President's Message

After a long winter of up and down weather, spring has arrived and is welcomed with open arms. Migrant birds are returning from the south, some to nest locally, while others stop briefly before continuing on to their breeding grounds further north. Frogs are singing in the wetlands, first the shrill peeps of Spring Peepers and later the melodious chirping of the Gray Treefrogs. A sequence of wildflowers are sprouting up in the woodlands - bloodroot and hepatica - followed by trout lilies and trilliums. It truly is the best time of year to get out and appreciate nature. North Durham Nature is offering a variety of outings in April, May and June that focus on these aspects of spring. We are also trying a couple of novel hike ideas, that incorporate environmentally sustainable aspects of agriculture and garden design. Check the NDN website for details and be sure to pre-register for ones that interest you.

If you cannot make one of our outings, I encourage you to get out and appreciate nature wherever and whenever you can. Migrant birds can appear in anyone's backyard and plants of one kind or another sprout up in any land that is not tended. Going into and exploring some of the larger natural areas in North Durham will reap greater rewards. Some areas worth checking out are East Cross Forest Conservation Area, Walker Woods and sections of the Rail Trail along the Beaver River. Make it a family outing.

Upcoming Events – April to July 2023

Talks

May 23, 2023 - *TRAVELS WITH THE MONARCH* – with Don Davis, @ 7:00pm, Scugog Memorial Library

For 44 years, Don Davis has studied monarchs as a citizen scientist, tagging his first monarchs in 1967. Don will review the monarch's life history and migration and will discuss what actions should be taken to maintain successful monarch populations. He will also share how recent research offers insights and knowledge about how to best allocate limited resources to conserve this iconic species. Don is the Chair of the Monarch Butterfly Fund, an American non-profit organization, and has served on the Monarch Recovery National Technical Committee.

June 27, 2023 – Bad Reputations: Cormorants and Conservation with Gail Fraser @ 7:00pm, Lucy Maud Montgomery Church in Leaskdale (11850 Concession 7, Uxbridge)

Since their rapid population recovery in the Great Lakes, Double-crested Cormorants have been assigned a bad reputation because they are a large black waterbird that eats fish and their nesting habits kill trees. Professor Gail Fraser describes the role of cormorants in the Great Lakes ecosystems and how cormorant ecology relates to biodiversity conservation.

Walks and Outings:

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

Please check websites and email for changes and additional hikes.

Sat. April 15 - evening Amphibian walk at Crow's Pass Conservation Area

Sat. April 29 - afternoon Spring Ephemerals (Mark and Derek)

Sat. May 13 - afternoon Spring Ephemerals (Mark and Derek)

Sat. May 20 "Orioles and Orchards" – Morning bird hike at Nonquon followed by agricultural tour of the Two Blokes Cider farm at Seagrave

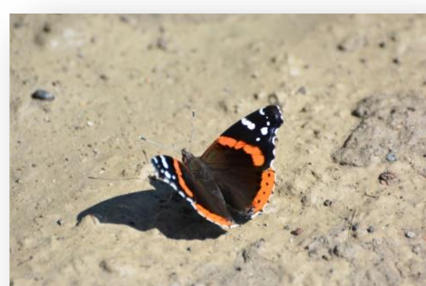
Sun. June 11 Morning outing in search of Bobolinks and Meadowlarks – Derek

Sun. June 25 - Oshawa/Port Perry Butterfly Count

June 6 (afternoon) - Biodiversity by Design with Neil Turnbull tour of Hedgerow Farms

Sat. July 1st Canada Day – "Tricky Sparrows" morning bird hike - Derek

Mon. July 3 – Sunderland Butterfly Count



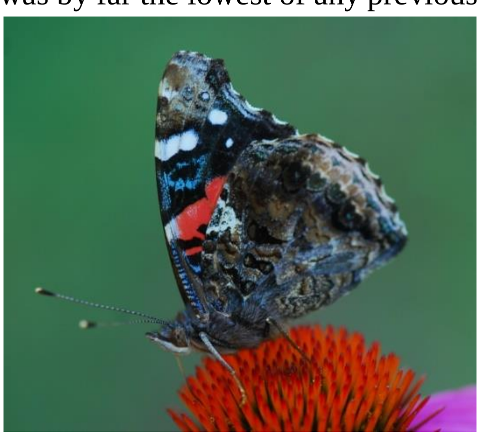
Butterflies in Peril?

Low Butterfly Numbers in 2022, What Will Happen in 2023?

By James Kamstra

I have been observing butterflies since I was a youth and have been organizing butterfly counts for nearly 30 years. The summer of 2022 stood out as having the lowest numbers of these beautiful insects that I have ever seen. The trend was the same in all four counts that I participated in (Oshawa, Sunderland, East Toronto and Haliburton) and many other counts had similar reports. The weather conditions were ideal on most of these counts, so consequently low numbers could not be blamed on cool days with overcast skies.

The results from annual butterfly counts, which are done across southern Ontario, provide a means for making year to year comparisons. The data of all Ontario counts from 2009 to 2021 show that the average number of native butterflies (i.e., discounting Cabbage White and European Skipper, which are not of conservation concern) per hour of survey was 37.8 yet in 2022 this number fell to a mere 20.9. Butterfly numbers can fluctuate considerably from one year to another as a result of weather, disease and other factors having ranged from a high of 63.5/hour in 2012 to a low of 24.4/hour in 2009. The Sunderland butterfly count in North Durham has had consistent levels of participants and field effort for 25 years. Here the number of native butterflies recorded averaged 54.3/hour from 1997 to 2021 (ranging from 115.0/hour in 1999 to 24.6 in 2019) but only 12.4/hour in 2022! This was by far the lowest of any previous year.



What could the cause be for such a plummet in butterflies? Apart from Monarchs, migrant species which include Red Admiral, Painted Lady and Question Mark were in very low numbers in 2022. Numbers of these species go up and down like a seesaw from one year to another, so as a result their paucity is not a particular concern. But when consistently abundant resident species such as Tiger Swallowtail, White Admiral, Eyed Brown, Great Spangled Fritillary and Northern Crescent are noticeably fewer than there is an indication that something is wrong. The reason is not clear. Weather cannot be the issue since temperatures and precipitation was about average in June and July.

Was it a result of increased pesticides' use, habitat loss, disease or something else? My first thought was that spraying to control Spongy (Gypsy) Moths has been greatly increased after the heavy infestation of their caterpillars in 2021. The bacillus thuringiensis spray used on them affects all Lepidoptera larvae. That was unlikely however as the downtrend was too widespread. We will have to see how butterfly numbers transpire this coming summer to see if the low numbers of 2022 represent a permanent decline or an aberrant year if populations bounce back. Since insects including butterflies lay a large number of eggs, populations have the potential to respond quickly. Let's hope.

Photos Mid-summer Tiger Swallowtail and Red Admiral by James Kamstra

Truth or Myth Mini-quiz?

Test your knowledge on this mini-quiz ….

1. Lemmings commit mass suicide when populations are high – Truth or Myth?
2. Some spiders can mimic chameleons – Truth or Myth?
3. Bulls get angry when they see the colour red – Truth or Myth?
4. Goldfish have no memory – Truth or Myth?
5. At least one species of bird can have 150 eyes – Truth or Myth?
6. Prehistoric mammals were mostly colour blind – Truth or Myth?

Trees without leaves – yes you can identify them!

On January 29th Cara Gregory and James Kamstra led a group of keen naturalists on a tree identification walk through the forests of Secord Track near Uxbridge. What an exhilarating time we had enjoying the falling snow and the beauty it added to the forest setting. Cara and James imparted a wealth of information to the group. Below are a few of the clues they used to identify trees in winter.

One of the keys to identifying trees is to look at the arrangement of the branches, which will be mostly arranged either opposite each other (like your arms) or alternating (where branches are staggered).

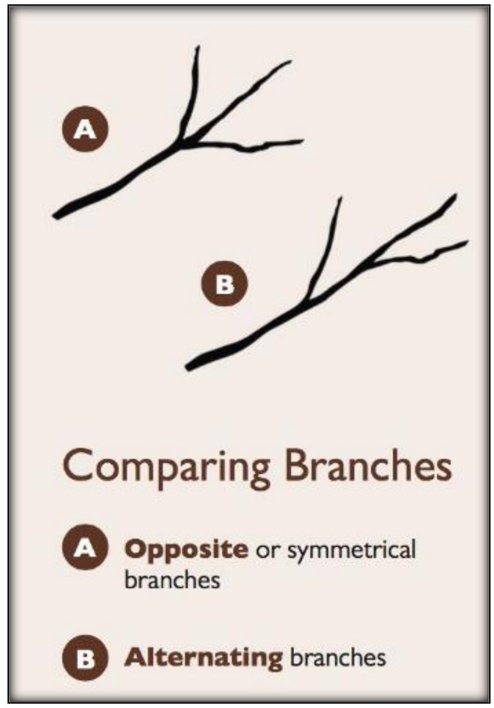
There are a set of tree species which have opposite branching:

Maple, Ash, Dogwood* and Viburnum - You can remember them with the pneumonic MADVibes.

**One exception being the Alternate Leaved Dogwood, which is fairly easy to remember since it is in the name.*

Other clues to look for:

1. Is the bark smooth, ridged, spongey, grooved, dark, grey, etc.?
2. Does the bark have obvious lenticels? What is a lenticel? Derived from the Latin *lenticella* meaning small window, lenticels look like lines or spots on the bark of a tree. They are areas on the bark that permit respiration– the exchange of oxygen and carbon dioxide between the tree and the environment. Without the lenticel opening the bark would seal in the tree's cells and cause the tree to die. For example, White Birch trees have obvious lenticels.
3. Where is the tree growing? While some trees will grow in many different conditions, most will only grow in a certain type of soil or terrain.
    a. Is the tree in a low-lying wet area?
    b. Is the tree growing in an upland dryer area?
    c. Is it growing under other trees meaning that it likes shade?
    d. Is it growing out in the open meaning that it is sun loving?



Want more details? NDN member and hike participant, Brenda Near created a pdf booklet summarizing Cara and James' information from the hike, including photos of trees and their identifying features. You may request a copy of it by emailing her at brendaanear@gmail.com

Editor's Note: The document that Brenda prepared is excellent and I would encourage you to reach out to her if you're in any way interested in trees in the off seasons.

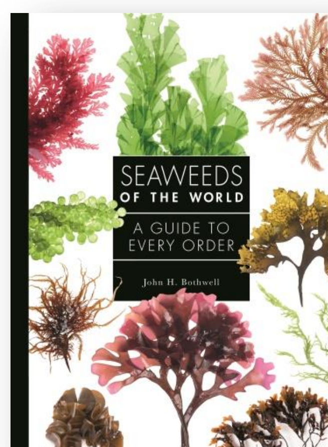
Nature Quiz – What am I?

This photo doesn't give many clues except that there is obvious filamentous algae growing on a substrate that is sort of convex shaped. Also based on the size of the green blades of grass, this is a sizable object.   Is it an animal or an inanimate object? Any ideas?

Book Reviews

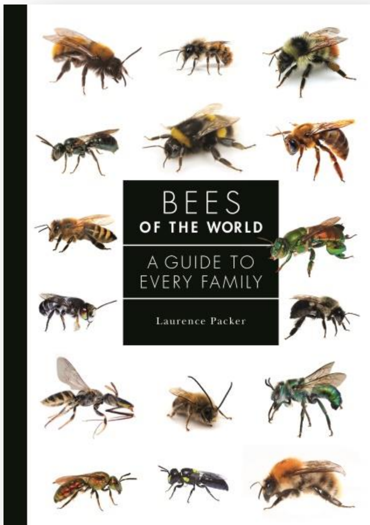
By Geoff Carpentier

Seaweeds of the World – a Guide to Every Order. John H. Bothwell. 2023. Princeton University Press, Princeton, New Jersey, 08540. 240 pages - hardcover $29.95USD. ISBN:976-0-691-22854-9



I love all types of books but this one almost didn't catch my attention. I know a bit about "seaweed but not a lot. I've seen it in many places around the globe, but frankly didn't think much about it except when I saw some in Antarctica or I watched Sea Otters playing in it Alaska. But my inquiring mind said maybe spend a bit of time and learn some more. So that's exactly what I will did. As we listen to the news we learn how vital the oceans will be to our survival and of course the seaweeds are a critical component of those ecosystems.

The book is illustrated with over 260 mostly colour illustrations and photographs and 77 maps. The lead in pages of the book are quite fascinating of themselves, dealing with topics such as evolution (ever hear of the great oxidation event? Me neither!), taxonomic variation, general natural history of the complex, early pioneer's scientific studies, reproduction of seaweeds, photosynthesis and distribution. The author then delves into uses, such as food, fodder and fertilizer and extractive industries, such as potash, saltpeter, iodine, and biofuels. The balance of the book is dedicated to describing the seven orders of seaweed, generally categorized in part by colour: green, red, and brown seaweeds. I will warn you this is not an easy book to read but the author has taken the time to make sure that the scientific information is formatted so the enquiring mind can absorb it without much effort.

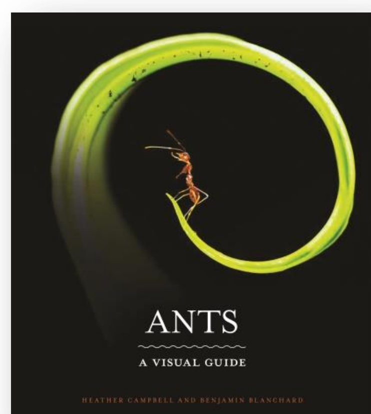


Bees of the World – a Guide to Every Family. Laurence Packer. 2023. Princeton University Press, Princeton, New Jersey, 08540. 240 pages - hardcover $29.95 USD. ISBN: 976-0-691-22662-0.

I have written in these pages previously about other books on bees and their allies and lamented how difficult it is to find good resources for many classes of animals and plants. The science is evolving and publishers, like Princeton, are leaders in this regard. They repeatedly find new exciting topics that will help us better understand the world and the species that make it work. This new book focuses on one group of pollinators – the bees. In its pages, a tremendous amount of information is given about the seven bee families. Worldwide over 20,000 species may be found. While we typically think all bees live in hives and make honey that is not the case as the vast majority acts nothing like our introduced and domesticated variety.
Through these pages you will explore their habits, habitats, foraging and nesting.

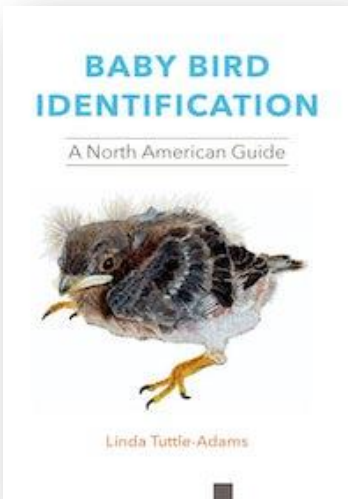
The book is illustrated with 217 color photos, 17 B&W images and 106 maps. To say the photographs are spectacular would be an understatement by the way. The author, Laurence Packer, is a world renowned expert on bees and shares his knowledge in this book. Placing this book by your bedside will allow you to slowly absorb a vast amount of knowledge about bees and why we should do all we can to save them.

Ants – A Visual Guide. Heather Campbell and Benjamin Blanchard. 2023. Princeton University Press, Princeton, New Jersey, 08540. 224 pages - hardcover $32.00USD. ISBN: 976-0-691-22662-0



Wow, I just purged my book collection and lo and behold the timing was perfect since yet another will adorn a place of honour by my other books. This new book from Princeton continues with the exploration of new subjects not adequately covered by other publishers. As with other books of this ilk, the introductory chapters deal with general biology, anatomy, evolution, life cycles, ecology and social systems. Found throughout almost every part of the world, ants are not just a bug; they are a critical part of the earth's ecosystems, fulfilling every roll from farmer to predator to prey. Each broad subject area is accompanied by vignettes about relevant species of ants that typify those attributes. As always, spectacular colour photos and maps accompany the species described. A handy two page ant classification chart will help the reader put into perspective the various subfamilies of ants, including the seven extinct ones. While this book is not an inclusive field guide, it provides innumerable clues to the identification of many species and families of ants. Make space for this baby on your shelves.

Baby Bird identification – a North American Guide. Linda Tuttle-Adams. Comstock Publishing Associates an Imprint of Cornell University Press, Ithaca and London. 2023. 401 pages, softcover. $39.95 USD. ISBN: 978-1-5017-6285-7.



This is an intriguing and interesting book that forges into relatively uncharted territory related to reference books about hatchlings, nestlings and fledglings of select North American birds. Tuttle-Adams has designed a book that I think will be quite interesting and very useful to both academia and laypersons alike. The layout of the book is clear and readable. The author takes time to carefully explain important background considerations, such as ethical handling and photography of wildlife. Following this she describes in a clear and concise manner the illustrated glossary that deals with the topography of baby birds. The accompanying photographs are very well chosen and clearly explain the features she is describing. Following this are chapters on anatomy, growth, estimating age and a detailed discussion on a methodology to actually correctly identify the species in question. Much of the balance of the book deals with individual species and salient features one would consider in identifying them at various ages. Information such as age, diet, gape and bill colour are offered for each species discussed. These are supported by paintings on 35 full colour plates and then 8 pages of photos. However, I'm not really sure of the value in separating the photos from the plates. I realize she is a painter but as a reader I'd rather see all the illustrations in one place, rather than having to look at two separate sections to see if the information I'm seeking is there.

That said the paintings are exquisite and detailed. An oddity I can't explain is why in one case a nest with eggs was depicted. This is unexpected as this is not a book about bird nests. I think the space would be better utilized to show another example of a baby bird. The copy editor in me notes that Plates 10 (which cites Hawks, Eagles and Kites, only shows hawks) and 13 (Woodpeckers (continued) title missing) have errors in the titles that should be corrected. The book closes with a series of appendices in a tabular form that cover subjects such as Growth and Development, Species Comparison and an Identification Worksheet. These in themselves will be most helpful to researchers and wildlife rehabilitators.

I wanted to test a couple of species I was familiar with to see how the author did with her ID skills – Barred Owl and American Woodcock. The first one was an easy one but the latter tougher. She aced it! Perfect depictions of both species I had photographed years ago.

Now there are some improvements I might suggest for the future. Key amongst these is the species chosen, or more correctly not chosen. Why is space dedicated to species such as Indian Peafowl, Chukar and Spotted Dove, when many native species are omitted? There is also a confusing formatting issue when discussing the raptors. Headings called “hawks” , “kites “and “eagles” start off the section and the implication is that the species following would include representations of those species. Not so. They appear to be floating headlines only. I really don’t understand their purpose. I was disappointed in the scope of species covered. I think due to the number of species that could be discussed, an eastern and western guide could have been developed and published separately. Groups such as gulls are grossly under-represented as only handful are included. Likewise with ducks, both puddle and diving, few examples are offered.

That said, in conclusion, I think this is a good book and is an excellent addition to the avifaunal library. I look forward to additional volumes on more species we might encounter.

The 3rd Ontario Breeding Bird Atlas Update

Oh my goodness – Year 3 – already! I hope that all of you are looking for nests or signs of nesting. Please don’t let this valuable data go to waste. Either register to be a participant in the atlas or at least email me your sightings of unusual species, with species name, dates, what you saw and very specifically where you found them. Thanks so much. This is a great project that will help us assess the health of our avian populations.

Answers to Truth or Myth Mini-quiz

1. Lemmings commit mass suicides off cliffs – Myth. It has long been believed that lemmings react to overpopulation by simply killing themselves by suicide. This is absolutely false and its roots are reported to be embedded in action taken by producers of a Disney movie called White Wilderness, where the lemmings were photographed jumping off a cliff. In actuality, the lemmings were brought to the site and forced over the edge to create the devastating scene. Wow you sure couldn’t do that today.
2. Some spiders can mimic chameleons – Truth. The crab siders are stealth hunters and rely on camouflage to catch prey. They can change colour to match the background of the flowers they use to hunt prey.
3. Bulls get angry when they see the colour red – Myth. Bulls are actually colour blind and can’t even see red or green. They react to the movement of the matador’s cape not the colour of it. It is said the matadors used red capes to hide the blood generated when they spear the bulls to kill them. By the way this spear is called an “estoc”.
4. Goldfish have no memory – Myth. Again this is false. Researchers at Plymouth University determined that goldfish can remember events for up to three months. Other studies show they might even be able to associate this memory with time. One study utilizing technology, where the fish had to nudge a lever at a specific time to get fed, showed that the fish learned

to anticipate feeding time even before the researchers provided other clues. They simply showed up at the lever when they were supposed to be fed!

5. At least one species of bird can have 150 eyes – Truth – well sort of. The Peacock has two eyes that can see and up to 150 eye spots on its tail feathers. The latter are used to attract females. The more eyes and the brighter they are the better!
6. Prehistoric mammals were mostly colour blind – Truth. Prehistoric mammals in the early evolutionary days hunted mostly at night and so didn't need to see bright colours. As they evolved and competition increased some became diurnal and therefore needed to rely on colour to spot prey and enemies.

Nasty & Nice Nature News

Compiled by Geoff Carpentier

A MammothTask: Colossal Biosciences, a US company has been planning for over two years to try to revive the Woolly Mammoth from extinction. Over $225 million USD has been raised through investors. But why? What would you do with a Mammoth if you did create it? Seems the concept isn't about reviving the animals, it's about genetic manipulation and the technology that can be used elsewhere, such as health care. *(Source: The Associated Press)*

Smoke Shading; Fire experts in California have revealed that the intense brush fires in California may themselves be producing conditions that cause the fire to diminish rather than expand in some cases. Essentially the fires creates so much smoke they block the sun and cause shading near the earth that results in a cooling of surface temperatures and more stable environmental conditions. (*Source: Reuters)*

Giant Eggs From Oz: This just in from the Land of Oz … scientists may have unravelled the mystery of the giant egg from Australia. 45,000 years ago some giant bird laid a cantaloupe sized egg – well hundreds of birds laid thousands of them over time. Some thought the egg-layer was an enormous bird called a *Genyornis newtoni*. Others thought a much smaller turkey-sized bird did the deed. A recent paper in the Proceedings of the National Academy of Sciences details a technique known as paleoproteomics (the study of proteins) on egg shards that were recovered. They made one firm conclusion – the eggs did not come from any bird that was genetically like anything alive today. They also determined that the eggs LIKELY came from the 500 lb. *Genorynis newtoni*. The interesting outcome of studies of this type is that most of these giant animals disappeared from human hunting pressure, not catastrophic climate events. *(Source: The Washington Post)*

Earwigs – Great Parents? Only about 1% of insect species show parental care. Earwigs are one of them. Females construct an underground chamber and lay 30 to 60 eggs which they protect and keep clean from fungi by "licking". If a mole or another burrowing animal scatters her eggs, she diligently collects them together again. On the other side of the coin, not all insects are caring parents like the earwig. Some are provisioning parents – that means that they only provide the essentials for life to start, then the young are on their own. There is a type of wasp which will seal her eggs in a nest with only enough food for a few larvae, leaving the strongest to eat their siblings.

This is parental provisioning, rather than parental care. Nature can be nasty or nice – that's for sure. (Source: www.theconversion.com)

Answers to Nature Quiz

Well this was certainly tough and frankly there was so little to go on that unless you just recognized something about the photo you'd be left wondering .. So I'll put you out of your misery .. It's a large Snapping Turtle. These turtles can get quite big and it's not difficult to find one draped in weeds or covered in algae as they spend so much time in slow moving water. The only clues the original photo offered was the slope of the carapace and the base colour coupled with what I just said about vegetation clinging to the animal. If you got this on – I'm impressed!

Birdathon 2023

Geoff will be doing his annual 2023 birdathon in May – stay tuned for an announcement in your email inbox as to how you can donate to this important and worthwhile cause.

Thank-you Kim Lendvay and Cyndi Barron

Kim has been managing our Facebook for the last several years – always making sure you, our members, know what’s happening. She has decided to step down and Mark Dorriesfield will pick up the reins. Thank-you so much Kim for all the effort and time you have put into this important task!

Cyndi has been one of our copy editors for years and has ensured that the words in these newsletters are accurate and grammatically correct. She is stepping down from this important role. We are most grateful to Cyndi and are now looking for someone to fill her shoes. If interested please let me know and I will explain the role and time commitments.

Nature’s Pretty Side

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