President's Message

I just returned from the Ontario Nature Annual Gathering in Sudbury hosted by Sudbury Naturalists in June. This event had been cancelled for the last three years due to COVID, so it was a pleasure to be able to gather with 150 or so like-minded people, who are interested in and concerned about nature and the environment. There were workshops, field trips, keynote presentations and a banquet.

Decades ago, the City of Sudbury was infamous for its bleak barren moonscape; a result of mining and smelting activities that were so intense that all vegetation had died off for many kilometres in every direction. Since then however, the City and the mining industry have worked together to reverse the trend. A massive investment was made to improve air quality, neutralize the acidic soils and plant millions of trees and shrubs. The Sudbury rehabilitation success story was highlighted at the AGM. Restoration work is continuing but today the rolling landscape surrounding Sudbury is once again covered in trees. At the start of the AGM, Paul Lefebvre, the Mayor of Greater Sudbury described and praised the greening efforts, and then ended his speech by pledging that the Municipality would designate 30% of its land as protected area by 2030 following the global "30 by 30" initiative. This is the first municipality in Canada to make such a commitment and Sudbury is boldly setting an example for other jurisdictions to follow. It's nice to hear some good news about the environment for a change.

James Kamstra, President, North Durham Nature

Upcoming Events – July to September 2023

Talks and Upcoming Meetings – no meetings will be held over the summer but autumn programs are already arranged. Please check websites and email for changes and additional hikes.

September 24, 2023 – Tyler Hoar from the Ontario Field Ornithologists will be talking about "Ontario Winter Finch Forecasting".

Walks and Outings:

Saturday August 19 is Lake Discovery Day to Celebrate Lake Scugog. There will be many demonstrations and events in Port Perry throughout the day, including a wetland hike led by James Kamstra starting at 2:00 pm from the Rowing Club Boat Launch. NDN will have a table there so if you have time and would like to help out for an hour or so, let Derek know.

Remember you have to pre-register for all walks so consider signing-up soon as space may be limited! northdurhamnature2@gmail.com

Waterways of North Durham
Focus on East Cross Creek

Story and photos by James Kamstra

Editor's Note: This is a new column, which over time, will highlight some of the rivers, streams and other water bodies to be found in the northern part of the Regional Municipality of Durham. Water is essential to all life and is dynamic since it is in constant motion. Water features provide critical environmental functions, wildlife habitat and are defining features of our landscape.

I will start with East Cross Creek that straddles the eastern boundary of Durham in Scugog Township. The headwaters lie in the rolling lands of the Oak Ridges Moraine, partially within Long Sault and East Cross Creek Conservation Areas. Various tributaries join together to form a main channel, which then flows north by northeast through a more or less linear valley. The valley of the East Cross is most apparent when one drives along Highway 7A east of Nestleton Station. The valley broadens out and its slopes are less defined northward as it flows through an extensive mixed bottomland for many kilometers. The creek crosses the Durham Region boundary line, entering Kawartha Lakes municipality. Further north, the floodplain broadens further becoming an open marsh up to half a kilometre wide. East Cross flows through this marsh for the final 10 km of its course before emptying into the Scugog River about 5 km south of Lindsay.

The route of East Cross extends approximately 27 km from south to north, but the actual route of the channel is about twice as long. For most of its length, it is a slow moving river, a seemingly endless series of back and forth bends. The natural cover along the creek is excellent, forming a continuous north-south corridor of natural habitat that runs parallel to the east side of Lake Scugog with only a few road crossing gaps. It provides an important link that allows wildlife to move freely. By contrast most of the tablelands immediately east and west of the East Cross valley are intensively cultivated with minimal wildlife habitat remaining.

Photos show lower and middle sections of East Cross Creek

Wood Duck is commonly seen along this waterway

Two earthen dams have been constructed along the creek, one forming Brown Pond at the hamlet of Cadmus, while the other is the larger Fallis Pond, located east of Nestleton Station. The dams restrict fish movement between upper and lower sections of the creek. Brook Trout are only found in the faster flowing oxygenated waters upstream from Brown Pond. At least 24 species of fish are known to live in East Cross Creek. The creek, along with surrounding wetlands and adjacent forest or valley slopes, supports a wide range of wildlife, since all together they form a substantial block of core habitat including wetland and upland forest.

Most of the natural lands bordering East Cross Creek are privately owned and therefore not readily accessible to the public. A headwater swamp can be seen in the East Cross Creek Conservation Area. The creek channel itself is a navigable waterway and can be accessed by canoe or kayak from one of the road bridges that cross it. Much of the bottomland has been classified as the provincially significant East Cross Creek Wetland comprising approximately 1720 hectares of marsh, thicket swamp, deciduous swamp and conifer swamps.

The Kawartha Region Conservation Authority has completed a study on the entire watershed called the East Cross Creek Subwatershed Characterization Report, which is available online at East_Cross_Characterization_Report (kawarthaconservation.com)

Fact or Fiction?

Article by Lynda Kamstra
Photos by James Kamstra

Baby porcupines do not have quills at birth. FICTION

It would be completely logical to expect baby porcupines to be born without quills. However, this is not the case. Even more intriguing is - how did the parent porcupines even mate in the first place?

Like all mammals, porcupines are covered in fur or hair — quills are modified rigid, hollow hairs that are pointed, barbed and attached to the body by muscles. To protect the mother at birth, the baby is surrounded by a tough membrane and the quills are soft. After birth, they remain soft for a day or two but then soon harden with exposure to air.

In addition to quills, porcupines have two types of fur: long coarse guard hairs and shorter, fluffy undercoat hairs. Normally, the quills lie flattened against the skin. Only when threatened, do porcupines reveal their quills by contracting the muscles connected to the quills, causing them to stand upright. This action pushes the guard hairs out of the way forming a crest-like appearance on the head.

Back to the mating question—yes, the porcupines use their muscles to fully flatten the quills to keep them out of the way and to ensure that the reproductive cycle can happen without undue discomfort or stress!

Some flowering plants do not need sun to survive. FACT

Pinesap

We are accustomed to consider most plants as photosynthetic, sun-dependent power-houses. But have you ever wondered about those life forms that look like plants but make you think twice because they lack traditional green chlorophyll and other typical plant structures? In Ontario, we have several non-green plants and they are, therefore, parasitic relying solely on other plants for nutrients.

Ghost Pipe *(Monotropa uniflora)* and Pinesap *(Hypopitys monotropa)* are pale parasitic forest plants that obtain nutrients by *myco-heterotrophy*—their roots connect to mycorrhizal fungi associated with other photosynthetic plants. They lack true stems and leaves. Instead, the structure we see growing above the soil surface is the flower stalk which relies on pollinators for seed production.

Members of the Broomrape Family are other examples of parasitic plants found in Ontario. These plants grow roots that produce rounded projections called *haustoria* that allow them to attach directly to the host plant. In Ontario, American Cancer-root *(Conopholis americana)* is parasitic on oak and Beechdrops *(Epifagus virginiana)* are parasitic on beech. One-flowered Cancer-root *(Aphyllon uniflorum)* is parasitic on vetch and other members of the pea family.

One-flowered Cancer-root appears in spring

Beechdrops appear late summer and fall

These parasitic relationships do not kill the host plants.

NDN reaches out to the community!!

Story and photos by Derek Connelly

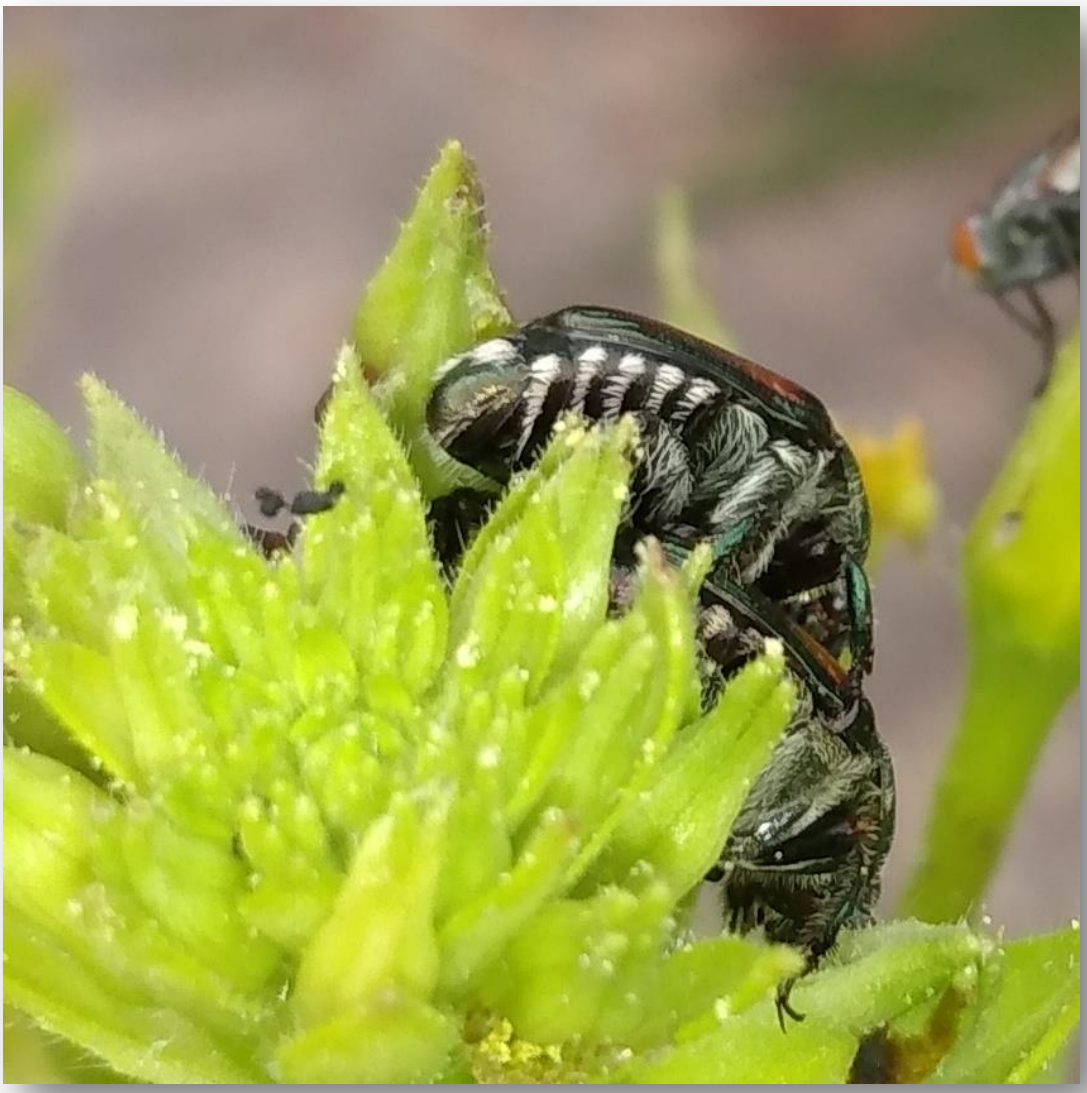
NDN Helps Town of Uxbridge with Nature Interpretation on Some of its Trails

Our signs are up on some of the Town's trails! Working with a Greenbelt grant the Town's Parks Department and NDN created four interpretive signs to help trail users on four trails better understand the nature living there. Check them out on the Barton, South Balsam and Quaker Trails and in the Countryside Preserve. You will see our NDN butterfly logo on each sign. Thanks to Derek Connelly, James Kamstra, Jay Thibert and other NDN members for text, photos and suggestions.

PS There is no charge for parking in the Uxbridge Countryside Preserve/ Herrema Fields/ Barton Trail, or at the museum/off leash dog park parking lot. You can access Quaker Trail by parking on roadsides in town where permitted.

Nature Quiz – What am I?

Photos and quiz by Geoff Carpentier



Let's see – I have an Asian connection. I can bug you without even trying. I came to America in 1916 and have established myself widely across vast parts of the continent.

I spend part of my life above ground but much of it below ground as well. As a youngster I don't resemble my parents at all, but I have many cousins that do look a lot like me. There are two of me (and a third unrelated species) in this photo by the way.

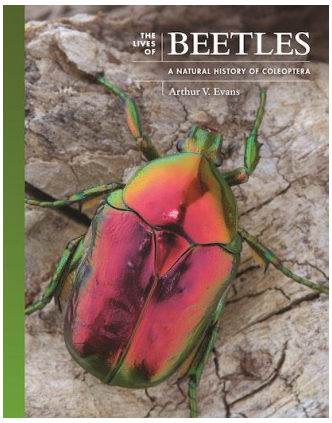
What am I?

Book Reviews

By Geoff Carpentier

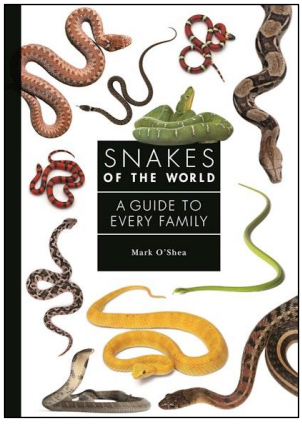
Goodness I have received so many great books these past few months – here is a sampling:

The Lives of Beetles – A Natural History of Coleoptera. Arthur V. Evans. 2023. Princeton University Press, Princeton, New Jersey, 08540. 288 pages - hardcover $25.00USD. ISBN: 978-0-691-23651-3.



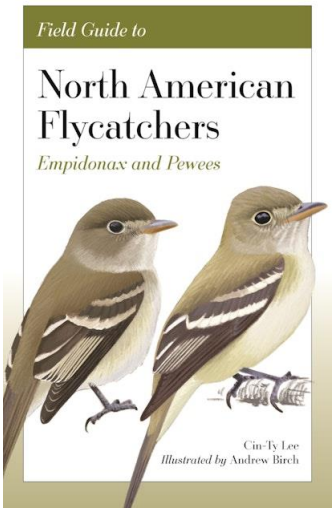
What's tiny (well usually) and comprises about 20% of all living organism? Well it's the beetles and with over 400,000 species worldwide, they not only are abundant and cosmopolitan but they function as predators and prey and offer foundational contributions to ecosystems through their ability to recycle almost everything organic! This book is simply laid out and provides enough detail to excite almost any reader - including insect haters! Chapters focus on body structure and function, evolution & diversity, biological functions such as reproduction, communication, development, feeding and defense. Coupled with this is an interesting treatise on their use in medical, technological and scientific endeavours. The book then finishes with chapters on conservation and classification. What I really liked was an interesting way to introduce us to some of the 400K species mentioned above. The author chose to select nine species per chapter to showcase several of the families. Each is unique and teaches us something about the diversity and attributes of the various members of this large group of insects.

Snakes of the World – A Guide to Every family. Mark O'Shea**.** 2023. Princeton University Press, Princeton, New Jersey, 08540. 240 pages - hardcover $29.95USD. ISBN: 978-0-691-24066-4.



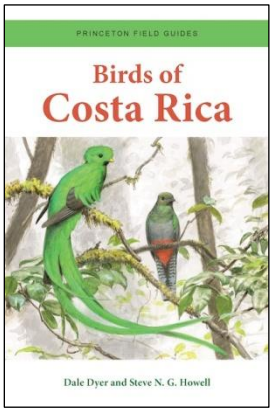
Ok let's see – most folks dislike snakes but probably don't even know why. They're not slimy, are rarely aggressive unless provoked and generally hide and stealthily carry on their hunting efforts despite our intrusive life styles! Reading this book might help one better understand what they do and don't do. The author has presented concise and interesting information about the 4000+ species found worldwide. No, he didn't describe every species, but what he did do is talk about every family and subfamily and offer great insights and information for each group. Everything from biology, reproduction, camouflage and conservation is covered in the book. To emphasis his points, he highlights individual interesting species from around the world. What the reader will quickly learn is the snakes aren't simply slithery creatures that catch and eat food – their hunting styles and means of mobility are variable and the way they hunt and reproduce cover the gamut of possibilities. You will learn about constrictors and venomous species and myriad more oddball offerings in this interesting book.

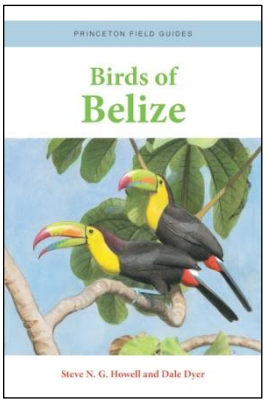
Field to North American Flycatchers – Empidonax and Pewees. Cin-Ty Lee. 2023. Princeton University Press, Princeton, New Jersey, 08540. 240 pages - softcover $19.95USD. ISBN: 978-0-691-24062-6.



This book is for the serious birder as it deals with a small group of flycatchers which trouble birders from the first time they see one of these similar and confusing flycatchers - the Empids and Pewees! If you ever get to South or Central America this problem will compound itself greatly as there are many more almost identical species down there. But throughout Canada and the US, the 18 possible species are covered beautifully in this book. I haven't had the time to field test this yet, but I will as time goes by. However let me say this, the illustrations are magnificent and key to the usefulness of the book. I spent some time looking at the treatment of Alder vs. Willow Flycatcher as these often cause confusion for local birders. The treatment is interesting as Lee deals with them one-on-one talking about base colour, shape of the forehead, wing panel contrast, wing projections, and bill length and shape. Then Lee throws Least flycatcher into the mix for comparison as these are often a confusing alternative. Finally, if there are regional differences, such as eastern and western Willow subspecies, these are also covered. The outcome is a confidence level that should help identify most individuals in the field with practice. I would HIGHLY RECOMMEND this book to everyone who has ever or will ever struggle with flycatcher identification – it is a great addition to the specialized books out there.

Birds of Belize. Steve N. G. Howell and Dale Dyer. 2023. Princeton University Press, Princeton, New Jersey, 08540. 304 pages - hardcover $35.00USD. ISBN: 978-0-691-22072-7 and **Birds of Costa Rica.** 2023. Dale Dyer and Steve N. G. Howell. 2023. Princeton University Press, Princeton, New Jersey, 08540. 456 pages - hardcover $35.00USD. ISBN: 978-0-691-22335-5.

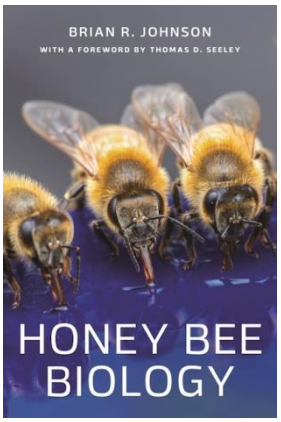




These two new titles have just been added to Princeton's impressive library. It's getting to the point that if you're looking for a great field guide to birds anywhere in the world, you should look to Princeton first. You likely won't be disappointed. Continuing with the tradition of the Princeton guides, these books are lavishly and beautiful illustrated with multiple poses for many species. Every species that occurs in each country, regardless of whether it is a local breeder, a vagrant or a migrant is covered in detail. Range maps and detailed information supports each species and group of species to help you troubleshoot similar looking or confusing birds. An added bonus is a "progressive taxonomy" section, which simply means that the authors have offered their opinion into where bird research is going and have included notes on some species that may be in transition to or from being a full species.

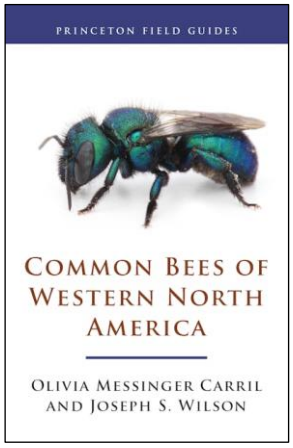
Common Bees of North America. Olivia Messinger Carril and Joseph S. Wilson. 2023. Princeton University Press, Princeton, New Jersey, 08540. 416 pages - softcover $35.00USD. ISBN: 978-0-691-17550-8 and **Honey Bee Biology.** Brian R. Johnson. 2023. Princeton University Press, Princeton, New Jersey, 08540. 304 pages - hardcover $45.00USD. ISBN: 978-0-691-20488-8.

Goodness, I may have to buy a new house, there's not enough room for any more bookshelves – LOL! The world is fascinated by bees and other pollinators right now, but much of the information readily available is incomplete and sometimes even misleading. These two books, by acclaimed specialists should help clear the muddied waters.



The *Honey Bee Biology* book is not in any way light reading. It is very much like a text book, but it is chock full of up-to-date science on the biology, reproduction and feeding of honey bees. Their role in pollination under natural foraging scenarios is well described and explained. What I felt was most important was the chapter on agricultural pollination as this is an emerging issue of concern. Millions (maybe billions) of bees are transported around North America annually to pollinate such crops as almonds. The outcome can be devastating to native pollinators as these "interlopers" may bring disease and they can and will certainly out-compete the local insects. This is an issue beyond just dealing with pollinators as the mono-cultural aspects of modern day agriculture, by their very nature, are counter-productive to a healthy pollinator population. Read this book with your "pro honey bee" bias and an open mind, - you might be very surprised what's happening behind the scenes and struggle to balance the known benefits of honeybees with their "dark sides".

The *Common Bees of Western North America* is a very different type of book. It is much more like a field guide, with beautiful paintings and concise information on the many types of bees to be found in the western part of the continent. Referencing over 3000 species in western North America alone the authors took on a daunting challenge. Naturally they can't describe every species but they've chosen over 200 of the commoner ones to introduce us to the families and genera. For the featured species, they provide detailed notes on identification, size, key features, nesting and even which flowers they prefer in any area. Range maps are clear and easy to read to help determine which species might be found in a given locale. To narrow the scope of which species to highlight, the authors have chosen many that favour urban landscapes, others that are distinctive in appearance and still others that favour unique species of plants. All in all it is an interesting book that has local content. Many of the species featured are not limited to the western half of the continent, but in fact may be found throughout our region. This will be very helpful in identifying some of our own pollinators. By the way the eastern guide was published in 2021 by the same authors.



The 3rd Ontario Breeding Bird Atlas Update

The atlassers have been very hard at work over the past 2.5 years, finding and categorizing over 180 species of birds that are now breeding in Durham Region. Special surveys for nightjars, marsh birds and owls are undertaken as part of this research study as well.

In a story that supports our atlassing efforts, NDN has been involved for several years in helping our birds through a nest box project led by Derek Connelly. Derek shared the following update with me recently.

"*Report on Uxbridge Bird House Projects Spring 2023 - Helping Cavity Nesting Birds*". The Lafarge bird houses had an active start this year with 44 boxes yielding 40 Eastern Bluebirds, 147 Tree Swallows and 12 House Wrens. These numbers are impressive despite onsite activities by Lafarge to truck in topsoil as part of their long term restoration of the gravel pit. This resulted in some nest mortality as the dust may have caused two nests to fail when the adults abandoned the bird house. The nest boxes are monitored weekly.

Bird houses in other areas of Uxbridge Township (30 in total) had a similar start to last year with slightly more swallow young than wrens and similar bluebird young numbers. Discussions with Town Parks staff are ongoing and we are considering moving bird houses to more open areas as vegetation changes habitat. Many club members and local residents have stepped up to assist in the monitoring, which is greatly appreciated. Anyone interested in helping out can reach out to Derek Connelly ndnature7@gmail.com or 647-965-8765. The photos above of baby Eastern Bluebirds (top) and Tree Swallows (right) were provided by Lee Fisher.

One more short breeding bird story seems appropriate. This is from Derek Connelly with amazing photos by Ed McDermott. Uxbridge's Elgin Pond's Trumpeter Swans have produced young again! The pair raised four young last year with only two surviving through the winter. While they are beautiful to see and photograph they are very protective of their young and can be aggressive if approached closely. Do not feed them and they will find their natural foods. Bread and other non-natural foods can be harmful to birds.

Nasty & Nice Nature News

Compiled by Geoff Carpentier

I decided we have so much great happy news in this newsletter, I would forego my normal Nasty & Nice Nature News until the fall!

Answers to Nature Quiz

Well there's not too much to go on in the previous photo but clearly these are insects of some kind.

The glossy green and copper tones coupled with the white dots on the side show this to be a Japanese Beetle.

They can be a bit of a scourge to gardeners as they can devastate many plants in short order. In addition to their adult stage, which lives and feeds above ground, there is a larval stage that lives underground eating the roots of grasses and forbs.

It also seems that not much eats them. For more information check out a column I wrote some time ago that explains more about their interesting lifestyle and history in North America. Do Japanese Beetles taste yucky? • Troy Media

Birdathon 2023

Thank-you to everyone who has donated to my 2023 birdathon. The attached link to an article I wrote for the Standard Newspaper will tell you all about the project and how I did. If you meant to donate but still haven't done so, there's still time.

Here's the link to the aritcle - Oh, what a day it was! (thestandardnewspaper.ca)

And the donation page https://www.canadahelps.org/me/6MuMgK7

Copy Editor Still Needed

In the last newsletter, I asked if anyone would be interested in being one of our copy editors. The response wasn't forthcoming so I'll ask again. Here's what you would do and what skills you need. The job is to proofread each of our four newsletters after I write them and provide specific comments and corrections re spelling, grammar, punctuation and clarity of the wording. You need to have a sharp eye to spot errors or omissions and knowledge of good grammar and punctuation. Anyone willing to take on this role would join with James and Derek who work also as copy editors. Oh, why do we need three copy editors? Simple - this is a task where every error missed reflects on the quality of the newsletter in my opinion. More eyes mean that non-obvious errors won't be overlooked.

Nature's Pretty Side

Baby Trumpeter Swans photo by Ed McDermott

For more information about NDN

Visit Us On Facebook
and our website
www.northdurhamnature.com

NDN Executive Committee

President / Programs: James Kamstra
Vice-president: Derek Connelly
Past President: Cara Gregory
Treasurer / Membership: Kim Adams
Secretary: Lynda Kamstra
Outings: Derek Connelly
Promotion: Jay Thibert
Member at Large: Mark Humphrey
Facebook Coordinator & Website: Mark Dorriesfield

Newsletter Editorial Board

Geoff Carpentier – Editor/writer

Proofreaders – James Kamstra and Derek Connelly