President's Message

One of the local issues you may have heard about is a proposed 600-unit residential development by Avenu Properties Corp. This project lies adjacent to and partially in a Provincially Significant Wetland on Lake Scugog north of Port Perry. So far, the wetlands found along much of the Lake Scugog shoreline prevented the wall-to-wall cottage development found on some nearby lakes. That may change however, if developments of this type get approved and constructed. For more details see https://www.durhamradionews.com/archives/188808

The cooler days of autumn are upon us. Certainly, one of the highlights of this time of year is seeing a hillside displaying a range of brilliant hues as the leaves change their colours, while many migrant birds pass through on their way to the wintering grounds. Get out and enjoy nature, when you can and also enjoy our autumn events.

James Kamstra, President, North Durham Nature

Upcoming Events – October to November 2024

Upcoming Meetings

A couple of changes occurred in our speaker's roster. Dr. Erica Nol was not able to present in September because of personal issues but will give us her songbird talk in the New Year. Thankfully Mark Stabb was able to replace her on short notice. Also, Micaela Cooper will replace Phil Careless in October, who was originally scheduled to tell us about Queen Elizabeth Wildlands.

October 22, 2024 – Micaela Cooper, Ontario Parks Biologist
"Queen Elizabeth II Wildlands Provincial Park" – Discover the secrets of this little known, but extensive wilderness park, not far north of us.

November 26, 2024 – Geoff Carpentier
"Citizen Science" – Learn how being a Citizen Scientist benefits all wild things!

Upcoming walks & Outings (see NDN website for more details)

Oct 12 Fungi and Friends – Explore the lesser-known members of the forest understory (10 a.m.)

Oct 26 Autumn: Seasonal Changes in the Forest - Find evidence of flora and fauna preparing for winter (9:30 a.m.)

Nov 16 Lake Simcoe Waterbirds - View migrating waterfowl along the south shores (9 a.m.)

Bears and Birds Don't Mix

Bear Battered Bird Boxes and Habitat Change brings our 10-year Conservation Project to a Close

Text and Photos by John Fisher (trio with shovels) Derek Connelly (other two photos)

After ten years of monitoring bird houses in Lafarge's Uxbridge Pit, we have decided to remove them. Changes in habitat and predator attacks by Black Bears has turned a safe nesting location into a trap for the Tree Swallows and Eastern Bluebirds. This bird house project has been very successful over the years, producing an estimated 1200 fledglings, with an average of over 80% occupancy. The predator-proof metal box and pole design and lack of wren habitat reduced predation and interspecies competition over the initial years. As the new forest grew up, wren nesting increased in the bird houses (0 % - 10%). More importantly, Black Bears knocked over 2 bird houses in 2022, 8 in 2023 and 16 this year killing eggs, young and possibly adults trapped in the boxes. This year saw a 60% decline in fledgling success attributed to bear attacks on 1/3 of all the bird houses (see table below). Other factors such as weather, insect population decline, and gravel extraction also played a part in this downward trend.

Fledgling Estimates in Lafarge Uxbridge Pit

:

	2015	2016	2017	2018	2019	2020	2021	2022		2023	2024	Total
TREE SWALLOW	78	97	81	96	123	108	104	50		106	31	874
EASTERN BLUEBIRD	13	19	32	24	29	63	32	34		62	20	328
BLACK-CAPPED CHICKADEE		5	5					19				29
Total Fledged	91	121	118	120	152	171	136	103		168	51	1231

Other more open grassland habitats, like rehabilitated inactive Lafarge sites further from the present bear habitat may be good candidates for future bird house projects. Lafarge welcomes proposals for conservation on its properties including repairing and relocating the bird houses.

Should NDN put up more bird houses? Are the Lafarge properties likely to remain viable for conservation? Another abandoned Lafarge site in Goodwood has been identified. It has been inactive for fifteen years and has an open meadow habitat. Lafarge and NDN are looking for someone to reshape, repair and reinstall these boxes. If you are interested in participating with NDN in this new site restoration project, let us know. Contact nature7@gmail.com.

Thanks to the many people in NDN and local neighbours for volunteering their time over the years - monitoring, repairing boxes and helping with this project.

Nature Quiz – What am I?

by Geoff Carpentier

Let's see – is this a breakfast treat? A waffle? What could it be? Hint: It is edible and grows in wild dark, damp places. But be careful of look-alikes as they can be deadly!

Marsh Monitoring – Beaver River Marsh 2008-2024

Photos and text by Ann Balmer and John Peters

The Great Lakes Marsh Monitoring Program (MMP) started in 1995 as a cooperative venture between Canada and the United States. The goal of the MMP is to maintain a long-term data base to monitor the health of the wetlands and coastal marshes in the Great Lakes basin by identifying changes in the presence of a few focal and several secondary species of breeding birds and frogs.

Protocol for Bird Data Collection

Survey routes, consisting of one to several stations, are established at marshes throughout the area. The protocol for the survey is standardized so all participants collect the same data using the same methods. The current protocol is to carry out the surveys in the three hours after sunrise. The goal is to fit in three trips per season, ten days apart between May 7th and July 5th. The forms, bird call recordings, survey route locations and stations, reporting methods, and guide to allowable weather conditions are all provided.

The Focal Species on the data form are American Bittern, American Coot/Common Moorhen, Black Rail, King Rail, Virginia Rail, Yellow Rail, Least Bittern, Pied-billed Grebe and Sora. Five of these are represented on the broadcast recording, likely because these calls are enough to elicit responses from all of them.

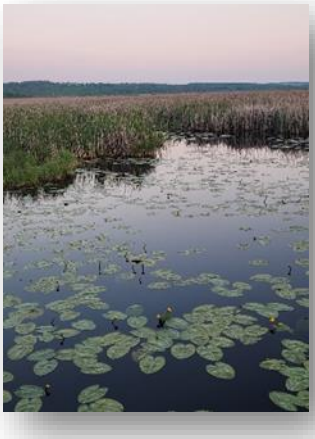
Unless these marsh species are responding to a perceived threat from a competitor, they are generally secretive and quiet, making them difficult to detect without broadcasting their calls. Each station consists of a 100 m semi-circle. Participants spend 15 minutes at each station and follow a standardized procedure of listening, playing the broadcast recording, and listening again. All observations are recorded on the forms which are later submitted to Birds Canada.

Beaver River Route

This route was established and surveyed once in 1995, remaining dormant until we took it over in 2008. It consists of seven stations along a 4 km segment of the Rail Trail in the Beaver River Marsh between Scugog Lines 12 and 13. The station locations were selected to represent the various habitat conditions along the route. For this route, each survey takes about two and a half hours.

Results

The 1995 focal species recorded were American Bittern, Common Moorhen, Sora and Virginia Rail. We have never recorded a Moorhen, but the other three species still occur regularly along the route. Although the overall MMP data show trends up and down for various species (MMP Newsletter 2022), the results for this route have been very consistent over the years. This may be due to the large size, stable nature, and the inland location of this marsh. Although there is some variation in water level, there has been no long-term trend one way or the other. There are variations in bird species numbers, but they appear to be related to specific weather conditions at the time rather than long-term trends.



John Peters with broadcast speaker on his head (right).
Beaver River Marsh June 2024 (left)

Butterfly Counts

Oshawa & Sunderland Butterfly Counts in 2024

Photos and text by James Kamstra

The Oshawa butterfly count was conducted on July 4th, marking its 30th year, a true milestone. Meanwhile, the Sunderland count happened on July 7th in its 28th year. Counts involve participants going out in small groups to tally and identify all of the butterflies that they observe in their respective areas.

The Oshawa count was originally scheduled for June 29 but was postponed due to poor weather (cloudy, rainy and cool). As a result, several participants were not available on the adjusted date, and only 6 counters participated in four parties. The circle of the Oshawa count stretches from north Oshawa to north of Port Perry.

The Sunderland count (which includes portions of Uxbridge, Brock and Georgina Townships) was better attended with 27 participants in 13 parties. Weather conditions were fine on both counts with moderate temperatures, ample sunshine and low winds.

Thirty-eight species were tallied on the Oshawa count. Baltimore Checkerspot, Gray Comma, Dion Skipper and Broad-winged Skipper were observed which are all infrequent at Oshawa, yet regular at Sunderland. All species recorded at Oshawa were also found at Sunderland (which also had an additional 11 species not seen on the Oshawa count). The Sunderland circle generally has better butterfly habitat than Oshawa, but also greater field effort resulted in considerably higher numbers of most species.

The number of species recorded at Oshawa was the second lowest in 30 years and less than the long-term average of 46 species. Sunderland had considerably more with 49 species (but less than the average of 53). The Sunderland count documented 24.5 native butterflies per hour of field effort (i.e. not including Cabbage White and European Skippers) in 2024, an improvement over the all time low of 12 butterflies per hour recorded in 2022, but well below the long term average of 54. Only 18.0 native butterflies per hour were tallied at Oshawa, well below the pre-2022 average of 49.0. Monarchs too were well below average numbers on both counts.

Spring was somewhat warmer than average in 2024 resulting in earlier emergence of some butterfly species. As a result, Common Ringlets, an early flying species, were missed on both counts. It had been recorded on all previous Oshawa counts and most of Sunderland's. Silvery Blue, another early species which is recorded nearly every year, was also not found.

The results of both counts can be found in the following table and the participants are listed below.

	Oshawa	Sunderland
SPECIES	**July 4**	**July 7**
Black Swallowtail		6
Midsummer Tiger Swallowtail	15	51
Mustard White	2	59
Cabbage White	68	363
Clouded Sulphur	18	172
Orange Sulphur	1	10
American Copper		1
Bronze Copper		1
Harvester		4
Coral Hairstreak		1
Acadian Hairstreak	1	6
Eastern Tailed Blue	12	21
Northern Azure	24	53
blue sp.	4	3
Great Spangled Fritillary	9	38
Meadow Fritillary		2
Pearl Crescent	1	8
Northern Crescent	39	71
Baltimore Checkerspot	4	110
Question Mark	9	14
Eastern Comma	4	7
Gray Comma	1	5
anglewing sp.	7	4
Mourning Cloak		3
American Lady	3	19
Red Admiral	36	71
White Admiral	18	16
Viceroy	1	8
Northern Pearly-Eye	4	28
Eyed Brown	48	183
Appalachian Brown	3	23
Little Wood Satyr	3	6
Common Wood Nymph	17	202
Monarch	5	44
Silver-spotted Skipper	29	14
Northern Cloudywing	4	1
Columbine Duskywing		1
Least Skipper	11	60
European Skipper	106	130
Peck's Skipper	4	29
Tawny-edged Skipper	1	17
Crossline Skipper		6
Long Dash Skipper	3	21
Northern Broken Dash	8	22
Little Glassywing		9
Delaware Skipper	22	122
Hobomok Skipper	5	5
Broad-winged Skipper	5	37
Dion Skipper	3	28
Black Dash		1
Dun Skipper	24	115
grass skipper sp.	5	8
TOTAL SPECIES	38	49
TOTAL INDIVIDUALS	587	2239
No. of Participants	6	27
Km. on foot	23	85
Km. by car	70	131
Hours on foot	22	67
Hours by car	2	4
Total Hours	23.5	71

Participants: Oshawa: Jon Alsop, Carly Davenport, James Kamstra, Helen Lam, Steve Laforest, Tom Mason.

Sunderland: Jon Alsop, Susan Blayney, Carly Davenport, Sarah Dobney, Mark Dorriesfield, Todd Hagedorn, Paul & Debra Harpley, Brian Henshaw, James & Lynda Kamstra, Steve LaForest, Helen Lam, Craig Lloyd, Reuven Martin, Tom Mason, Ginny Moore, Brenda Near, Ed Poropat, Barb Samuels, Victor Szabo, Sam Turner, Diana Wolfe, Dave & Mary Beth Worthington and Bob & Karen Yukich.

Book Reviews

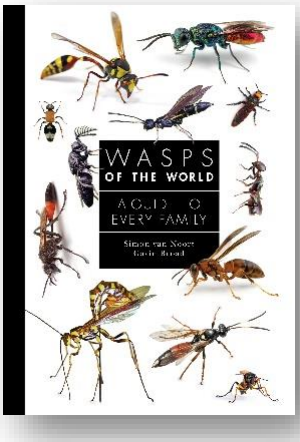
By Geoff Carpentier

I received the following three books recently and will share my thoughts in a coordinated fashion as they have similar formats and style, although the content is clearly different.

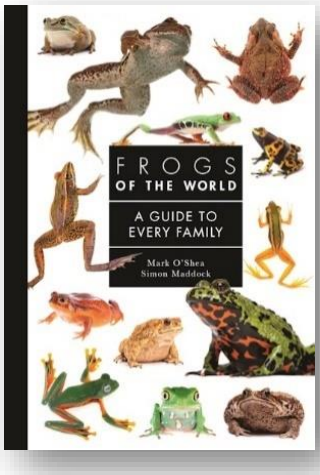
Frogs of the World: A Guide to Every Family. Mark O'Shea & Simon Maddock. 2024. Princeton University Press, Princeton, New Jersey, 08540. 240 pages. $29.95 USD. ISBN: 978-0-691-24830-1.

Shells of the World: A Natural History. M.G. Harasewych. 2024. Princeton University Press, Princeton, New Jersey, 08540. 240 pages. $29.95 USD. ISBN: 978-0-691-24827-1.

Wasps of the World: A Guide to Every Family. Simon van Noort & Gavin Broad. 2024. Princeton University Press, Princeton, New Jersey, 08540. 240 pages. $29.95 USD. ISBN: 978-0-691-24854-8.

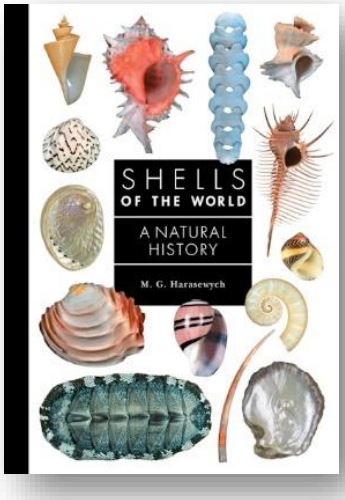


Trying to deal with the many families of creatures that span multiple regions and have thousands of individual species and forms can be a challenging task. One can never expect the outcome to be totally inclusive, but it leads one in a direction where further research can lead to deeper insights. The very fact that one becomes aware of the complexity of the group under study or the range and scope of their presence on earth can itself be revealing and exciting. These three books lead one succinctly to those realizations. With this in mind these three book respectively introduce you to 7600 frogs, 80,000-100,000 molluscs and 150,000 wasps – how hard could that be to deal with these species in 720 pages of text and photos? Well, as in the past, the authors pulled it off – each book is lavishly illustrated with photos and maps and the complexities of each family and subgroup are well explained. Here are some tidbits to tease you:



The frog book discusses the three suborders, eight super families and 56 families of frogs. Each is generally described, with details on habits, activity, reproduction, diet, size and range. A map and photo accompany each family account. The amount of detail is incredible, and one can appreciate that much information is provided in a few pages, covering topics such as evolution, anatomy, physiology, senses, vocalizations, reproduction, feeding, diet, defence, locomotion and conservation. Did you know that the 'tailed frogs' of western North America are the only frogs in the world to internally fertilize the females?

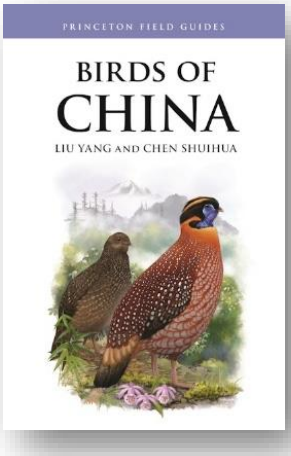
In the shell book, similar treatments are offered for the eight classes of Mollusca and 93 of the 700 families are discussed in some detail in this book, but all freshwater and land base molluscs have been excluded. You can only do so much in the limited space this book offers! I found this overview interesting, but the substance and detail was understandably limited. Not sure how to fix this but maybe this should be a series of books where each class is dealt with separately in individual books, so more specific insights and detail can be provided, since the classes differ from each other in so many ways.



Finally, the book on wasps covered about 100 families of wasps, detailing information on anatomy, evolution, diversity and biology. Unlike the mollusc book, I found this one more satisfying as the details and similarities between families was not as extreme so understanding them was easier to comprehend as one traveled though this book.

Would I recommend these books to you? Yes, with the caveats outlined above.

Birds of China. Liu Yang & Chen Shuihua. 2023. Princeton University Press, Princeton, New Jersey, 08540. 672 pages. $39.95 USD. ISBN: 978-0-691-23752-7.

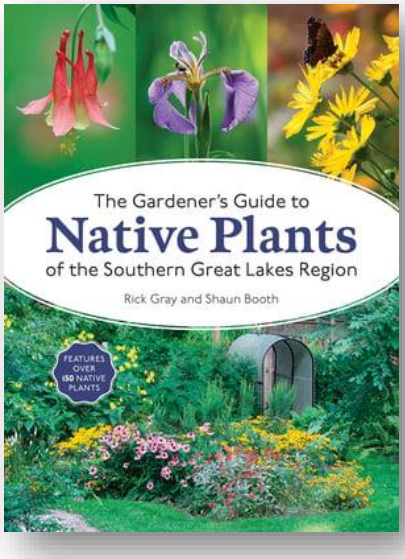


China is a complex region that is vast in size and varies in habitats and terrain. This book is the first of its kind to publish information on all ~1500 species that occur in China. Firstly, the paintings are exquisite, and the images depicted are of substantial size so that the reader can see fine detail. Often, when so many species are included in a single volume, the images are so tiny one has trouble seeing the features related to the identification of the species – not so here! The usual information on identification tips, names (English, Cantonese and Hanyu pinyun (the English transcription of a blend of Roman and phonetic depictions for the Mandarin characters in the name). Now briefly here are a couple of issues I noted. First of all, although the paintings are almost all beautiful and depict the field marks accurately, some are too dark or not reflective of the range of detail some species exhibit in the field (i.e. the European Honey Buzzard is too dark, and the morphs shown don't match what one would see in the field). At the beginning of each group of species (e.g. rollers, bee-eaters and kingfishers) a painting of a representative species for each of the subgroups is shown to introduce the section. I don't see the value of showing these paintings, which appear in subsequent pages in exactly the same pose. It would have been simpler to just have a title for each group, and then go straight to the species accounts. I found this confusing and a waste of space. Then throughout much of the text the paintings appear on one page and opposite that the text and maps all appear on the opposing page following a horizontal ordering, where the order of the species vs. maps, etc. is the same, except periodically they are not! The species and formatting should all match exactly with the map and text opposite for consistency. Generally, I loved the book, and it will be most useful if one intends to study the birds of this vast region.

The next two reviews are provided by Derek Connelly.

Gardener's Guide to Native Plants of the Southern Great Lakes Region. Rick Gray and Shaun Booth. 2024 Firefly Books, 352 pages, $45.00 CDN. ISBN: 978-0-228-10460-5.

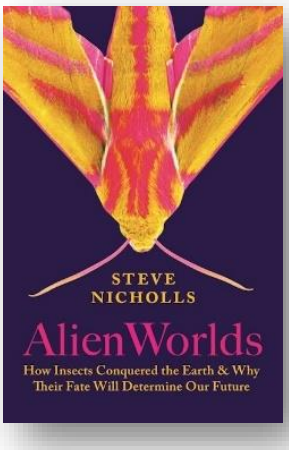
This book covers 150 native plants in the five US states and one Canadian province that surround the southern Great Lakes. It describes the plant, and what it needs to thrive in your garden, along with the insects that use it as a host plant, any pests of importance and its status as a Species at Risk (SAR). The plants are organized in alphabetical order by scientific name, followed by the common name. The photos clearly show the flower, seed pod, leaves and the whole plant on two facing pages with all the details listed. Seven appendices for further reference, and a common name index are included at the back.



One of the authors, Rick Gray presented this year at the Uxbridge Lucy Maud Montgomery annual garden tour at a book event in Leaskdale, Ontario. I was encouraged by his passion for native plants in our gardens. He was an easy-going speaker defining terms and clarifying his points in a light-hearted way. This comes across in their book too with their headings: for example. "A Coneflower by any other name" where they describe scientific naming of plants. Other headings are straight forward, e.g. "What is a Native Plant", and "How to use this book". This keeps the details clear and easy to read. I particularly liked the references to the butterfly and moth hosts. Their decision to use vague range maps indicates the problems they faced in defining where plants are actually native, and supports their efforts to provide advice on choosing native plants for one's garden. This encourages more native plantings to increase diversity in the garden, resulting in more butterflies, pollinators and birds in general, and less garden maintenance. The timing of this book release was perfect as so many gardeners are looking for ways to make this change. The Globe and Mail listed it on their Bestsellers list this spring.

I like this book and feel it adds more awareness about native plants, their ecosystems and adds more sustainable biodiversification to our gardens. I bought it for my wife who is adding more native plants to our garden every year. My spring native wildflower walk may soon be right in my own backyard!

Alien Worlds - How Insects Conquered the Earth and Why Their Fate Will Determine Our Future. by Steve Nicholls. 2023 Princeton University Press, Princeton, New Jersey, 08540. 496 pages. $39.95 USD. ISBN: 978-0-691-25358-9.



As the book unfolds, the full-page tilting head shot of the African mantis is a definite "Alien" as if to say "Hello, welcome to our world". It's a creepy but funny and enticing start. You can pick this book up and start with any chapter, but the rich content is all connected. It's an entertaining read even if you have no science background, but the science is all there if you choose to notice.

I spotted this book on the shelf in the Uxbridge library. The title and photographs lured me in. I started reading it and was amazed at the detail and lighthearted writing. It's packed with fascinating insect facts and short personal experiences from this successful Emmy Award winning professional naturalist. With a Doctorate in Entomology, the author branched out to direct and produce wildlife documentaries, first with BBC Nature and now across the world. Nicholl's is also the author of a number of books, e.g. *Flowers of the Field: A Secret History of Meadow, Moor and Wood;* and *Paradise Found*: *Nature in America at the time of Discovery*. This book is loaded with over 500 notes and references at the back connecting biological and historical facts he uses with scientists, poets and other experts or notable characters.

The book is broken into 11 chapters, each offering another journey into insect evolution. The first few pages of photos and graphs let you know you are in for a treat. The photographs are incredible and overall follow along with the text. I wanted more photographs, but as he advises not every insect described has been photographed.

The chapter on flight I found particularly interesting, as it described not only the ideas of the evolution but the intricacies of the wing movements, and their pros and cons from an engineering success. We can learn so much from insects, and as I read the last chapters about the social insects, I wondered if their ordered structure is our only way to survive too?

Fact or Fiction?

Text by Lynda Kamstra
Photos by James Kamstra

Grey Treefrogs use visual cues to trigger colour changes

FICTION: It's all about the frog's skin. The Eastern Grey Treefrog *(Hyla versicolor)* is known to display two main colours - grey and green. The statement, "They change colour to camouflage with their environment" is a common phrase that we have all heard. But do they literally take a look around and decide, "Hey, time to turn green!"? No, as it turns out, the answer is skin deep.

Colour changing occurs in certain species across a variety of animal groups, but the how and why varies. A few examples include seasonal changes in Snowshoe and Arctic Hares and plumage changes in breeding birds. The mechanism behind colour changing in amphibians, like the treefrog, is different than in these other organisms.

In the froglet stage, after metamorphosis from a tadpole, there is a brief stage when they are always green. Full colour changing ability begins once they reach adulthood and begin a terrestrial existence. Environmental conditions, such as light and temperature, act on the neurological system in the frog's skin. This causes a release of the Melanocyte-stimulating Hormone (MSH). This hormone in turn controls chromatophores in the skin. Chromatophores are specialized pigmented cells found in the skin of amphibians. Important types of chromatophores are melanophores (dark pigments) and xanthophores (yellow pigments). Chromatophores also contain iridophores which act like mirrors and reflect iridescent silvery or blue light. MSH levels control the shape and position of these chromatophores to impact the way light reflects off the frog's skin - grey or green.

Colour changing helps the treefrog camouflage itself against predators. In general, frogs exhibit darker colours when in darker backgrounds and lighter colours in brighter backgrounds. When exposed to changing light intensity and background colour, researchers have discovered that frogs can adjust their hue, chroma (darkness), and the lightness of their skin accordingly and within minutes. Colour changing has also been shown to help treefrogs thermoregulate and the surrounding temperature is another important cue. Frogs become lighter as temperature increases. Conversely, by becoming darker as temperature decreases, this allows the frog to better absorb heat rather than reflect heat.

It also important to note that other factors, such as humidity and stress, are also at play. Therefore, the colour a treefrog displays is triggered by a complexity of environmental factors.

Next time you observe a treefrog, take note of where you find it, the environmental conditions in which it is exposed, and the predominant colour phase it is displaying. And, more interestingly, see what happens when it tries to escape your gaze and scrambles to a new and different surrounding.

Nasty & Nice Nature News

Compiled by Geoff Carpentier

I'm going to shorten this column this week as so much great information as been presented by others, and I'm literally running out of room - but here's some food for thought. Are people becoming tax weary? Everyday, some government seems to have its hand in our pocket, drawing out millions and billions of dollars for projects which should have value and should provide benefit, but don't always meet the standard hoped for. Often the oversight and accountability of these monies and their management is never undertaken by the government. This is simply wrong. A recent referendum in Switzerland proposed increasing the total area set aside to enhance biodiversity and encourage wildlife enhancement across the country (Editor's note: these are my words not those on the official referendum). It was hoped that farmers and other landowners would set aside lands to let these wild places develop naturally and to increase the total green spaces protected throughout the country. The outcome – this referendum was rejected by 63% of the population because it as too costly. Previously committed initiatives with the same intended goals, had already cost Swiss taxpayers $961,000 (CDN), so that added cost of approximately $650,000 (CDN) for this new initiative was too much to bear by the three levels of government. The message seems clear. We simply can't afford any more expensive projects unless the value is proven, the funds generated by means other than simple taxation and the outcomes monitored and achieved. (Source: The Associated Press).

The 3rd Ontario Breeding Bird Atlas Update

This season and year 4 are now history – sort of! Don't forget you can still gather data on used nests and enter information you collected throughout the first four years of the project and most importantly – plan for next year. Where will you go? What effort do you intend to expend? Special projects? Etc. Whatever you do in year five thank-you all so much for what you've done so far. This is a part of the legacy of our birds and will be used for decades to come to assess the health of our birds.

Answers to Nature Quiz – What am I?

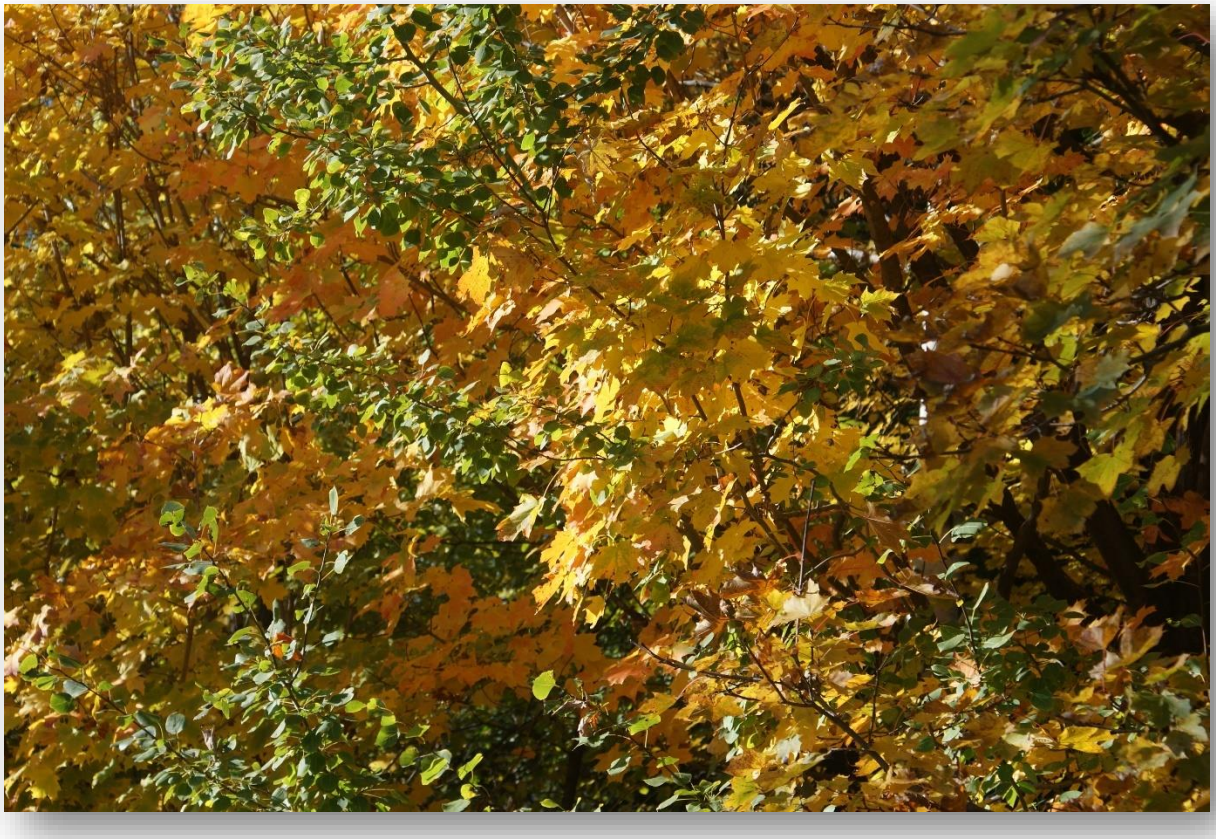
Well – I'm a mushroom – a Common or Yellow Morel (*Morchella esculenta*) to be exact! This is an edible food that can be harvested from late April to early June in our area. To identify false morels, consider the following tips:

1. Observe the cap shape: False morels have wavy or lobed caps that bulge outwards.
2. Check the stem: True morels have a hollow stem, while false morels have a solid stem.
3. Slice the mushroom: Edible morels are hollow inside, while false morels are filled with fiber-like tissue.
4. Examine the pits on the cap: True morels have pits angled towards the inside, while false morels have pits that bulge outward.
5. Cut the mushroom vertically. A true morel will have a cap attached to the stem, while a false morel's cap hangs freely.

Want to know how to cook these? Check out this link: How to Cook Morel Mushrooms (bhg.com)

Nature's Pretty Side - It's coming!

By Geoff Carpentier



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