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SUMMER 2017

LANDSCRIPT

PROTECTING the WILDERNESS of our UNIQUE ARCHIPELAGO

Georgian Bay's Wetlands

Why they're important and how they're threatened

Species Spotlight:
Muskellunge

Eco-friendly
Cottage Cleaning

Meet Georgian Bay's
Species at Risk

Threats to aquatic habitat in coastal marshes of Georgian Bay:

Climate change, invasive species, and human impacts

by Dr. Patricia Chow-Fraser, Professor, and Dan Weller, PhD Candidate, Department of Biology, McMaster University



Of the key ecosystem services provided by wetlands, one of the most important is the provision of habitat for numerous fish, birds, and wildlife species. Nowhere is this more important than in the thousands of pristine coastal marshes lining the shoreline of eastern Georgian Bay. What brings trophy-size fish such as the muskellunge and northern pike into these quiescent areas? What are they doing? How long do they stay? What else do we find there? These questions have consumed my students and me since 2003, and along the way, we have uncovered a few things about these magical places.

First, what makes wetlands such biodiversity hotspots? Wetlands occur at the interface between water and land, and therefore have both aquatic species (fish, water lilies, pondweeds) and terrestrial species (wet meadow plants, insects), as well as semi-aquatic species such as turtles and amphibians. A key component that maintains high biodiversity is the large inter-annual fluctuations in water levels that have varied by up to two meters between high and low water years over the past century. Since most wetland plants grow at an optimal water depth (for submerged or floating species) or soil wetness (for meadow/terrestrial species), as water levels go up or down, the plant communities must also shift with the shoreline accordingly. Repeated water-level cycles of five to seven years prevent any one group of plants from dominating the landscape. A healthy aquatic plant

community consists of a diverse mix of submersed aquatic vegetation (pondweed and waterweed), floating species (lilies and water shield), and emergent plants (bulrush and cattails) that create a three-dimensional structure allowing small fish to hide from predators, and large fish to ambush their prey.

In 1999, when water levels dropped below the long-term mean, folks across Georgian Bay expected a correction the following year. But it did not happen the next year, nor the year after that, and when water levels remained below historic norms for 14 years, submergent and emergent plants migrated lakeward, while meadow species migrated towards the shoreline and colonized the previously submerged land. Within 10 years, the meadow and upland species like pine trees had become firmly established, and in some cases, where rock sills prevented water of Georgian Bay from flooding the wetland, aquatic habitats simply dried up. Just as suddenly, however, water levels rose above the long-term mean beginning in 2014 and have remained high over the past two years. Since 2015, we have been observing how coastal marshes recover when water levels rebound. The majority of the 40 or so wetlands we have visited thus far are still in very good health, as indicated by the Water Quality Index, which considers the relative amount of naturally occurring primary nutrients, water turbidity, and planktonic algae in water samples, and the Wetland Macrophyte Index, which considers the presence of pollution-intolerant plant species.

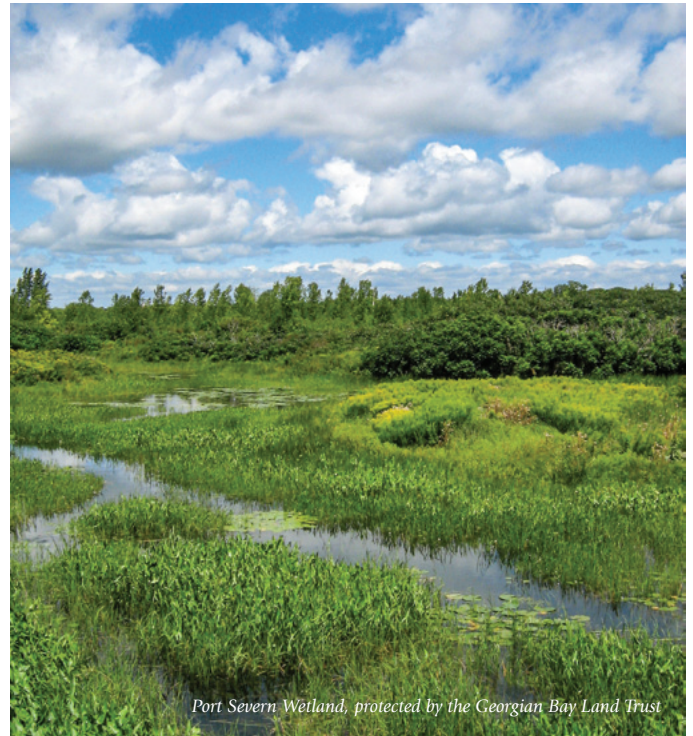


Blanding's Turtles, as well as many other species, call Georgian Bay's wetlands home.

Despite the relatively good health of Georgian Bay wetlands, they are still faced with many current and pending threats. Human impacts, invasive species, and climate change all have the potential to disturb or disrupt the function of coastal marshes. Shoreline modifications by humans continue to be a threat; these include construction of docks, boathouses, hardened shorelines, artificial beaches and the associated removal of wetland vegetation that in turn compromises habitat quality. Certainly future development must strike a balance between recreational uses and habitat quality so as not to diminish the integrity of the natural environment that makes Georgian Bay so appealing in the first place.

Georgian Bay has also experienced several biological invasions in recent years. The round goby has spread throughout Georgian Bay over the last decade. We saw them in abundance in our nets for the first time in 2005 in Severn Sound. Its high reproductive rate, and voracious appetite (on dreissenids (zebra and quagga mussels)) has allowed it to spread rapidly in wetlands of Lakes Erie and Ontario. Their impact on wetlands of eastern Georgian Bay appears to be limited, but they are being used as a prey item by some fish species, and this may lead to avian and fish kills from dreissenid-mediated botulism poisoning that have been reported in Nottawasaga Bay. When we sampled wetlands 10 or more years earlier, most of the wetlands were free of gobies, whereas now they are present in nearly all sites although not necessarily in abundance.

Notable invasive plants include Eurasian milfoil and the common reed (*Phragmites australis* ssp. *australis*). Eurasian milfoil is an aquatic species that can form large, dense patches in the water column of wetlands, and limit the foraging ability of resident fish species. *Phragmites* is a relatively recent invader that has spread throughout the province into coastal wetlands, and along highway and roadway corridors. An aggressive competitor, *Phragmites* is an emergent plant with showy seed heads that can spread by seeds or via underground stems. Its tendency to form tall dense stands makes it particularly devastating for migratory semi-aquatic species such as the Blanding's turtles. Our research in a Lake Erie wetland showed that *Phragmites* accounted for up to 170 ha (13%) of lost habitat to Blanding's turtles. Given that many wetlands in



Port Severn Wetland, protected by the Georgian Bay Land Trust

Georgian Bay are small (< 2 ha), it is frightening to imagine what the establishment of common reed could do within the Biosphere Reserve. All of these threats are compounded by the effects of a changing climate. Shifts in seasonality, timing and duration of seasons, precipitation, and water levels all have the potential to directly and indirectly affect the functioning and quality of wetland habitats. The shift away from historic, normal conditions may affect the resilience of Georgian Bay's wetlands and open the door for future invaders or facilitate the spread of those already present.

Our ongoing research on muskellunge highlights how the prized fishery has also been affected by these threats. While trophy-caliber adults continue to be captured in Georgian Bay, we have been unable to find any muskellunge young-of-the-year (YOY) at historically confirmed muskellunge nursery areas in the Severn Sound area. We surveyed wetlands in this area during 2012 and 2013, towards the end of the sustained low water period. We know that adult muskellunge return to spawn at the same sites each year and have found adult muskellunge near these sites during spawning season. Our surveys reveal that the wetland vegetation community had changed from historic conditions, with less diverse species composition and less complex structure. This is a serious impediment for the survival of YOY muskellunge during their first year as they are very vulnerable to predators. They require suitable habitat structure to both hide from predators and to forage for prey. We also found an abundance of round gobies and yellow perch, both of which are documented egg predators. These changes appear to be linked to the presence of shoreline modification, and sustained low water levels that have been associated with global climate change. Further research should focus on accurate forecasts of water-level scenarios, understanding how wetland ecosystems may respond to new climate regimes, and developing adaptive strategies to manage these wetlands.

Muskellunge, the King of Pikes

by Brooks Greer, Land Protection Program Manager, GBLT



Photo by Andy Camper

The muskellunge (*Esox masquinongy*) is the largest member of the pike family of fishes. Native to eastern North America, its range spans the Great Lakes/St. Lawrence basin and adjacent drainages, down into the northern Mississippi valley and reaches as far south as Chattanooga and the Tennessee River Valley.

The muskie favours lakes and large rivers that are *oligotrophic* (low-nutrient, high-oxygen and clear freshwater, generally with granitic bottoms) and *mesotrophic* (medium-nutrient, intermediate-oxygen, generally clear freshwater with beds of submerged aquatic plants). Muskellunge habitat includes waters surrounding islands, submerged reefs, productive shallow embayments, and river deltas. Ontario has more than 300 distinct native populations of muskellunge in inland lakes and in the Great Lakes basin.

Although not listed in Canada as a species at risk, muskie have probably never been numerous. It could be said that as a species they are “rare” as opposed to threatened, which might go some way to explain why the muskie is considered by so many the Holy Grail of freshwater fishing. Even though not many would want to actually eat a muskie, in our part of the planet its pursuit has produced a particularly rabid breed of angler. There is some dispute about the world record muskie, but two of the whopping documented contenders of 61.25 lb (27.8 kg, November 2000) and 65 lb (29.55 kg, October 1988) were pulled out of Georgian Bay by Martin Williamson and Ken O’Brien.

Since muskellunge are certainly not a panfish, and not very appetizing due to their role (and their bioaccumulation) as an apex predator, almost all fishing for muskie is catch and release. This is sensible due to their limited population, and encouraged by the Ontario Ministry of Natural Resources and Forestry (MNRF) regulations. All of Georgian Bay and the North Channel are within Ontario Fisheries Management Zone 14. The basic restrictions here are: muskie season goes from the third Saturday in June until December 15; with a regular Ontario Sportfishing License, the daily limit is one fish, and it must be a minimum of 54” (that’s already a very big fish). If you have a Conservation Fishing License, you are entitled to zero muskie.

In a paper by Arunas Liskauskas, Management Biologist with the MNRF, he mentions that the North Channel and eastern shore of Georgian Bay support the largest contiguous

population of muskellunge in the Great Lakes. Arunas goes on to state that there has been only one muskie stocking program in Lake Huron, which was an effort to replace a “historically abundant population” of muskie in the Spanish River delta in the North Channel. This program prompted a further study to assess muskie populations in Lake Huron, and this study continues as a collaboration between the MNRF and McMaster University today.

Muskie populations at large have been impacted by harvest, habitat degradation, and invasive species introductions, causing declines in many areas. On Georgian Bay, critical spawning and nursery areas are provided by coastal marshes. Recent research conducted by Dr. Pat Chow-Fraser of McMaster University (*please see Dr. Chow-Fraser’s cover article in this issue of LandScript*) has uncovered an alarming lack of young-of-the-year muskellunge fry in traditional Georgian Bay wetland nurseries, and it is suspected that introduced fish and aquatic plant species are at least partly responsible.

The protection of large-scale, healthy wetland habitat is critical to the survival of muskie and other native Georgian Bay fish species. Wetlands provide spawning grounds, and subsequently the nursery habitat for the young fish. Our Natural Area Conservation Plan (NACP) mandates the preservation of coastal wetlands as a first concern, and with properties such as the Port Severn Wetlands, Jean G. Northey Conservation Reserve, and the recently acquired Kofman and Steamboat Channel Reserves, the GBLT continues to protect priority and productive coastal wetlands.

Distinguishing a muskie from the far more common northern pike:



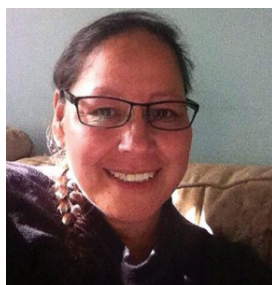
Muskie have light-coloured bodies with darker markings. They can be silver, brown, or green, with dark vertical stripes on the flanks which may break up into spots. In some cases, stripes and spots may be absent altogether, especially in fish living in turbid (murky) waters. Pike have dark bodies with light markings and are usually clearly spotted. A reliable method to distinguish the two similar species is by counting the sensory pores on the underside of the mandible or lower jaw. A muskie will have seven or more per side, while the northern pike never has more than six. The lobes of the caudal (tail) fin in muskellunge come to a sharper point, while those of northern pike are generally more rounded. In addition, unlike pike, muskies have no scales on the lower half of their opercula (gill covers).

Congratulations to our

King Family Bursary Winners

The Georgian Bay Land Trust is delighted to announce the winners of this year's King Family Bursary. Supported by the Wally and Marilyn King Endowment Fund, as well as an anonymous donor, the bursary provides \$3,500 to support projects that promote knowledge and appreciation of eastern Georgian Bay and/or the North Channel.

This year's winners are both embarking on very important projects for Georgian Bay. Katherine Denune will spend the summer tackling one of the biggest threats to conservation on the Bay, invasive *Phragmites*, while Boshdayosgaykwe will set out to document one of the area's most important cultural practices, the art of quillwork. Congratulations to both winners, and thank you to the donors and volunteers who make this bursary possible.



Boshdayosgaykwe / Tracey Pawis

Boshdayosgaykwe is an Ojibway/Potawatomi Quill worker from Wasauksing First Nation, (Anishinabe Territory) Ontario, Canada. Through teachings received by her mother, and ancestors, she recognizes the importance of celebrating a long-lived tradition.

This project is a set of pictures in booklet form of completed quillwork that outlines a recorded five generations of quillwork within Tracey's lineage. Quillwork is a skill that has been practiced for hundreds of years beyond the recorded works this book has outlined.

Learning to make and create quillwork has been a personal goal of Tracey's towards preserving, protecting, and promoting her Ojibway/Potawatomi heritage.

From Boshdayosgaykwe:

"Georgian Bay is recognized as Anishinabe territory. The work that's completed is a true testament of the learned traditions that have been carried on through my family's generations. This history carries and holds strong within me, and as an Anishinabe woman, I carry pride and love for this time honoured tradition."



Quillwork detail



Katherine Denune

Growing up spending summers on the waters of the eastern Georgian Bay has instilled in Katherine a passion for and commitment to protecting this magnificent ecosystem. Katherine is entering her fourth year at Ohio State University majoring in Evolution, Ecology and

Organismal Biology with a special focus on conservation and restoration. This summer she will be creating a comprehensive baseline assessment of the invasive reed, *Phragmites*, from Parry Sound to Twelve Mile Bay to enable and encourage future management and eradication efforts. Katherine will be promoting community knowledge and engagement in *Phragmites* eradication efforts throughout her project, and will produce a guide to *Phragmites* identification and removal that can be used by communities throughout Georgian Bay.

From Katherine:

"I am very honoured to receive the King Family Bursary Award and excited to further address invasive phragmites in the Georgian Bay. This support will assist in documenting the current distribution to enable further removal and monitoring efforts. I look forward to sharing and engaging with others who are concerned about preserving our remarkable and pristine shoreline."



Katherine and friends tackle Phragmites



Giant's Tomb:

Island of Transition

By Brooks Greer, Land Protection Program Manager, GBLT



Northeast shore of Giant's Tomb

Kitchikewana was a gigantic Huron (Ojendat) god, the son of Manitou, and he stood guard over all of Georgian Bay. Huron legend portrays Kitchikewana as ill-tempered and perpetually angry; hoping to bring his rancor to heel, the assembly of Huron gods decided to find him a suitable bride.

The Huron gods gathered together eligible women from the surrounding area, one of whom was a girl of surpassing beauty whose name was Wanakita. He was smitten, but when Kitchikewana proposed to her, to the gods' horror Wanakita rebuffed him, saying that she was already betrothed to a warrior of her tribe.

The earth trembled, the skies darkened and the wildlife ran for cover as Kitchikewana's fury rose. He smashed his massive hand into the ground, grabbing a huge clump of earth and rubble which in his rage he hurled up the coast, thus creating the Thirty Thousand Islands. The resulting great divots left by his fingers formed the five southern Bays: Midland, Penetang, Hog, Sturgeon and Matchedash.

Kitchikewana, crushed and heartbroken, then lay down and fell into a deep and eternal sleep. His body gives the shape to Giant's Tomb Island that we see to this day.



The GBLT owns the northernmost lot on Giant's Tomb Island, and also holds a Conservation Agreement on a larger adjacent interior lot reaching down to "the Gap", the pool that divides the small northern portion of the island from the much larger southern portion. Awenda Provincial Park begins just below the Gap and occupies the rest of the island, except for its extreme southern tip.

Giant's Tomb Island measures approximately 5 kilometres from north to south, and 2 kilometres from east to west. It is



GBLT summer students Anne Hughes and Tilly Cook proudly stand behind a pile of invasive *Phragmites* removed from Giant's Tomb

located in the transition area from Ecodistrict 5E-7 (comprising most of the eastern Georgian Bay coast) to Ecodistrict 6E-6, which also represents the transition from the Precambrian Shield on to the southern Moraine. The island overall is more than 600 hectares and includes undisturbed mature deciduous, mixed, and coniferous forest, sandplain meadows, and a number of interior and coastal wetlands. An 80 metre high till dome, formed from glacial deposit near the centre of the island, is known as "the Tomb". The western side of the island is rocky while the eastern side, which is more sheltered, is a combination of sandy and cobble beach systems.

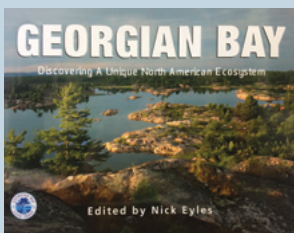
The vegetation species and communities on Giant's Tomb are surprisingly "southern Moraine" in nature; in contrast to the coast just a few kilometers to the east, Giant's Tomb's interior forest consists largely of deciduous tree species, and much of its forest has a dense shrub layer of Canada Yew (*Taxus canadensis*). A number of provincially and regionally significant flora and fauna can be found on the island, and it is well used by migratory birds. The majority of the island has been designated a provincially significant Area of Natural and Scientific Interest (ANSI) and well over two thirds (460 hectares) is part of Awenda Provincial Park. One unusual detail about Awenda's Giant's Tomb section is that its boundaries actually extend 300 metres out into the lake from both

sides of the island, covering more than 400 hectares of the actual water, but this does not include the lake bottom. This is simply in order for the park to have some control over activity just offshore, largely for safety concerns presented by swimmers and boats sharing the same water. According to Mike Armstrong of Ontario Parks, Awenda used to provide some minimal park facilities (privies and picnic benches) on Giant's Tomb, but they have since been removed. Access is "boat-in" only and there is no ferry service. Overnight camping and fires are not allowed. The beaches are beautiful, but be forewarned—in the sandy soil just inland grows a large and ferocious expanse of poison ivy. The 18 hectare southern tip of the island is home to the island's lighthouse, and is owned by the federal Department of Fisheries and Oceans.

The Awenda portion of Giant's Tomb was only established in 1985. Different sections of the island have been logged at different intervals, including during the great Georgian Bay coast log-off before the turn of the 20th century, but it has been left alone to recover for at least 60 years now. Because it straddles the Shield/Moraine divide, Giant's Tomb supports a wide diversity of vegetation and wildlife associated with both landforms, including what is believed to be a healthy isolated population of the fascinating Eastern Hog-nosed snake.



A Hog-nosed Snake on Giant's Tomb. The Hog-nosed is known for its elaborate display which can involve flaring its neck and hissing like a cobra - don't worry though, it's all an act and the Hog-nosed is perfectly harmless!



Georgian Bay: Discovering A Unique North American Ecosystem

There's so much more to Georgian Bay than a beautiful landscape and endless recreational opportunities. Georgian Bay has provided a home to people for millennia, has been the site of industry, exploration, conflict and community, and is one of the most ecologically unique and biodiverse areas of the country. Georgian Bay's environment has served as a foundation

for cutting edge art, resource extraction, and everything in between, and is home to hundreds of fascinating species of birds, mammals, fish, plants, and more.

Georgian Bay: Discovering A Unique North American Ecosystem explores these sides of Georgian Bay through a collection of chapters written by local experts. It's the perfect way to learn more about the place we love and appreciate its history, culture, and environment.

Copies are on sale for \$60, with proceeds supporting the Land Trust's work conserving this special place. Visit gbt.org/book for more information and to order your copy for pickup this summer, or contact info@gbt.org or (416) 440-1519 x102.



Ten Georgian Bay At Risk Wildlife Species

....and how they are designated

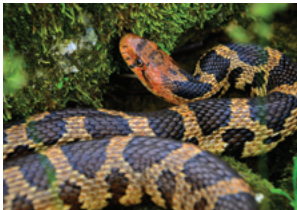
Georgian Bay Land Trust properties provide homes and habitat for documented specimens of each of these at risk species native to Georgian Bay:

1 **Spotted Turtle** (*Clemmys guttata*) Endangered COSEWIC and COSSARO



The Spotted Turtle has actually been extirpated from at least four known areas in Ontario. The reasons for its general and extreme population decline are road mortality, habitat loss from development, habitat degradation by invasive plant species (in particular by the European Common Reed a.k.a. *Phragmites australis* ssp. *australis*), and collection of wild specimens for the pet trade or traditional medicine trade. Georgian Bay harbours the largest population of Spotted Turtles in the province.

2 **Eastern Foxsnake** (*Pantherophis gloydi*) Endangered COSEWIC and Threatened COSSARO (Great Lakes/St. Lawrence population)



The greatest threats to the Eastern Foxsnake are habitat loss and fragmentation caused by shoreline development and the draining of wetlands. Many Foxsnakes are also hit by cars and deliberately killed by humans. Illegal collecting for the pet trade also reduces Foxsnake numbers.

3 **Blanding's Turtle** (*Emydoidea blandingii*) Endangered COSEWIC and COSSARO (Great Lakes/St. Lawrence population)



Nest predation by raccoons, skunks, foxes, and coyotes are significant causes of Blanding's Turtle nest failure. Draining and development of wetlands, plus the attendant roads, contribute to habitat destruction and road mortality respectively. Blanding's are also sought after by the pet trade.

4 **Eastern Hog-nosed Snake** (*Heterodon platirhinos*) Threatened COSEWIC and COSSARO



Hog-nosed numbers are being reduced by habitat loss and fragmentation, and persecution by humans. The impressive cobra-imitation of this harmless snake is so convincing that people often think it is dangerous. Road mortality is also an ever-increasing threat to this species.

5 **Little Brown Myotis** (*Myotis lucifugus*, formerly *Little Brown Bat*) Endangered COSEWIC and COSSARO



White-nose Syndrome (WNS) is having a catastrophic impact on northeastern North American bat species. The Little Brown Myotis is facing an imminent population collapse. Caused by an imported European fungus that thrives in the cold damp environment found in bat caves, WNS infects bats' muzzles and wings, disturbing their regular hibernating behaviour and ultimately causing them to starve to death.

6 **Lake Sturgeon** (*Acipenser fulvescens*) Threatened COSEWIC and COSSARO (Great Lakes/Upper St. Lawrence population)



Over harvesting, dams and other river barriers, habitat loss, and poor water quality have been responsible for the decline of Lake Sturgeon throughout North America. In Ontario, habitat fragmentation and regulated water flows from dams are the greatest threats to the species.

7

Whip-poor-will (*Caprimulgus vociferous*)
Threatened COSEWIC and COSSARO



Like many other aerial insectivores (birds that feed by catching insects while in flight), Whip-poor-will numbers have declined sharply in recent years. Contributing factors are believed to be the widespread use of

insecticides, habitat degradation and the climate change-related extreme weather that the birds now must face during migration. Other local at-risk aerial insectivores are Common Nighthawk, Barn Swallow, Bank Swallow, Chimney Swift, and Eastern Wood-Pee-wee.

8

Least Bittern (*Ixobrychus exilis*)
Threatened COSEWIC and COSSARO



The decline in Least Bittern numbers is attributed to large-scale loss and degradation of wetlands, disturbance to nest areas by activities such as boating, collision with cars and electric power lines, and increasing

migratory hazards such as climate change-related severe weather.

9

Bald Eagle (*Haliaeetus leucocephalus*)
Not at Risk COSEWIC and Special Concern COSSARO



The Bald Eagle suffered its biggest decline in the 1950s and 60s when the widespread use of pesticides caused thinning and failure of its eggshells; it was also shot as a pest or trophy. Currently on an impressive rebound, the main impact on the Ontario population is the continued development of

shoreline habitat, and pollution, since the bald eagle always nests near a large body of water.

10

Monarch Butterfly (*Danaus plexippus*)
Endangered COSEWIC and Special Concern COSSARO



The Monarch Butterfly suffers from habitat loss and fragmentation due to the logging off of its overwintering grounds in the Oyamel fir forests of Mexico, decreased availability of milkweed (its primary food) and widespread pesticide and

herbicide use. The Monarch is the first and only species to have its migration behaviour designated by the International Union for the Conservation of Nature as a "threatened process."

Many thanks to Sandy Sutherland for his help with this piece.

The **Committee on the Status of Endangered Wildlife in Canada (COSEWIC)** is the federal panel charged with determining the status levels of at risk fauna species nationwide. COSEWIC makes status recommendations to the federal Minister of Environment and Climate Change (MoECC) who then decides whether or not to list them in the schedules under the Canadian Species at Risk Act (SARA).

The **Committee on the Status of Species at Risk in Ontario (COSSARO)** is COSEWIC's counterpart at the provincial level. COSSARO provides the provincial Minister of Natural Resources & Forestry (MNRF) with recommendations for species inclusion in **Species at Risk Ontario (SARO)**. These status recommendations are typically accepted by the MNRF. The Minister has 90 days to turn the recommendation back to COSSARO for reconsideration if the assessment is known or suspected of being somehow data deficient.

Both bodies employ the same scale of threat classifications. In descending order of gravity:

Extinct

Is no longer alive, not just in Canada/Ontario, but anywhere in the world.

Extirpated

Lives somewhere in the world, and at one time lived in the wild in Canada/Ontario, but no longer lives in the wild in Canada/Ontario. Can also refer to removal or disappearance from a traditional local area.

Endangered

Lives in the wild in Canada/Ontario but is facing imminent extinction or extirpation.

Threatened

Lives in the wild in Canada/Ontario, is not endangered, but is likely to become endangered if steps are not taken to address factors threatening it.

Special concern

Lives in the wild in Canada/Ontario, is not endangered or threatened, but may become threatened or endangered due to a combination of biological characteristics and identified threats.

Grenville Volunteer Award Winners: Peter Koetsier and Wendy Wingfelder

by Bill Lougheed, Executive Director, and Brooks Greer, Land Protection Program Manager, GBLT



There is an old saying: “If you want a great volunteer, ask a busy person”. This certainly applies to Peter and Wendy. Peter may not know that he has been given the nickname “King of the Bay” due to his involvement in almost every not-for-profit organization, task force, or committee

concerned with conservation and responsible planning on our eastern Georgian Bay shore.

Wendy and Peter have enthusiasm that is boundless. They attend every GBLT event humanly possible, either from their home base in Barrie or the cottage in Honey Harbour. During events, Peter and Wendy help at the load in, and again at the pack out. They assemble materials, package auction wins, schlep event equipment, props and people in cars (and boats), and then ask “what else?”

It is perhaps only the greatest volunteer that actually looks forward to an annual audit. It has been five years now that Peter has helped the GBLT grow with a steady and prudent

hand. In 2012-2013 Peter brought his Chartered Accountant training to bear as he transitioned into the role of Treasurer with John Catto’s able help. Peter steered the re-writing of the GBLT’s investment policy, and made quick work of reviewing our financial position and investments. Thank you Peter for those long evenings reviewing each year’s audit documents. Peter is always available to answer financial questions, and although he may regret providing our executive director with his direct line, he has never let on. Our “numbers guy” always brings a cheerful and positive attitude to his volunteer work. We are blessed to have such a sharp and upbeat volunteer on our side as Treasurer.

Wendy is an artist contributor to the Bayscapes Art Auction and has donated both a beautiful watercolour and oil painting. Throughout the year, she is always ready to jump behind the scenes and help out wherever needed, from cooking and serving hors d’oeuvres, to putting up posters, to assembling last-minute gift bags. Her support and enthusiasm for all things GBLT has been invaluable and never seems to diminish.

We need also to thank Peter and Wendy for raising such hardworking and capable daughters. Kristin was our wonderful summer staffer for the 2014 season, and Sarah is our current Communications and Office Administrator par excellence. Thank you Peter and Wendy for your singular generosity to the GBLT. You have both really made a difference.



Spreading the word about conservation with OTF support

Although Georgian Bay area landowners experience the incredible natural world of Georgian Bay every day, many are unaware of the actions they can take on their own property to help conserve this special place. This past year, the GBLT set out to change that with the support of a grant from the Ontario Trillium Foundation (OTF).

From April 2016-April 2017, the GBLT launched a program to communicate with landowners in the Township of Georgian Bay about conservation options and the associated federal income and capital gains tax incentives. We plan to use this as a pilot project for further communications along the entire eastern shore of Georgian Bay. Residents received personalized information packages by mail, and were invited to attend a seminar series to learn about conservation options.

The two main options for landowners are Conservation Agreements (also known as easements), and gifts of land. Conservation Agreements allow landowners to maintain use and ownership of their property, while agreeing to leave it (or a portion of it) in its natural state forever. A gift of land is an outright donation of property to the Land Trust to become a conservation reserve. Federal income and capital gains tax incentives help make both of these options financially, as well as environmentally, responsible choices for many landowners.

The Land Trust has already seen an increase in landowner engagement as a result of this project, with many individuals expressing interest in setting up Conservation Agreements on their own properties, or initiating gifts of land. These acts create pockets of Georgian Bay wilderness that are protected forever, for people and all species on Georgian Bay to benefit from for years to come.

If you’re interested in learning more about conservation options for your property, please get in touch with Bill Lougheed at bill.lougheed@gblt.org or (416) 440-1519 x101.



Georgian Bay QUERY:

Answered by Anne Stewart and Sue Russell

What is the best way to keep my cottage clean without harming the environment?

LandScript talked to two local eco-experts, Anne Stewart and Sue Russell, to answer some common questions about eco-friendly cleaning at the cottage.



Algae blooms like this can result from high levels of phosphorous and other nutrients in the water. Photo by Galen Herz

What are some common cleaning practices at the cottage that are harmful to the environment?

Almost any cleaning you do at the cottage can have an effect on your surrounding environment, from personal bathing to household cleaning to washing dishes. Many cottagers have a tradition of conducting some of their cleaning outdoors, and even products used indoors often make their way into the local environment through the septic tank. That's why it's important to make all your cottage cleaning as eco-friendly as possible.

Most commercial cleaning supplies contain ingredients that are harmful when released into the environment. The risks posed by phosphates are well known, but even phosphate-free products contain nutrients that can deplete oxygen in the water. It's also important to note that automatic dishwashing detergents are exempt from the laws surrounding phosphates, meaning that unless you pay attention, you're likely to be sending phosphates into your septic tank every time you use a dishwasher.

Is using biodegradable soap or detergent a solution?

"Biodegradable is kind of a misleading term," says Anne, "because everything will break down in the environment if given enough time." What you really need to look for is how long it takes to break down—will it take a month, a year, or a thousand years? Anne recommends looking for products that advertise being biodegradable within 30 days, or products certified by the Ecocert program.

Biodegradable products are much better than non-biodegradable ones, but they're still not necessarily safe

for direct release into the environment. In many cases, you can make your cleaning even simpler by moving away from commercial cleaners and using natural ingredients.

What are the best techniques for keeping yourself and your cottage clean without harming the environment? Are there any products you can recommend?

Both Anne and Sue recommend using simple products like borax, baking soda, vinegar, and lemon. For household cleaning, "you really don't need anything other than that," says Anne. There are often natural substitutes for more specialized cleaning as well – Anne recommends using cooking oil instead of furniture polish, and Sue sprinkles cloves in her cupboards to deter mice.

When you must use commercial products, look for things that are reliably biodegradable and/or Ecocert certified, and always avoid getting suds directly in the lake. Even if they're "biodegradable", "any cleaning products you use should always go through some system to filter out the nutrients before they reach the water," says Anne. Your septic tank can serve this purpose, but so can your lawn/soil if you're washing things outside. If you bathe off the end of the dock, use a hose or bucket to rinse the shampoo off on the lawn before jumping in to the lake.

If you use a washing machine at the cottage, Sue recommends moving away from detergent entirely. She uses a laundry ball (SmartKlean), which is a mid-sized reusable plastic ball that is filled with four types of mineral-derived ceramic beads and two magnets, each performing different cleaning functions. It can be thrown in with each load instead of detergent. For bleach, Sue recommends the power of Georgian Bay sunshine.

Avoid toxic products like air fresheners, carpet shampoos, and cleaning wipes (which should never be flushed into a septic system even if they're advertised as flushable), as well as anything containing triclosan or triclocarbon, common in antibacterial gels and creams. When in doubt, use simple materials and some good old-fashioned scrubbing to get things clean. As Sue says, "elbow grease is a little harder to use, but it will get anything off." With a few small changes, you can keep your cottage clean and your land and water healthy—and then get back to enjoying the Bay!

Anne Stewart is a cottager in Nares Inlet and the owner of ecofitter, a consulting company that helps people create a more environmentally healthy lifestyle. She also sits on the board of the Georgian Bay Association.

Sue Russell is a long-time Georgian Bay Land Trust volunteer and past president of the Georgian Bay Osprey Society. She cottages in Cognashene.

Welcome Jan Ruby, Incoming GBLT Board Chair

by Janny Vincent, Outgoing Chair, GBLT



It is with pleasure that I introduce Jan Ruby, GBLT's incoming Chair. Jan has a long relationship with the Georgian Bay. Her connection originated through her father, Walling Ruby, whose parents hailed from Midland. Jan's father's deep love of the Bay passed down to the entire Ruby family, who made their

summer home on Bienvenue Island in Pointe au Baril.

In 2009, Jan and her partner Mary Thomson inherited their own island ("99A") located along the same shore as the Ruby

family place. Jan and Mary built a new cottage in 2013 with design help from architect John Stark, past GBLT Chair. The couple are very happy to be close to the rest of the Ruby clan who continue to summer nearby. Jan is passionate about protecting Georgian Bay for the next generations to come, so that they too may be blessed by its wonderful features.

The GBLT will be well served by Jan, who is a "roll up the sleeves" kind of person – smart, articulate and generous of her time and ideas. She and her family have been big supporters in the Georgian Bay community; this includes tremendous support of the Parry Sound Hospital.

I know all of us on the GBLT Board look forward to Jan's chairmanship, and to working with her to achieve the Trust's ongoing goals.

Farewell to our past Chair

by Jan Ruby, Incoming Chair, GBLT



With many thanks, we say goodbye to our past Chair Janny Vincent. Janny joined the GBLT in October 2010 and served on both the Communications and the Development Committees before assuming the role of Vice Chair in 2013. Janny served as Board Chair from December 2013 to June 2017. The period of Janny's

tenure as Board Chair has seen unprecedented growth in our portfolio of properties (from 36 to 47) now protected forever for present and future residents and travelers on the waters of Georgian Bay.

Janny's ever-steady hand on the tiller steered the GBLT through some very challenging issues and acquisitions, such

as the affectionately named Steamboat property in Pointe au Baril (northern half of Mackenzie Island). In addition to expertly chairing the GBLT Board, Janny helped spearhead the Long-term Stewardship Task Force. She was instrumental in initiating and enshrining the GBLT's "openness and transparency" policy and, importantly, assisted the Executive Director in reformulating our Land Use Policy. It is doubtful that the publication of *Georgian Bay: Discovering A Unique North American Ecosystem* would have happened without her support and hard work to bring it to fruition.

What a record of fabulous results!

Janny enjoyed great respect by all for her inclusive, democratic, and intelligent leadership style. Bill Loughheed, our Executive Director, describes Janny's very warm and engaging leadership as "thoughtful listening followed by very intelligently doing the right thing at the right time".

She is already missed, but the ship sails on stronger than ever!



We're Moving!

As of July 1st, our new address is:
120 Eglinton Avenue East, Suite 1000
Toronto, ON M4P 1E2

All phone numbers and email addresses remain the same.

Welcome to Janet Brough Tinsley,

New Senior Development Officer

by David Doritty, Fundraising Chair, GBLT



In 1942 Janet's maternal grandfather, Smirle Alexander Lawson, wrote this about the family island, Gunn Island in Wah Wah Taysee:

"This rock has no monetary value to any of its current occupants as it is their sole responsibility to maintain, preserve and enhance it for the next generation to come."

Officer. The quote above speaks directly to a mission that the GBLT strives to in all the work we do in the Bay. Gunn Island (also known as "Ferncliffe"), which I've been visiting for many years, holds a very special and important place for Janet's entire family. Janet's 2 children, Amy and Adam, are 4th generation Ferncliffers.

Janet has had a long and rewarding career in marketing and advertising with a number of well-known Canadian and global companies. Her strength in strategy and communications will be a real asset to the GBLT. Importantly, Janet knows cottagers up and down the shore line of the Bay and makes friends where ever she travels.

Welcome aboard, Janet!

On behalf of the board and management team, we are thrilled to have Janet join in the position of Senior Development

Welcome Summer Conservation Interns



Anne Hughes is currently finishing a Psychology degree at Ryerson University in Toronto. She has spent all of her summers growing up at her family's cottage in Cognashene, and has a strong love of the outdoors and learning. Anne spent many years participating in, working at, and finally being head of, the Cognashene

Recreation Program. Anne is extremely excited to be back working with the GBLT for her second summer. She is looking forward to continuing to share her passion for Georgian Bay this summer and keep doing her part to maintain the Bay for future generations.



Nicholas Harrison is a fourth year student at the University of King's College and Dalhousie University in Halifax, currently studying Political Science and taking part in the Contemporary Studies Programme. Nick grew up on the rocks at Go Home Bay, and he is looking forward

to spending the summer giving back to an area that really means home to him. For Nick, environmental stewardship is absolutely necessary in order to maintain the natural beauty and harmony of the rocks, the water, and the trees that mean so much to so many people on Georgian Bay.



In celebration of Canada 150, Environment and Climate Change Canada has recognized the Georgian Bay Land Trust for outstanding contributions to Canadian conservation.

As Canadians, we're all stewards of the land that has provided humans a home, way of life, and spiritual connection to wild open spaces for countless generations. Help ensure the sustained health of the Georgian Bay environment by making a special gift of \$150 to the Georgian Bay Land Trust this July. Visit gbt.org/donate to make your gift.

Georgian Bay Snapshot

Last few days of ice on the
Little Shebeshekong River
by Michael Leckman



Michael took this beautiful image at the tail end of winter this past March. The glow you see in the background is the lights of Parry Sound, recorded during the long exposure Michael uses to capture the starlight.

Submit your best Georgian Bay shots to info@gbt.org, or use [#GBLandTrust](https://www.instagram.com/GBLandTrust) on Instagram, for a chance to be featured in the next Georgian Bay Snapshot.



Keep your Eyes on the Skies! – GBLT Photo Contest 2017



Capture your best photo of a Georgian Bay sky and enter our 2017 photo contest!

Photos should feature the sky but can contain other items (trees, rocks, water, etc.) Be creative! We love sunsets, but there is so much more to the skies of Georgian Bay. Here are a few ideas for photos that will stand out from the pack:

- Night skies
- Cloud formations
- Storms and lightning
- Rainbows
- Clear blue skies
- And more!

25 winning photos will be chosen for our “Skies of Georgian Bay” poster to be released in November. Winners will receive a complimentary mounted poster.

Maximum three entries per person, and please no photos smaller than 3 MB. Submissions are due by September 15, 2017. For contest details and to upload your submission, please visit our NEWS page at gbt.org.

John Birnbaum, 1943-2017

by Chris Baines, former GBLT Executive Director



The greater Georgian Bay community was saddened to learn of John Birnbaum's passing in January. John was certainly a character and a resource known throughout the Bay and southern Ontario for his long involvement in the affairs of Georgian Bay.

GBLT supporters may not be aware, but John Birnbaum was integral to the founding of our charity. 1991 was the 75th anniversary of the Georgian Bay Association (GBA) and John, on the board of GBA at the time, decided that the organization needed an event to bring everyone together to celebrate this achievement. Not only that, but the event should commence something worthy of the GBA's 75 years. John hit upon the concept of an art auction in Toronto, with the proceeds going to assist the founding of a new organization called the Georgian Bay Land Trust. It was John who was always best at implementing a great concept into reality. Wally King, our founder, called upon John as one of the five initial board members, and his skillful guidance in the early years was most helpful to the board.

A superb communicator and a skillful event planner, John was a humorous observer of life. He will be remembered for his extraordinary wit and playful use of words. He often remarked that, "a sense of humour is a sense of proportion."

In closing, I would very much like to say to John what he so often said ending his conversations: "Thanks for this".

Tribute GIFTS

Received from January 1st – May 26th 2017

In Memory

John Birnbaum
William Derby
Robert G. Eakin
Lyn Gillespie
Barbara Harris

Sheila MacFeeters
Jim Meisner
John Mitchell
Robert Northey

In Honour

Geordie Dalglish
Andrew Fabens III

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The Georgian Bay Land Trust acts to preserve the wilderness lands of eastern Georgian Bay and the North Channel through strategic conservation planning, land securement, conservation research, and education.

We are a registered Canadian charity (#13195 8811 RR0001)

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gbt.org

SUMMER 2017

SUMMEREVENTS

PROTECTING the WILDERNESS of our UNIQUE ARCHIPELAGO



Kids' Conservation Quest

Kids ages 8–12 will love learning about Georgian Bay flora and fauna and how to be a good steward of this precious environment. Bring a lunch and drinking water.

Honey Harbour Schoolhouse: July 25th, 10:30 am–12:30 pm

American Camp Island (Wah Wah Taysee): Aug 3rd, 10 am–1 pm



Rock Walks

Join “rock star” geologist Dr. Nick Eyles for a fascinating tour of the geological secrets seen in the rocks beneath our feet.

Giant's Tomb: July 26th (rain date July 27th), 1 pm

Island 821A (Bayfield Inlet): July 29th (rain date August 1st), 1 pm

Wreck Island (Sans Souci): July 30th (rain date August 2nd), 1 pm

Saturday, July 8

Kayaking the Kofman Moose Bay Reserve: 1 pm, Wah Wah Taysee. Bring your kayak (or SUP, canoe, etc.) and explore this rich aquatic habitat with us.

Yoga on the Rocks

Begin your day with invigorating yoga led by Angela Granziera. No experience required.

Southeast Wooded Pine Island: July 20th, 10:30–11:45 am, \$10

American Camp Island: August 10th, 10:30–11:45 am, \$10



Saturday, July 22

Photography Workshop: 2–5 pm, West Lookout Island, Pointe au Baril. Bring your cameras, your imagination, and a sense of adventure to this photography walk led by Sylvia Galbraith. Includes a fun photography scavenger hunt for all ages and skill levels.

Sunday, July 23

“Abstract Landscapes” Photography Talk: 2–4 pm, SSCA Schoolhouse, Sans Souci. Photographer and King Family Bursary winner Sylvia Galbraith will present her project “Outside of Time” which explores landscape abstractions found in Georgian Bay’s rocks.



Saturday, August 12

Rock the Bay: 3 pm, Arthur Island, Cognashene (rain date August 13th, 1 pm). Come hear Kitty and the Boyz from your boat or onshore at this very popular dock concert! \$20, free for kids 12 and under.



Sunday, August 13

Celebrating the Steamboat Channel Reserve: 1–3 pm, Steamboat Channel Reserve, Pointe au Baril. Bring a picnic, and join us to learn more about the ecological features of this remarkable and newly protected island.



Friday, August 18

Phragmites Removal at Sandy & Ingersoll: (rain date August 21st) 9 am–12 pm. Help us remove this invasive reed from the shoreline of Sandy and Ingersoll Islands.

Saturday, August 19

“Cocktails & Canvases” on Southeast Wooded Pine Island: (rain date August 20th) 3–5 pm. Bring your art supplies and/or a cocktail, and join artist Andrew Peycha for an afternoon exploring this beautiful property.



For more information about any of these events please visit gbt.org/events.