Alien Invasion!

European Common Reed or Phragmites

(*Phragmites australis subsp.australis*)
Text and photo by Paul LaPorte

Invasive species in Ontario are becoming a persistent reminder of the long-term and pervasive impacts that human activity can have on our environment. This is all too apparent when considering the observable consequences of the introduction of the Emerald Ash Borer. With over 441 invasive species established in Ontario, there is a very serious threat to the health of our ecology and our economy. It is well-recognized that biodiversity is the key to a healthy environment, which in turn has a direct connection to human health.

It is important to note that, while human activity is responsible for the damage to our environment, we also have the capacity to mitigate some of the negative impacts. Through educational awareness, partnerships and community action, our ecology can be restored and protected for all of our flora and fauna.

An invasive species that is of particular concern throughout Ontario is European Common Reed (*Phragmites australis subsp. australis*), or Phragmites. The first known establishment in Canada was in Nova Scotia in the early 1900s and, since then it has become so widespread across the country that Agriculture and Agri-food Canada has deemed it the nation's "worst" invasive plant species. It was first recorded in Ontario on Walpole Island, Lake St. Clair in 1948 and it has continued to steadily establish along the St. Lawrence from Eastern Canada by way of road corridors. Since the 1990s, it has been expanding throughout the province at an alarming rate. With the capacity to easily out-compete native plants, this species threatens to have an adverse effect on

multiple organisms. Phragmites acts as an "ecosystem engineer" by lowering water levels and having a lasting effect on the nutrient cycle. Growing up to 5 meters (16 feet) in height, it also has numerous economic impacts such as lowering property values, creating fire hazards and creating liability concerns. Unfortunately, these negative impacts are often only fully recognized when the reality of managing the species has become exceedingly difficult. As Phragmites has the potential to impede the positive function of Ontario's watersheds in the near and foreseeable future, the need to control its advancement is clear. With its strong foothold in many of the communities in Southern Ontario, municipalities are striving to develop Phragmites' management solutions. Scugog Township is investigating how to control Phragmites before it has a chance to spread to "reduce the environmental impacts, time and costs." Although it is established throughout Scugog, individual populations are presently relatively small. It has not yet become prevalent along tributaries or the shoreline of Lake Scugog.

Through a partnership between Scugog Township, Kawartha Conservation, Central Lake Ontario Conservation Authority, Scugog Lake Stewards, North Durham Nature and the Nature Conservancy of Canada, a strategy is being developed to gather and share information and prepare a long-term local management plan. In April of 2017, wetland ecologist Dr. Janice Gilbert was invited to Purple Woods Heritage Hall to help educate members of the community on the direct risk Phragmites poses to our watershed. Also Scugog Township and The Uxbridge Trails Committee have taken steps to manage Phragmites by partnering with the Ontario Federation of Anglers and Hunters (OFAH) and Ministry of Natural Resources and Forestry (MNRF) through the Invading Species Awareness Program (ISAP). A contract student was hired to record visible establishments of the species within the townships' borders. Using the Ontario Early Detection & Distribution Mapping System, 148 sites were recorded in Scugog Township and 40 along the Uxbridge trail system. Detailed reports were created outlining size, priority status and recommended treatment for each entry. As the "information on the geographic occurrence of invasive species is essential for the protection of native biodiversity", this initiative will assist the townships in prioritizing the areas in most need of management. Given that there are currently no effective ways to control Phragmites populations over water in Canada, it is imperative to prevent the species from establishing along road corridors into retention basins, tributaries and shoreline habitat. Local efforts to manage Phragmites will be ongoing through 2018 and will require continued support, building on the momentum to date.

The Phragmites Invasion Reaches North Durham

Text and photos by Derek Connelly

Last year many of your NDN directors attended a presentation at Purple Woods CA on the invasive plant *Phragmites australis australis,* the European Common Reed. The inevitable change that our natural ecosystems face as this plant, like other invasives, outcompetes our native species. Phragmites forms large monocultural habitats, lowering biodiversity and threatening wetlands and its inhabitants.

This year the Scugog Environmental Advisory Committee co-operated with Scugog Township, Kawartha Conservation and the Ontario Federation of Anglers and Hunters to hire a student to survey all of the roadsides in Scugog Township for the presence of Phragmites. Using a special cell phone App, the plant can be photographed, located, mapped and details recorded of its size and stage of growth. The online data can then be accessed and used as a baseline to monitor its spread. As the season progressed, NDN cooperated with the Uxbridge Trails Committee and the Township of Uxbridge to undertake a similar, but scoped-down, project to map parts of Uxbridge Township on the town trails and some roadsides within Uxbridge Township north of Goodwood Road.

I spent a day with our student, Lauren Negrazis, to learn the recording methodology and to better understand Phragmites and its implications. Near my home on the Barton Trail in Uxbridge, *Phragmites* had just started growing beside the retention pond in the last couple of years. I decided this would make a perfect spot for an immediate mechanical removal using a few volunteers. I notified the Township of my intentions and the parks department agreed to handle and dispose of the bags of invasive plants we were to collect.

On two Saturday mornings in September, a small group of volunteers spent a total of six hours cutting the plant at ground level and bagging it. Our timing was good as the flowers had not gone to seed. The first day we filled 18 garbage bags with the plant. The following weekend, with a smaller crew, we just removed the flower heads and some roots leaving the leaves and stems out of the marsh but near the site. The weather was good, drying the plant out and hopefully the black bag storage further reduced its chance of spreading. Next year will show how well the underground roots survive and how many we need to remove again. Hopefully each year there will be less.

The media photographed the effort and an article was published which raised awareness of the plant and hopefully others will volunteer to remove this invasive from areas

near their homes. I will be bringing this report to the Uxbridge Council and encouraging the Uxbridge Watershed Advisory Committee and the Town of Uxbridge to continue removing the plant and taking steps to reduce its spread.

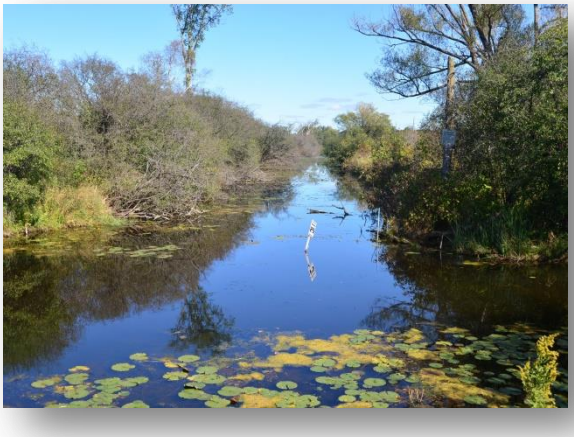
Secret Garden

Osler (Scugog) Marsh

Text and photos by James Kamstra
Pitcher plant photo by G. Carpentier

Have you ever driven Highway 7A across Lake Scugog just east of Port Perry, and wondered about the vast wetland and natural area on the south side of the causeway? This is an area known as Osler Marsh or Scugog Marsh, a provincially significant wetland and provincial life science Area of Natural and Scientific Interest (ANSI) covering more than 2000 hectares in area. The site is privately owned and there is no public access, but it is well protected.

Lake Scugog is a bit of an artificial artifact as the lake is largely the result of a dam that was installed on the Scugog River in Lindsay in the 1830s. The water level was raised by about 2 metres, which effectively flooded former forest and swampland, but formed new wetlands in new places in addition to creating an open water lake. Osler Marsh became the largest wetland on the lake but there were plans to drain and 'reclaim' it for agriculture. The Lake Scugog Marsh Lands Drainage Company formed and purchased the land in 1880 with the intent of doing just that. The province approved the drainage scheme and the company was set to go but the County Council voted against it, and fortunately the drainage scheme never happened. The company then sold the parcel to a group of wealthy Toronto sportsman, known as 'the Syndicate' headed by Henry Smith Osler. They wanted the area for the sole purpose of having a private hunting and fishing preserve. Osler originally purchased a 2000 acre parcel but he obtained additional adjacent land holdings increasing the Syndicate's area nearly fourfold. Access was very difficult for the hunters and fishermen so they dredged out nearly 30 km of channels in the late 1920s and hired a full time warden to oversee the area. The channels were periodically dredged when vegetation encroached. Osler Marsh, including surrounding lands on the south side of Lake Scugog, continues to be owned and managed by the Syndicate to this day.



Although the wetland configuration is the result of the Lindsay dam, it has been in existence for some 180 years and a diverse wetland mosaic has developed and stabilized over this period. Within the wetland there are extensive cattail marshes, sedge marshes, willow thicket swamps, alder thicket swamps, black spruce bog, low shrub fens dominated by leatherleaf and sweet gale, and open water marsh with a rich variety of submerged aquatic plants. An extensive wild rice marsh occurs south of the open water bay and can be seen from the west causeway in autumn. Wild rice grows in deep water (up to 2 m), with the stalks growing from the substrate to the surface, then lying flat on the surface until late summer when the plants suddenly stand erect and begin flowering. The low shrub fens, dominated by leatherleaf

and sweet gale, lend a 'northern' character to the wetland for many of the plants occurring there are more typical of northern Ontario. In addition to the dominants, this habitat contains less common plants such as bog rosemary, dwarf birch, floating burreed, large cranberry, pitcher-plant and round-leaved sundew.

The wetland supports a wide range of wetland wildlife. Large numbers of waterfowl stage here during spring and autumn migration, and some stay to nest. They can be viewed in the bay on the south side of the west causeway of Highway 7A, particularly in early spring. In some years mudflats form in the same area and are frequented by a range of shorebirds and Caspian Terns in autumn. Several Osprey pairs nest in the marsh, and in recent years Sandhill Cranes have started breeding here. A large Black Tern colony continues to exist deep within the wetland and Least Bitterns breed within areas of cattail marsh where there is good open water interspersion. King Rails have been reported a few times over the years and may even breed regularly but with little access and very infrequent surveys there true status here is unknown.

Mink Frogs are quite common in Osler Marsh, but surprisingly are at the very southern edge of their range here. They do not occur south of the Oak Ridges Moraine. Northern Water Snakes (which are rare in Durham Region) have been observed in the 1970s and likely still occur. Osler Marsh is also the only place where Bog Copper has ever been found in Durham. It is a tiny butterfly whose larvae feed exclusively on cranberry, a plant that is very restricted in the region.

The extensive wetlands of Osler Marsh are quite apparent to anyone driving east of Port Perry. Although there is no public access to the interior of this intriguing wetland, there is comfort in knowing that few people ever go there and disturbance is minimal so wildlife are able to thrive with minimal interference. Remember that we came close to losing this wetland over a century ago. Just think how different Scugog would be today if that had happened? It would not have been for the better.

More information on the history of Osler Marsh can be found at http://www.scugogheritage.com/misc/scugogmarsh.htm

Photography Corner

Motion Matters

Text and photos by Jay Thibert

Just about everyone has been drawn to take photographs of moving water. Whether you find yourself next to an impressive waterfall or a babbling brook, you are tempted to capture the beauty that surrounds you. Most often we grab the camera, compose the scene and press the shutter. The camera will select the shutter speed, the f-stop and the focal length and you will get a picture that captures the moment. This edition's column will show you how to capture the motion of the water that flows over the waterfall and down the river. Have a look at photograph 1 (below) and notice that the blurred water shows motion. This was not an accident. It was done by controlling the main three settings on your camera: the shutter speed, the f-stop and the ISO setting.

*Figure 1 A small creek not far from our cabin. *

How was this picture taken? It was not a quick point and shoot effort. In addition to the camera I brought along a tripod, a critical piece of equipment to get this effect. (My wife Bev has long cursed my tripod on canoe portages.) Set the camera on the tripod and compose the scene you want to shoot. For this picture I was in the moving water at the edge of the creek. It is very important that you know how your equipment sets up and that everything is secure. Anything that is dropped will be lost or damaged.

The camera is now set on the tripod and aimed at the scene you want to capture. You must use the manual controls on your camera that allow you to decide what the settings will be. Start by setting the ISO to the lowest possible number. In digital photography ISO measures the sensitivity of the image sensor. The same principals apply as in film photography – the lower the number the less sensitive your camera is to light and the finer the grain. Then set the f-stop setting to the highest number possible. For many digital lenses this number may be f22. So your camera's sensor is at its lowest setting, you have further stopped light by stopping the lens down to the highest number.

You might be wondering how we can possibly take such a photograph. To obtain enough light for a proper exposure we must lower the shutter speed. For the picture in Figure 1, the shutter speed was 1.3 seconds. This is a slow shutter speed and thus you see why a tripod is crucial. If you keep the camera rock solid, every object that is not moving will be tack sharp and the moving water will be blurred. The ISO for Figure 1 was 50, the f-stop was 22 and the lens focal length was 31mm.

Figure 2, Skógufoss, Iceland Shot at 1/6 sec. f22, ISO 50, 24mm

When you are stopping the lens down to f22 you are of course increasing your depth of field (DOF), also called focus range or effective focus. Depth of field is the distance between the nearest and farthest objects in a scene that appear acceptably sharp in an image. Notice that in the waterfall picture, Figure 2, the foliage in the foreground and the sheep on the distant hill are in focus. Remember that if the foliage or the sheep are moving they too will blur. With this extra depth of field consider carefully where you focus to maximize what ends up being in focus. Try focussing at the centre of your image.

Sometimes in very bright conditions, even with the ISO set very low and with the highest f-stop number, the shutter is still too fast to obtain the motion you are looking for. You need a shutter speed of 1/5 of a second or slower to obtain suitable blurring of the moving water. A neutral density filter is the solution. These filters can be attached to your lens and will absorb one to eight stops of light. Have a look at Figure 3, an image shot this summer on Georgian Bay. The lens had a neutral density filter which allowed a shutter speed of 15 seconds. Notice how the water is very blurred with this long exposure taken just as the sun was setting.

Figure 3, the neutral density filter allowed for a 15 second exposure. f 22 ISO 50.

So dust off your tripod, learn how to control your cameras settings and find your favorite fall waterfall. You will be very pleased with the control you have to create unique and inspiring images.

Figure 4, Gullfoss, Iceland Shot at 1/5 second, f 18, ISO 50, before I owned a neutral density filter. I used a polarizing filter to absorb some light.

Local News

Durham Butterfly Counts 2017

Text and photos by James Kamstra

Two butterfly counts were attended by members of North Durham Nature and other enthusiasts. All of the individual butterflies encountered within a 25 km^2 on the count day were recorded and tallied. This was the 23rd year for the Oshawa butterfly count and 21st for Sunderland.

A total of 44 species were recorded at Oshawa which is right on the average of 44. The rarest species was a Common Buckeye observed by Rayfield Pye which had only once been previously recorded. There were no record high numbers of any species on the Oshawa count and the majority of species were in lower numbers than average. A few lingering early season species were noted which are: Silvery Blue, Juvenal's Duskywing, Dreamy Duskywing and Arctic Skipper. None of these were present at Sunderland a mere week later.

The Sunderland count recorded 50 species which is somewhat lower than the long term average of 54. Like Oshawa, the majority of species at Sunderland were in lower numbers than average. Particularly noteworthy were the very low number of Common Sulfurs on both counts. Average counts are 130 for Oshawa (only 3 seen in 2017) and >600 for Sunderland (10 seen in 2017). European Skippers were in surprisingly low numbers since average counts are 2900 for Oshawa (335 in 2017) and >4000 for Sunderland (637 in 2017). Two species had record high counts at Sunderland: Eastern Tiger Swallowtail and Northern Cloudywing. Another rare find were two Mulberry Wing Skippers found by Dennis Barry. Painted Lady, another migrant which does not appear in many years, was recorded on both counts.

Overall the spring was delayed and exceptionally wet this year. This weather trend continued through the summer such that butterfly species emerged somewhat later than usual but their flight times were extended later.

The one real bright spot for this summer were the number of Monarchs. Both counts recorded the highest numbers in the last five years. The last year that we saw good Monarch populations in Ontario was 2012. The species suffered a precipitous decline the following year. Recovery was very slow since then until a rebound in 2017.

The results of the two counts are shown on the table below.

BUTTERFLIES OBSERVED ON THE DURHAM COUNTS IN 2017

SPECIES	Oshawa 02-Jul	Sunderland 09-Jul
Black Swallowtail	2	1
Canadian Tiger Swallowtail	3	8
Eastern Tiger Swallowtail	11	78
tiger swallowtail sp.	19	14
Mustard White	11	39

SPECIES	Oshawa 02-Jul	Sunderland 09-Jul
Cabbage White	120	600
Common Sulfur	3	10
Alfalfa Orange	1	1
Harvester		1
American Copper	2	
Bronze Copper	1	26
Coral Hairstreak		6
Acadian Hairstreak		2
Banded Hairstreak		
Striped Hairstreak		1
Eastern Tailed Blue	3	45
Summer Azure	6	20
Silvery Blue	6	
Great Spangled Fritillary	14	83
Silver-bordered Fritillary	1	
Meadow Fritillary		17
Pearl Crescent	9	38
Northern Crescent	349	520
crescent sp.	14	
Baltimore		84
Question Mark	8	9
Eastern Comma	4	12
Gray Comma		9
Mourning Cloak		4
Painted Lady	2	7
American Lady	15	17
Red Admiral	59	45
White Admiral	45	34
Red-spotted Purple	2	
Viceroy	8	18
Common Buckeye	1	
Northern Pearly-Eye	19	78
Eyed Brown	61	160
Little Wood Satyr	104	44
Common Wood Nymph	1	24
Inornate Ringlet	69	33
Monarch	92	69
Silver-spotted Skipper	54	19
Northern Cloudywing	5	31
Juvenal's Duskywing	1	
Dreamy Duskywing	1	
Arctic Skipper	1	
Least Skipper	34	78
European Skipper	335	637
Peck's Skipper	9	73
Tawny-edged Skipper	12	51
Crossline Skipper	3	17
Long Dash Skipper	42	86
Northern Broken Dash	1	32
Little Glassywing		14
Delaware Skipper		38
Mulberry Wing		2
Hobomok Skipper	35	25
Broad-winged Skipper		5
Dion Skipper		1
Dun Skipper		98
TOTAL SPECIES	44	50
TOTAL INDIVIDUALS	1603	3372
Butterflies / hour effort	35.6	40.6
No. of Participants	11	25

Participants

Oshawa: Dennis Barry, Susan Blayney, Dan Bone, Margaret Carney, John Foster, James, Kamstra, Carolyn King, Steve LaForest, Tom Mason, Maria Prisciak, Rayfield Pye.

Sunderland: Dennis Barry, Susan Blayney, Dan Bone, Jon Boxall, Margaret Carney, Paul Carter, Lori Clancy, Derek Connelly, John Foster, Paul & Debbie Harpley, Jim Hopkins, James & Lynda Kamstra, Carolyn King, Steve LaForest, Craig & Kathryn Lloyd, Tom Mason, Ginny Moore, Dave Paddock, Ed Poropat, Marie Prisciak, Rayfield Pye, Bob & Karen Yukich.

Kid's Corner

by Cara Gregory
photos by Jay Thibert

Have you ever been on a hike with friends or family and the children in your group always seem to be finding different parts of nature they find beautiful, unique, or have questions about? For example, a leaf in the fall that seems to stand out from the rest in its colour, or a rock that has been worn to be completely round, or a mushroom poking out of the ground. Wouldn't it be great to take the opportunity to channel the kid's natural curiosity and creativity into a fun, learning experience and opportunity to create art? The creation of ephemeral nature art gives children and adults an opportunity to work together to explore, create and learn in the outdoors.

The definition of *ephemeral* is "lasting for a very short time". Therefore the art that you and the young people in your life would create together in nature would be temporary and a part of the ongoing natural processes of nature. The idea is to collect items that are no longer living, such as leaves, stones, flower petals, and cones for example, from a small area around where you have decided to stop and create your art. You would then creatively place these items in a pattern or shape. The learning component of this process would be to bring some identification guides with you, and together, try to identify what you have collected - what tree did this leaf or cone come from? What type of rock is this? Sand or snow could also be reshaped to create ephemeral nature art. Working with these two particular nature materials could lead to learning about the importance of driftwood on the beaches to the formation of dunes or about animals that create tunnels in the snow (subnivian animals).

Andy Goldsworthy is an artist who is well known for the creation of ephemeral nature art throughout the world. He works with whatever is at hand and photographs each piece of artwork after he makes it. His goal is to understand nature through directly participating in it. The value and enjoyment of the experience of creating ephemeral nature-focussed art has been well expressed by Andy in the following quotes:

"I enjoy the freedom of just using my hands and "found" tools--a sharp stone, the quill of

a feather, [and] thorns. I take the opportunities each day offers: if it is snowing, I work with snow, at leaf-fall it will be with leaves; a blown-over tree becomes a source of twigs and branches. I stop at a place or pick up a material because I feel that there is something to be discovered. Here is where I can learn. "

"I want to get under the surface. When I work with a leaf, rock, [or] stick, it is not just that material in itself, it is an opening into the processes of life within and around it. When I leave it, these processes continue."

http://www.morning-earth.org/ARTISTNATURALISTS/AN_Goldsworthy.html

This Thanksgiving weekend, consider taking a walk and exploring local nature together with the children in your life through the joint creation of ephemeral art. This direct interaction with the natural world will reinforce existing knowledge. It will also help in acquiring new knowledge of the processes that are going on around us all of the time that we may miss out on in our busy lives. It also provides an opportunity to connect with, and gain a new appreciation for the nature in your "own backyard".

Quiz

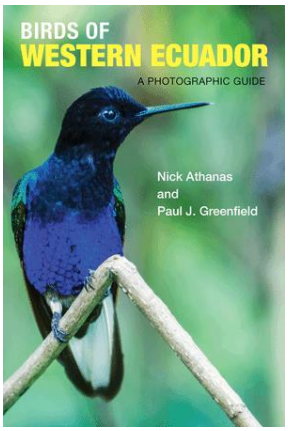
Okay, let's figure this out – shall we? It is a migrant that winters in Central America and northern South America. It nests on the Canadian Shield (and occasionally in Durham). It loves mixed forests and feeds primarily on insects during almost its entire life.

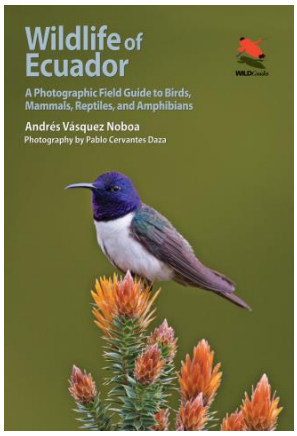
Book Reviews

Here's a sampling of some of the new titles I've received for review.

Wildlife of Ecuador by Andreas Vasquez Noboa. Princeton University Press. 2017. ISBN: 978-1-400-88505-3. 288 pages softcover. $29.95 USD.

Birds of Western Ecuador – A Photographic Guide by Nick Anthanas and Paul J. Greenfield. Princeton University Press. 2017. ISBN: 978-0-691-15780-1. 448 pages softcover. $45.00 USD.





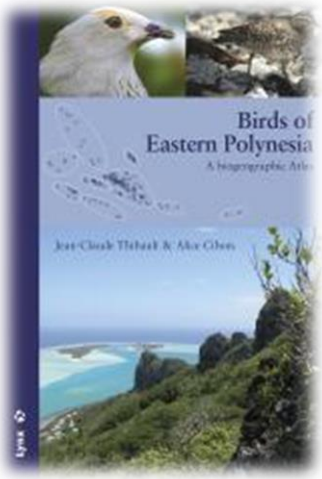
These two books aren't companion pieces but I grouped them because they serve similar and complementary purposes. They both deal with facets of the fauna of Ecuador. For anyone who wants to sample faunal diversity and the excitement of tropical birding, Ecuador is a must-see destination. Thousands of birds, mammals, reptiles and amphibians (herptiles) and so much more populate its forests and fields.

The Birds of Western Ecuador was a great surprise to me as most of the photography books I've reviewed in the past actually fall short of expectations and really don't do a good job of describing birds as the photographer's bias often interferes. Usually one or two photographers take responsibility for all the photos and as such the quality goes down. Not so here – over 70 photographers submitted excellent photos that are detailed and informative. Virtually every one shows the salient features in good light and the reader can actually use them to study and identify the birds. The plates illustrate almost 1000 species in total via 1500 photographs that are well organized. Four to eight species are identified on each plate. Similarities and forms and age-based photos are included that add to its value.

The Wildlife of Ecuador serves a different audience, but only slightly. The serious birder will not find everything he/she needs by the generalist will. Sections of the book focus on birds (223 species), mammals (70), reptiles (40) and amphibians (37). This serves to close a gap I personally have always found frustrating as I travel, for often books on mammals and herps don't even exist for many regions and I drool every time I find one. Four hundred photos illustrate the species covered.

So would I buy these books? Yes I would – the former because it actually does such an incredible job with the birds and the latter because it gives me lots (but not all) of the info I need about non-avian species.

The Birds of Eastern Polynesia. Jean-Claude Thibault & Alice Cibois. 2017. Lynx Edicions (www.lynxeds.com). Hardcover 438 pages. ISBN: 978-84-16728-0503. $35.00 USD.



I will be in Oceania soon and was quite excited to see this new book, even though I won't actually be going to Polynesia I will be quite close and thought I might garner some useful info about the region. The scope of the book is small but the subjects are often poorly studied and understood so this is a welcome addition to avian literature. It covers only 241 species of birds occurring on the 151

islands encompassed by the Cook, Austral, Society, Marquesas, Tuamotu & Gambier Archipelagos and the Pitcairn & Eastern Islands Groups.

So what's so great about this book? Well for one thing it deals with all known species, past and present, and provides not only a great study of current species but offers insights into ones now gone. This historical chronically is usually missing from studies of this nature. Additionally, where it can, it offers genetic analyses of confusing complexes. This can and will lead to a better understanding in the future of speciation and diversity across the islands. Lynx is renowned for this cutting edge research and doesn't disappoint in this book.

The plates are beautiful and detailed offering information on subspecies and races, distribution, range maps, population dynamics, and more. Every species, except those only known from bone specimens, are illustrated showing all the salient points of identification.

While not for everyone, those truly interested in insular species of birds and those into genetic diversity and speciation will find this book extremely interesting. Academia will gobble it up, but so will lay-ornithologists such as myself!

Answer to Quiz

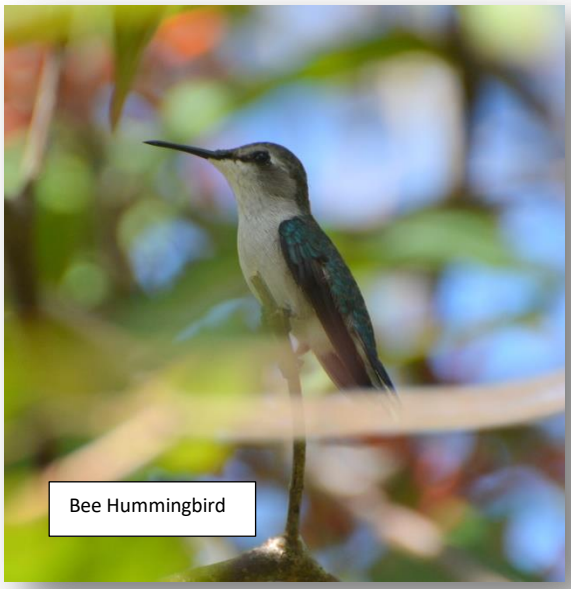
It clearly is a bird and it looks like a small one, but why does it have a crest and a beard? Well, actually it doesn't. The bird is bedraggled from a tough night migrating and was greeted with a wet dawn. So what appears to be a crest and beard are actually just misplaced wet feathers. Few birds would have the combination of yellow, white and black or charcoal on the face. So we can quickly rule out flycatchers, wrens, sparrows, blackbirds, swallows, kinglets, chickadee-like critters, nuthatches and of course woodpeckers. So, we're kind of left with warblers. Now which warbler has yellow on the throat and also has a white eyering? That

still leaves us some possibilities - Northern Parula, Nashville, Magnolia, Yellow-rumped (the Audubon's subspecies), Kirtland's, Prairie, Yellow-throated, Connecticut, Mourning (immature), Canada, Golden-crowned and McGillivray's Warblers and Yellow-breasted Chat … wow that's a lot. So can we narrow it down? Well if we remove those with broken eyerings, we are left with Nashville, Magnolia, Connecticut, and Canada. If we rule out those with unmarked yellow throats, we're down to only one species – the Magnolia Warbler! This individual was photographed by me on board a ship off the coast of Sable Island, N.S.

Don't forget NDN is going to Cuba in 2018!

Check out our website or contact one of the board members for details. See exciting places, meet great people, enjoy the culture and of course the wildlife is incredible.

Where can you find the world's smallest bird and biggest cars? Cuba of course!



Bee Hummingbird

Visit Us On Facebook!

For more information about NDN

NDN Board of Directors

Derek Connelly – President
Cara Gregory – Vice –President
Mark Stabb – Secretary
Kim Adams - Treasurer
James Kamstra – Program Co-ordinator
Jay Thibert – Director-at-Large
Carol Apperson – Director-at-Large
Patricia Baldwin – Membership
Geoff Carpentier – Newsletter Editor

www.northdurhamnature.com

Newsletter Editorial Board

Geoff Carpentier – Editor

John McLean, Nancy Melcher & Derek Connelly - Proof-readers

Note: All photos and text in this newsletter by Geoff Carpentier unless otherwise stated