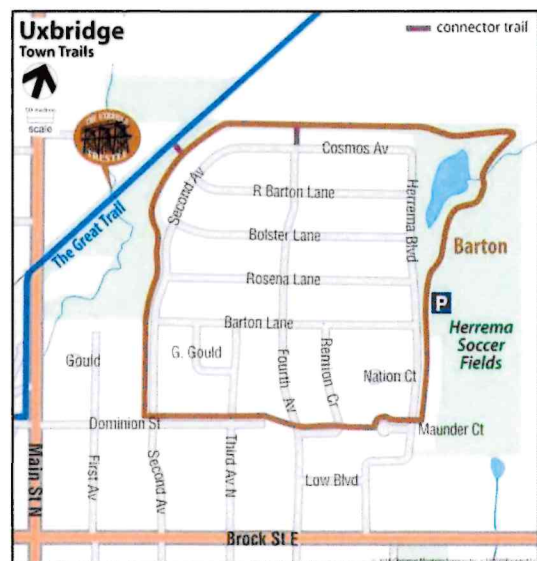
The Barton Trail is part of Uxbridge’s trails network and circles the subdivision named after the former Barton Farms. The 2 km trail passes Herrema Soccer Fields and a retention pond and is bordered by wetland, forest and meadow with links to the Great Trail (formerly called TransCanada Trail).

While most of the trail is along paved sidewalks the “wilder” parts are easy to get to. The retention pond is a stopping place for waterfowl in the spring and summer. Approaching slowly and quietly can reveal Great Blue Heron, Green Heron, Spotted Sandpiper, Bufflehead, Mallards and Canada Geese at the right time of year.



Red-winged Blackbirds, nesting in the cattails, are regular summer visitors. Spring Peepers, Wood Frogs, Bullfrogs, Green Frogs and Leopard Frogs can be seen and heard in the spring. One fall I discovered a Snapping Turtle baby beside the trail. A variety of small fish inhabit the pond and move in and out via the adjacent creek with fluctuations in the water levels.

The shoreline has recently benefitted from a community native planting event. The pond serves as a water retention pond. Its depth must be maintained by dredging so that it can collect the sediments in the runoff from our town’s streets. The cattails here are key plants in filtering any heavy metals out of the water before it joins the



Uxbridge Brook watershed. A couple of old bird houses along the trail assisted Tree Swallow and Black-capped Chickadee families for a few years in the past and now await new tenants and landlords.

Moving away from the pond, the trail changes to the paved walkway with backyards facing the woods where birds seek refuge after flitting back and forth from the occasional backyard bird feeder. A small sandy meadow, used by children to test out their new bikes on rolling hills and kid-made jumps, also provides habitat for a number of lesser seen creatures. Under a wooden board one summer day I discovered Eastern Gartersnake, Red-bellied Snake and Decay Brownsnake - all curled up enjoying the heat.



Red-bellied Snake

Continuing along the paved trail, you reach the first of two connections to the Great Trail. This was once the rail line for trains from Sunderland and towns to the northeast. The second connection leads to an old trestle bridge over the Uxbridge Brook and the John McCutcheon way, which leads you into town. Check out the interpretive signs to learn more.

The Barton Trail leaves the wooded area rising up to Second Avenue, passing a



small field used for tobogganing in the winter and hosting many wildflowers in the summer. The local scouts have planted a number of native plants here. It's a good spot for butterflies and other insects too. Back on the sidewalk, the trail exits towards Dominion Street, where some century homes still stand. Here tall maples show their colour each fall and small front gardens remind us of our struggle to keep connected to the natural world.

Spotlight on Frogs

The Western Chorus Frog

*Story by James Kamstra
Chorus Frog photo by James Kamstra and
Spring Peeper by Geoff Carpentier*

One of the first frogs to come out of hibernation in the spring is the tiny Western Chorus Frog. Along with Spring Peepers and Wood Frogs, it moves to vernal pools and begins calling in vociferous choruses in late March or early April. The call is frequently described as a trill that is like the sound of rubbing one's finger on a hard comb. Although often heard, the tiny Chorus Frog is almost never seen. Observing a calling Wood Frog is quite easy. Homing in on a calling Spring Peeper (see photo next page) is more

challenging but can be done with perseverance. But finding a calling Chorus Frog is nearly impossible. Either it will call while concealed under a tuft of vegetation or it will cease calling when a human tries to get close.

Although the Western Chorus Frog's call is quite distinct, Spring Peepers sometimes emit a trill call, instead of the usual "peep-peep-peep". That trill can be mistaken for a Chorus Frog, particularly by inexperienced surveyors. Since nearly all records are auditory without observation of the animal, there is some question as to whether all historic Chorus Frog records have been correctly identified.

Western Chorus Frogs are much more common in the northern part of Durham (especially Brock Township) than in the south, and they are almost completely absent from the Oak Ridges Moraine. The Ontario Reptile and Amphibian Atlas coordinated by Ontario Nature, documents sporadic records from the portion of Durham south of the moraine.

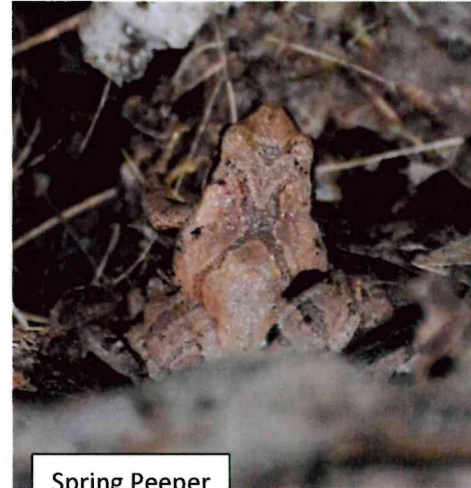
Many records from there are well over 25 years old and likely represent populations that have disappeared through expanding urbanization. There are also some recent records in the south such as those near Newtonville, Courtice and Pickering, but those populations appear to be isolated.



Chorus Frog

Adult Chorus Frogs sing heartily from their ephemeral breeding pools for about three weeks, primarily in April. They breed in pools that are at least 10 cm deep, fishless and that hold water for at least two months.

Pools need to be in open habitats such as meadows, meadow marshes and thicket swamps. They will even lay eggs in



Spring Peeper

flooded agricultural fields, but these will only be successful if standing water remains sufficiently long. Chorus frogs do not favour closed canopy swamps. While many of their breeding wetlands are lost through development, others become unsuitable through natural succession.

Each female frog deposits 400 to 1500 eggs, which are fertilized by a clasping male as they are being laid. Tadpoles hatch in about two weeks,

then transform into froglets after about two months.

Development is dependent on temperature though and can range anywhere from 40 to 90 days. Once frogs leave the water, they will live most of their short lives on land. They breed at one year of age, but most

individuals do not live to see a second breeding season. As a result, breeding ponds can experience local extirpation if even one breeding season completely fails.

Some anomalies are associated with this species. The Federal Species at Risk Act (SARA) classifies the Great Lakes population of the Western Chorus Frog as 'Threatened', while the Carolinian population is designated 'Not at Risk'. But the distinction between the two populations is not clear, just a somewhat arbitrary line stretching between Sarnia and Hamilton. Meanwhile the provincial Endangered Species Act (ESA) has assessed all of the southern Ontario populations as 'Not at Risk'. Surprisingly, Chorus Frogs in the Carolinian Zone (where habitat loss has been severe) have not shown a significant population decline, but those in southeastern Ontario and adjacent Quebec have.

Recent genetic research on Chorus Frogs has provided exciting but seemingly inconsistent results. Chorus Frogs occur in two widely separated parts of the province: a) from the southern edge of the Canadian Shield south through the rest of southern Ontario and b) northern Ontario from Lake Superior north to Hudson Bay and west to the Manitoba border. Originally the two ranges were treated as different subspecies but in 1989 they were reclassified as two distinct species: Western Chorus Frog (*Pseudacris triseriata*) in the south and Boreal Chorus Frog (*Pseudacris maculata*) in the north. The two species are nearly identical. The Boreal has shorter legs and a slightly different call than the Western. More recent genetic research on their mitochondrial DNA, however, is indicating something different. The Chorus Frogs in southeastern Ontario are apparently Boreals, while the southwestern ones are Westerns! Not everyone is accepting this taxonomic result: SARA and the ESA continue to regard all of the southern Ontario Chorus Frogs as Westerns.

A new project is being launched in spring 2020 to better understand the range and population trends of Western Chorus Frogs across southern Ontario. Blazing Star Environmental, the Canadian Wildlife Service and Trent University are together coordinating a long-term, volunteer-based monitoring program to detect and respond to chorus frog population declines. Success of this program will depend on having a strong foundation of volunteers to conduct 5-minute auditory surveys during the spring calling season. If you are interested in participating in these surveys please email info@blazingstar.ca for more information.

Fact or Fiction?

*By Dave Mudd
in collaboration with Cara Gregory*

- 1. THE EARLIEST BLOOMING SPRING WILDFLOWER, IN SOUTHERN ONTARIO, IS A DANDELION ... T/F**
- 2. TURKEY VULTURES ARE BIRDS OF PREY ... T/F**

What do you think? Please see page 8 to find out if these statements are fact or fiction.

Native Plant Spotlight

Prairie Smoke, *Geum triflorum*

Text and photos by Brenda Near

Do you have a well-drained, sunny spot in your garden or a rock garden? Then try growing Prairie Smoke. This spring blooming native is pure delight! Diminutive in size (6-12"), Prairie Smoke makes a nice edging plant and looks wonderful with early blooming native Hairy Beardtongue or small native grasses. *Geum triflorum* is an endangered



plant in Ontario as it is “primarily a prairie species that reaches the eastern limits of its range in Ontario” (http://www.rbg.ca/archive/rare/epo_gtri.htm). It is typically found growing in Alvars; so if you want to see it growing in the wild, visit Carden Alvar near Kirkfield around the end of May/ beginning of June. (<http://www.couchichingconserv.ca/in-the-field/the-carden-alvar/>)



In my garden, Prairie Smoke begins to flower towards the end of May. The pinky red flowers rise up on a hairy, reddish stem from a set of green basal leaves, which are also hairy, paired, slender and notched. The flowers are in sets of three, hence the *triflorum* part of their Latin name. Offering Bumblebees an early nectar and pollen source, Prairie Smoke’s nodding flowers open and stand up straight once they are pollinated. While the

flowers are pretty, it is the next phase that is the spectacular part of this plant. As the flowers fade they produce 2 inch long plumes on the seed heads. The greyish pink billows are what lend the plant its common name. The seed plumes last and are attractive in the garden until July.

Reference:
<https://www.minnesotawildflowers.info/flower/prairie-smoke>; Peterson Field Guide “Wildflowers Northeastern/North Central North America

Birder Murder Mystery

*Text by Steve Burrows
 Photo by Geoff Carpentier*

Canada’s own birdwatching detective, Domenic Jejeune, will soon be appearing on TV screens at home and overseas. Jejeune is the lead character in a series of novels - *The Birder Murder Mysteries*, penned by local Durham author Steve Burrows. The series has been optioned for a TV series by Canadian producers Shaftesbury, in partnership with the UK’s Company Pictures.



Here is Steve in Colombia doing research for a *Shimmer of Hummingbirds* while on an NDN tour

Work on script development is already underway and Steve has held talks with both Shaftesbury and Company Pictures to discuss some of the ways the series might be brought to the screen. "At the moment, the idea seems to be to shoot the series on location in North Norfolk," said Steve, "which I think is a great decision. The producers are also keen to ensure the accuracy of the birding elements, which is obviously a very important feature of the books."

Shaftesbury is well-known to Canadians as the producers of the Murdoch Mysteries, and Company Pictures has also produced a number of highly successful series. "Given the track record of these two companies in producing great TV shows, I have no doubt the Birder Murder Mysteries are in the right hands," said Steve. "I've always had my own ideas about how they would look on TV, so I'll be really interested to see how they are interpreted by someone else."

There are currently six novels in the Birder Murder Mystery series, and the TV series will draw on plot elements from the books, as well as featuring original material developed by the screenwriters. Steve is currently working on a seventh novel, with publication likely to be timed to coincide with the release of the TV series. "At least, that's the plan at the moment," said Steve. As usual, he's keeping the title and featured bird species to himself for now. But then, from a writer of mystery novels, what else would you expect?

Answers to Fact or Fiction Quiz

Photos by Geoff Carpentier

IS THE EARLIEST BLOOMING SPRING WILDFLOWER IN SOUTHERN ONTARIO THE DANDELION?

The earliest blooming spring wildflower in Southern Ontario is Coltsfoot (*Tussilago farfara*) NOT Dandelion (*Taraxacum officinale*).



In Southern Ontario, Coltsfoot flowers in late March, often before the last snow melts. Flower heads have even been known to push through snow. Dandelions bloom later in the season (April to September). Although both plants have a similar looking yellow flower, there are several differences. Coltsfoot has a scaly stem with a dark yellow centre, its flower is smaller (6-10

mm diameter) and it grows from rhizomes. Dandelion flowers grow on leafless, hollow stalks containing a milky sap, and are larger (20-50 mm diameter) and this plant grows from a tap root. Both have basal leaves, but the Coltsfoot leaf is “hoof shaped”, giving the plant its name, and contains tiny hairs, distinctive from the deeply toothed hairless leaves of the Dandelion.

ARE TURKEY VULTURES ARE BIRDS OF PREY?



Turkey Vultures (*Cathartes aura*) don't prey on anything. They are scavengers, so they only feed on animals that are already dead. Unlike most birds, the Turkey Vulture has a keen sense of smell, allowing it to find carrion while soaring overhead with its close to 2m wing span. Belonging to the family (*Cathartidae*), also known as *New World vultures*, they were classified as birds of prey until quite recently. It was most likely its soaring flight, curved beak for tearing, and the fact that it eats meat, that led scientists to categorize them as raptors. They do not have the talons for gripping prey that raptors have and their bald head and large nostrils are adaptations for eating carrion. DNA research has

revealed that they are not related to birds of prey. Their closest living genetic relatives are storks.

Nasty & Nifty Nature News

by Geoff Carpentier

Red Pandas; A recent study conducted by the University of Queensland Australia indicates that the population of Red Pandas in India, China and Nepal has declined by 50% since 2000. The reason – poaching of course. But the rub is that there is no market demand for this species, so why is it being poached? The reason may be that the very researchers who are studying its decline may be responsible for its demise. The researchers travelled throughout Nepal pretending to be buyers and may have inadvertently convinced local entrepreneurs that there was a demand – oops!

Covid-19: Inadvertent Covid-19 outcomes are surfacing. It seems that the global output of greenhouse gases is declining and air pollution indices in many countries are declining as well as people stay home in isolation. One bad outcome is that according to the UK's Daily Mail. Chinese government officials are foolishly trying to convince people to kill stray dogs (defined as any dog off a leash) as they believe they are carriers of the disease. Chinese officials deny they are encouraging culling the dogs due to Covid-19. They claim they are merely trying to control stray dog populations. The Coronavirus pandemic has had an unexpected side effect in Venice, where the normally cloudy canals have transformed into water that is crystal clear enough to see fish swimming below.

Italy's tourism industry came to a screeching halt once the number of Coronavirus cases began to spike in the country, but those who remain have been posting to social media images of the traffic-free canals.

China Banning trade and consumption of wild animals: China has just announced that the Standing Committee of the National People's Congress (NPC) is temporarily banning the trade and consumption of wild animals. The ban, which takes immediate effect, covers not just wild-caught species, but also the hunting, trading and transport of all terrestrial wild animals for human consumption. It also applies to wild animals born and raised in breeding facilities. The ban on wildlife trade and consumption is an attempt to limit the exposure of people to wild animals that could carry viruses that humans haven't encountered before and can't effectively defend against. There is a growing call for China to keep the ban in place permanently and amend its wildlife laws accordingly. Hopefully this is the first step!

Ontario government funding 85 local projects to protect Species at Risk: A news release issued by the Ontario government on March 4, 2020 reads:

Today, Minister Jeff Yurek announced the government is delivering over \$4 million in 2019-20 and up to \$4.5 million in 2020-21 to support projects by non-profit organizations, Indigenous communities and other stakeholder groups through the Species at Risk Stewardship program. "Everyone has a role to play in protecting and recovering at-risk species and their habitat," said Jeff Yurek, Minister of the Environment, Conservation and Parks.

"Our government is proud to support on-the-ground projects that promote strong environmental stewardship and help preserve Ontario's rich biodiversity for future generations". For a complete list of the 2019-20 projects visit: <https://news.ontario.ca/ene/en/2020/3/ontario-helping-communities-protect-species-at-risk.html>

US government relaxes rules re bird deaths: The New York Times reported that US Fish and Wildlife Service is proposing legislative changes that would drop the threat of punishment to oil and gas companies, construction crews and other organizations that kill birds "incidentally". Opponents to the change correctly state that fines and prosecution have, for decades, helped prod industries to take steps to protect birds. Industry leaders and government officials said they expected businesses to continue to voluntarily protect bird habitats. Essentially the government's response is that unless it can be shown that the company deliberately set out to kill birds, they would be exempt. Even before the legislation has been passed wildlife officials have stopped investigating complaints involving the death of birds and other wildlife.

In a related story, amendments to the **US Clean Water Act**, called the Navigable Waters Protection Rule, removes Clean Water Act protections for many rivers, streams, and wetlands that could now allow them to be altered, degraded or filled. Looks like we keep moving closer and closer to destroying our planet in the name of business.

Nature Quiz

by Geoff Carpentier

This is clearly a species of swan but which one? There are three species of swans we could expect to see in our area. Two breed here and one is a spring migrant.



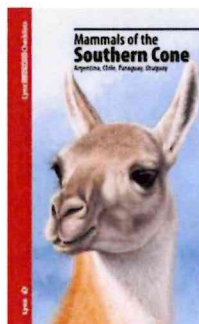
Book Reviews

by Geoff Carpentier

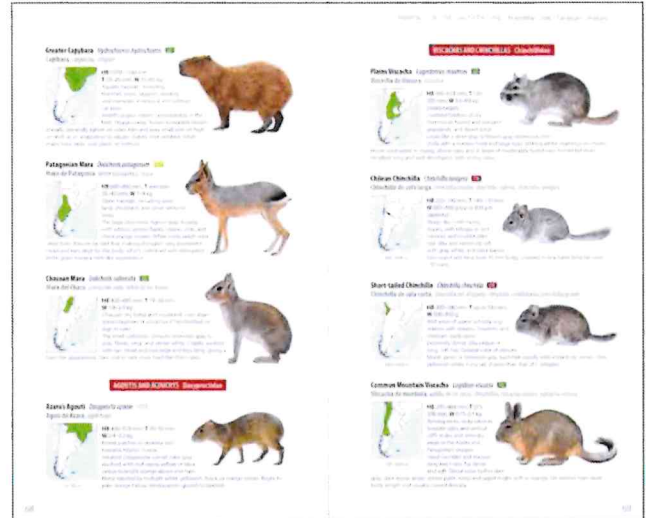
Mammals of the Southern Cone – Argentina, Chile, Paraguay & Uruguay. Compiled by Albert Martinez Vilalta. Lynx Edicions, Barcelona, Spain. 2020. 22€. 160 pages, softcover. ISBN: 978-84-16728-26-8.

Lynx recently completed the publication of its monumental eight volume set of the Handbook of the Mammals of the World. This was an expensive undertaking, but I bought all eight volumes as I have a strong interest in mammals and there has never been such an amazing collection ever offered.

Working on the success of the first offering, Lynx is now offering a new version of the books at a fraction of the cost. These small format books show the mammals of the



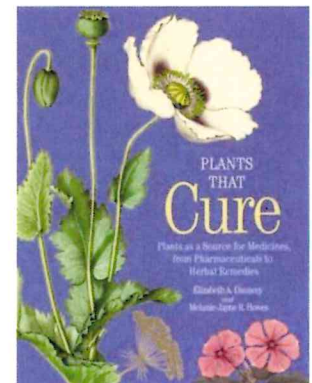
world by region. So now if you're interested in only southern South America you can buy this one volume for 22€ (about \$32 CDN).



The format is similar to the originals but concise. Each plate (see sample above) shows 2-8 species with a range map for each, details of habitat and distinguishing features. The paintings are spectacular and accurate. The maps are small but totally readable. This will be an asset to any traveler who can appreciate how rare good mammal books are for regions around the world outside of Africa, North America and Europe. I plan to own the complete set!

Plants That Cure. Elizabeth Dauncey and Melanie-Jayne Howes. Princeton University Press, Princeton, N.J. 2020. \$29.95 USD. 224 pages, hardcover. ISBN: 978-0-691-20018-7.

This full colour book documents many plants that have significant medicinal properties. As a sequel to her book *Plants That Kill*, Dauncey revisits the other side of plants – those that can help us cure diseases. The



layout of the book is eye-pleasing and very easy to read. Fact-filled, it informs the reader in an enjoyable way about the lives and uses of many plant species. Dauncey and Howe explain both historical and modern uses of many plants that have led to treatments for circulatory issues, fertility and some forms of cancer. I showed the book to my niece who is a naturopathic doctor and she was very impressed. That is meaningful to me, because as a layperson I might like the layout but was the content good? Apparently so. If you have an interest in botany, herbs, natural remedies, or medicinal plants in general, then check out this great book.

Answers to Quiz

Photos by Geoff Carpentier

Okay the three choices are Mute, Tundra and Trumpeter Swans. The Mute can be separated out by the fact it has a pinkish and black beak, but on our bird on page 11 the bill is black. But beware that young Trumpeters and Tundras also have a decidedly bi-coloured beak (see photo below of a young Trumpeter).



Okay so how do we tell a Trumpeter from a Tundra Swan?

There are several characteristics one can look at. Seen side by side, the Trumpeter is much bigger and longer necked. Other



differences are subtle. For example, where the white of the forehead meets the base of the beak the Trumpeter shows a v-shaped line of black, while the Tundra shows a straight shaped juncture. The bill of the Trumpeter is more convex, while the Tundra is concave. The black of the beak encompasses the eye, while in the Tundra it does not. And that's kind of it .. Although the Tundra usually shows a bit of yellow near the base of the beak, it doesn't always do so and to complicate it more – the Trumpeter can show some yellow but it is usually patchy and often scattered across the surface of the beak, rather than at its base.

So based on our photo, the black at the base of the beak extends to the eye, the beak is convex shaped and the point where the forehead meets the beak is v-shaped across, so this is a Trumpeter Swan. The picture of the adult Tundra above shows the more concave bill and the straight line at the base of the bill, typical of a Tundra Swan.

Last Thoughts

by Geoff Carpentier

How did Covid-19 move from animals to humans?

This is a tricky question and much speculation has been presented online and in the media. Everything from bats to pangolins to cats, snakes, dogs and more have been blamed. Actually it appears we may be the culprit. A recent report by the Wildlife Conservation Society (WCS) and Global Wildlife Conservation (GWC) indicates how the transfer may have taken place and why we should worry about the future. Chris Walzer, Executive Director of WCS indicated that it is most likely that the evolutionary or ancestral host was a bat, but it is uncertain if this is the real intermediary host or how it moved from bats to humans.

Coronaviruses are a group of viruses with exceptionally high mutation rates that are known to exist in bats, rodents, camels and cats. The Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) are categorized as Coronaviruses. Viruses naturally mutate and are able to recombine to create new viruses. So wildlife trading and meat markets, where multiple live species are kept together and butchered on the same surfaces, prove a perfect breeding ground for novel pathogens.

Walzer said that the animals are captured in the wild or raised on a wildlife farm and transported to a market, where they interact with other species from different locations. The animals are confined under stressful and crowded conditions and therefore potentially spread viruses between species. The viruses can then mutate and interfaces to humans are created. One of the main

means of stopping this is to ban both illegal and legal trade in wildlife and to ban outright any open market stalls that specialize in the trafficking of wildlife. This would of course show a huge benefit to wildlife as well since many species are being harvested to extinction.

*Coming soon to
everywhere near you!*

photos by Geoff Carpentier



Visit Us On  Facebook
and our website

www.northdurhamnature.com

*For more information
about NDN*

NDN Board of Directors

Cara Gregory	President
James Kamstra	Vice-President
Derek Connelly	Past President
Brenda Near	Secretary
Kim Adams	Treasurer
Jay Thibert	Director-at-Large
Carol Apperson	Director-at-Large
Patricia Baldwin	Director-at-Large
Mark Humphrey	Membership

*Newsletter Editorial
Board*

Geoff Carpentier - Editor

John McLean, Cara Gregory & Derek
Connelly - Proof-readers



Undaunted – our own Derek Connelly is knee deep in muck to make sure our feathered friends have a place to live when they return this spring!

photo by Elizabeth Calvin