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The Bras d'Or Lake Biosphere is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq.

Bras d'Or Watch: Citizen Science in the Bras d'Or *by Annamarie Hatcher*

What is going to happen in the Bras d'Or Lake as global warming and sea level rise change ecosystems around the world? One of the most powerful tools that we have in understanding these changes is repeated simple observations in specific places. In July, 2015 the Bras d'Or Lake Biosphere Reserve Association launched a local program called 'Bras d'Or Watch'. On July 17, two hundred and twenty people gathered on the lakeshore at six sites for the first Bras d'Or Watch lakeshore field day. Observers got up close and personal with many of the Lake's nearshore residents in Whycocomagh, Baddeck, Grand Narrows, Eskasoni, St. Peters and Ben Eoin. One of the more captivating residents was the Northern pipefish, a fascinating creature which looks more like a miniature dragon than the other small fish that they share the Lakes with. Another creature that interested many Bras d'Or watchers was the common periwinkle. Younger watchers using the underwater viewer followed the snails as they crawled on the sandy bottom. Did you know that these abundant shellfish are not native to North America? They came from Europe on ballast rocks in the hulls of 18th century sailing ships. European Green crabs are one of the target 'alien' species that we watch for in the Bras d'Or and we found them at all six sites in 2015. This crab first appeared in the Cape Cod region in the mid 1800's, also arriving in the ballast water of ships sailing from Europe. In the early 1900's they spread northwards, arriving in Maine in the 1950's and the Bras d'Or Lakes in the early 1990's. Bras d'Or watchers are keeping an eye on changes in abundance of this crab. Will we see any of these in 2018 and, if we do, where will we find them? If you join us on the shore you may be the one who spots one of them first! Bras d'Or Watch field day 2016 occurred on July 16 at six sites. Approximately 200 Bras d'Or watchers joined the naturalists and scientists and most of these observers were in Baddeck and Grand Narrows. In 2017 we had hundreds of observers at Grand Narrows, Eskasoni and St. Peter's. Bras d'Or Watch field day 2018 will be held on July 14 (rain date July 15) at several sites (Ben Eoin RV Park, Whycocomagh, Ross Ferry and St. Peter's). We need your eyes and hands to help us study the Bras d'Or. We have surveys and activities suitable for all ages and levels of experience and resident experts to answer your questions! You may see a northern pipefish in its' natural habitat! With our underwater viewers you can watch the green crabs and help us look out for the other two expected invaders. Come and be a scientist for a day. Keep an eye on the Bras d'Or Watch Facebook page to see what is developing: <https://www.facebook.com/BrasOrWatch/>



Bras d'Or Watch 2018

Join us for the 4th annual Citizen Science Field Day on the Bras d'Or Lake shore - no experience required!

Come Explore the Bras d'Or!

Saturday, July 14 (rain date July 15)

10:00am - 2:00pm

Locations:
Whycocomagh, Ben Eoin RV Park, Ross Ferry, St. Peter's

Like **Bras d'Or Watch** on Facebook for location updates!
All ages welcome - family-friendly games & activities

Logos: TD, TD Friends of the Environment Foundation, UNESCO, Bras d'Or Lake Biosphere, ACAP Cape Breton



**TD Friends of the
Environment
Foundation**



*The photo below is of a
desiccated Trigger fish found
on a local beach.*

<http://inaturalist.ca/observations/4685467>

Bras d'Or Watch Citizen Science Annual Event growing thanks to TD Grant *by Bill Vokey*

TD Friends of the Environment Foundation (TD FEF) has recently given a \$7,000.00 donation to the Bras d'Or Lake Biosphere Reserve Association (BLBRA) for its project "A community-based Report Card of Ecosystem Health".

This project aims to engage residents and visitors in education focused around the Mi'kmaw concept of 'MSIT No'kmaq', meaning 'all my relations', which underlies a practical synergy between community economic development and ecological integrity. These initiatives involve a broadening of citizen-based monitoring of significant ecosystem components through Bras d'Or Watch in the estuary and forests, and the delivery of a cross-cultural perspective to visitors that highlight the current state of the ecosystem.

The 2017 edition of this initiative, supported by a \$13,500.00 TD FEF grant, was very successful, attracting over 200 citizen scientists. For 2018, the BLBRA hopes to expand the program to additional sites which have requested participation, and to enhance the touch tanks activity at all Bras d'Or Watch field day sites.

"For TD FEF, it has always been important to support initiatives which involve local community members and focus on connecting Canadians to local green spaces through environmental education", mentioned William Vokey, TD Branch Manager in Sydney.

For over 25 years, TD FEF has helped make local environmental projects a reality providing funds to more than 26,000 community environmental projects and programs across Canada.

Recently, TD launched The Ready Commitment, a multi-year program to help open doors for an inclusive tomorrow. As part of this program, TD is committed to helping create a more vibrant planet by growing and enhancing green spaces for everyone to enjoy. Working with organizations like BLBRA, we can work together to elevate the quality of the environment so that people and economic can thrive.

Bras d'Or Watch 2018: Connecting the Bras d'Or with the rest of the world through iNaturalist

***By: Mary Kennedy, Department of Fisheries and Oceans (retired) and
Annamarie Hatcher (BLBRA)***

Did you ever see a really weird animal and wonder if it is rare or whether it is common but you haven't really noticed it before? Imagine having a scientist beside you who could tell you exactly what it was and whether your sighting was really unusual. Then, imagine being able to contribute



Examples of some iNaturalist submissions for June 18, 2018.



your observation to a group which is gathering important data from many sources to assess the health of 'your' ecosystem. Well, in today's connected world you can log a photo or observation on the web platform iNaturalist and experts will provide you with this sort of feedback. The data that you sent in is logged along with its' location and scientists can later compile species lists and look for unusual sightings. These sorts of analyses are extremely useful when we prepare for the impacts of climate change in the Bras d'Or Lake Biosphere. So, we are encouraging residents and visitors to become acquainted with iNaturalist and to start logging those observations.

iNaturalist is simple to use; you can choose to download an app to your phone, copy photos posted on Face Book or Flickr or upload photos directly to the site using a laptop. Unlike many other applications you do not need to know the name of the plant or animal in the picture. iNaturalist uses crowd sourcing to connect with experts to assist with identification and verification. Your responsibility is to provide the date and location where you made the observation. Date and time are usually recorded automatically by your camera. If location is not recorded by your camera then iNaturalist has a tool that will help you geo-reference the photo. You can enter a place name and then move the dot around the map until you find the approximate location. To get started on I-Naturalist, go to <http://inaturalist.ca/> and follow the instructions under 'sign up '. You will be asked to provide an email address, set a password and choose a username to be associated with your observations. The next step is to go outdoors, explore, and share your observations.

iNaturalist.ca is the Canadian version of the global program. In 2017, as part of the Canada150 activities, a number of bio blitzes were held across the country including the Cape Breton Highlands National Park. iNaturalist.ca was the tool used to collect and share these observations. One of the major objectives was to engage the public and to encourage a love of the outdoors and nature. This is an activity that we can enjoy throughout our lives with friends and family.

iNaturalist is a place where you can share observations of a given species observed in different locations or on different dates. Perhaps you have photos of plants or trees at different times of the year. Perhaps you have photos of eagles sitting on a tree or in full flight doing acrobatics. Perhaps you simply want to know what the thing on the beach is.

iNaturalist maintains an internal list of endangered or species at risk and exact locations of these species are not made visible to the general public, so don't worry that you are posting sensitive info that will endanger the plant/animal that you observed.

At this point we hope that you agree that iNaturalist is a great tool for you to use. Your next question might be: "How can my collection of photos be of interest to researchers?" A collection of a few photos is useful for rare or unexpected species and hundreds or thousands of these small scattered observations aggregated together on one platform is [a powerful dataset](#)!

The Bras d'Or Lake Biosphere Reserve Association extends its thanks and appreciation to the Bras d'Or Stewardship Society for its recent and most generous donation of \$26,000. This substantial gift also included 96 individuals who are now life time members of the BLBRA. The double gift of talent and treasure can only enhance the future endeavours of the BLBRA.

Newly release Video gets international recognition!



CEPI representative on the BLBRA Board and part-time videographer Stan Johnson of Eskasoni along with his brother Tom, recently produced a short video called [Reconciling with The Land and Each Other](#) which was played simultaneously in Ottawa at the AGM for the Canadian Commission for UNESCO and at the UN General Assembly in New York on June 7th. This was the only Canadian Biosphere video represented.

Congratulation and thanks

Notes from The Chair *by Bruce Hatcher*

June is an important time for the Bras d'Or Lake Biosphere Association: we hold the Annual General Meeting of our Membership and the Canadian Biosphere Reserve Association holds its national AGM. This year the CBRA meeting was combined with the AGM of the Canadian Commission for UNESCO in Ottawa. Board member Tom Johnson and I represented our Biosphere, in the company of others from Biospheres to the west. In addition, we were joined by some 60 delegates of the CC-UNESCO. It was an intellectually and culturally diverse assemblage. My overarching impression of these four days was one of informed energy focused on actions at all levels, from the individual to the globe. We had the opportunity to lobby politicians on Parliament Hill and participate in significant discussions about priorities for the implementation of national agendas on biodiversity conservation, sustainable development and reconciliation. The national attention to the United Nations' Sustainable Development Goals was apparent in the proceedings as well. After all that global thought I returned home inspired to act locally and the BLBA-AGM made it easy. With more than 30 Members in attendance at the Legion in Iona, we reviewed a banner year for the Association capped by the generous gift of money and life-time members from the Bras d'Or Stewardship Society. It was great to hear from three generations in the audience, from founding elders to young entrepreneurs. It is apparent that substantive progress is being made on all of the Biosphere projects, with old ideas coming to fruition and new ideas attracting volunteers. Amongst anticipated accomplishments, the coming year will see the fourth edition of Bras d'Or Watch citizen science, the installation of high profile signage on the major roads into the Biosphere, upgrading of the interpretive display at the Alexander Graham Bell National Historic Site and the complete redesign of our web site. If you have not already, I invite you volunteer some of your limited time to the Association. Everyone will benefit.

Tom Johnson accepts a National Role in Canada's Biosphere Network *by Eileen Crosby*



from the BLBRA.(English subtitles will be added shortly to the video where needed.)



Here is another video produced by the Canadian Biosphere Reserve Association (CBRA) concerning the formation of the CBRA Indigenous Circle.



<https://www.youtube.com/watch?v=biZcD3-hsJ0&t=22s>

Facts about Biosphere Reserves: Canada's 18 Biosphere Reserves play an important role in improving the quality of life of the 1.7 million Canadians who live and work within their boundaries. Canada's UNESCO biosphere reserves are situated within the traditional territories of over 50 First Nations.



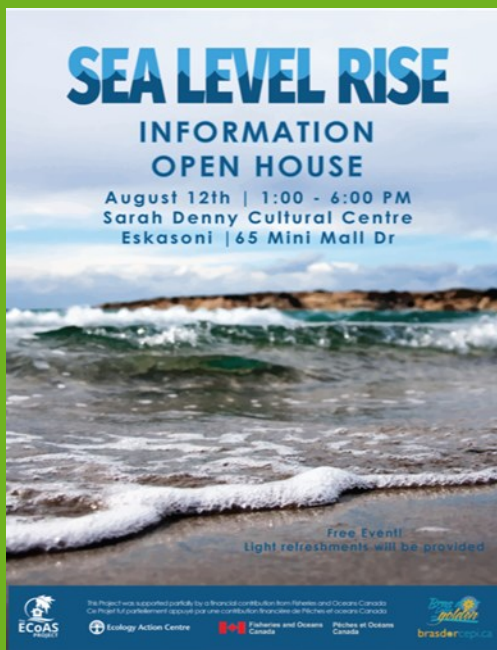
Earlier this month, Tom Johnson, a member of the BLBRA Board of Directors, attended the 58th annual general meeting for the Canadian Commission for UNESCO in Ottawa. In summarizing the meeting, Tom said, "I must say that it seems as though the Bras d'Or Lake Biosphere was the center of attention. It also seemed as though everything at this meeting was being prepared to address the Year of Indigenous Language." UNESCO has been designated the lead UN agency for the 2019 International Year of Indigenous Languages, which aims to draw attention to the urgent need to raise awareness of indigenous languages and to support their preservation, maintenance and revitalization all over the world. While attending this national meeting, Tom made 3 presentations including Q & A sessions on the preservation and rejuvenation of the Mi'kmaw language to help sustain it in his home community of Eskasoni. In addition, Tom was also elected to sit on the Executive Committee of the CCUNESCO Board which he agreed to do for a two year term.

"In February 2018, Indigenous Peoples from territories that host UNESCO biosphere reserves in Canada gathered in Ottawa on the occasion of the Canadian Biosphere Reserves Association. The twenty Indigenous representatives came to meet each other, share knowledge, and discuss what role they may play in the future of Canada's biosphere reserves. The Canadian Biosphere Reserves Association made a commitment to meet with the Indigenous Circle regularly to deepen our understanding about protocols and meaningful collaboration with Indigenous Peoples across all 18 UNESCO biosphere reserves in Canada. During the meeting the Indigenous Circle made a statement called "Making a Promise", in which they shared their objective to ensure that the "voices" of the water, the land, the air, and all things guide the biosphere reserves, and detailing how Indigenous Peoples must be valued and have direct participation as partners in all aspects of biosphere reserves." The foregoing statement comes from the Canadian Commission of UNESCO. See and hear some of the participants in this video (side panel), who gathered to shared their thoughts including Tom Johnson. the Eskasoni Fish and Wildlife representative on the BLBRA Board of Directors.

And now this from UNESCO's Proud To Share Campaign

"All around the world, incredible people are working to achieve the Sustainable Development Goals. The [#Proud To Share](#) campaign by UNESCO's Man and the Biosphere Programme (MaB) aims to share their stories and show how communities are making a difference in Biosphere Reserves. Watch the [Bras d'Or Lake's story](#) to find out just a few of the ways they are tackling the participation of indigenous people, quality education and forest and water management. In this video, they share just of few of their many solutions for people and nature to thrive together. And explore the rest of the [#Proud To Share](#) video collection to meet many others across the UNESCO MAB World Network of Biosphere Reserves."

Thanks to brothers Tom and Stan Johnson of Eskasoni for producing this mini one minute video to represent our Biosphere in the Proud To Share series. We were also the only biosphere in Canada to showcase our video in the Proud to Share video series.



Just announced...

NS DEPT. OF ENVIRONMENT
Environment Minister Iain Rankin
launched public consultations on
future coastal protection
legislation today, June 26.

The province is proposing coastal
protection legislation with clear
rules on what can and cannot be
done in areas next to the coast.
This will help ensure that new
construction happens in places
that are less likely to be
threatened by coastal erosion,
rising sea levels and storm
surges.

At the same time, it would
ensure that salt marshes, dunes
and other coastal features can
continue to filter water, shelter
birds and sea life, and adapt
more naturally to the impact of
climate change.

The public can have their say
online by visiting

novascotia.ca/coast.

The consultation will be open
until Friday, Aug. 17.

Bras d'Or Lakes Sea-Level Rise Open House

Location: Sarah Denny Cultural Centre, 65 Mini Mall Dr.,
Eskasoni, NS B1W 1C2

Date: August 12th - Sunday

Time: 1:00 - 6:00 PM

Overview:

Sea-level rise is impacting our coastal communities more and more every
year and it's not expected to let up in the future. Communities are looking
for information as to what this means for them and they want to know
what action is being taken place locally.

The **Ecology Action Centre** has teamed up with the **Department of
Fisheries & Oceans** until **March 2019** to create an informative website –
www.sealevelrise.ca - and sea-level rise resources for coastal residents,
fishers, and communities about rising seas that are specific to Atlantic
Canada and British Columbia. A big part of this project is engaging the
public through sea-level rise workshops and engagement sessions. We've
created partnerships in each of the Atlantic Provinces (Conservation Corps
of Nfld, UPEI, Climate Lab, and NB Environmental Network) and in BC
(Living Oceans Society) to host similar sea-level rise information sessions.
By the end of the project, over 40 sea level rise information sessions will
have happened across Canada.

WITH THIS PROJECT, WE WANT TO:

- Help communities learn about sea-level rise and how it impacts them
- Provide access to tools and resources that have been developed with the latest local climate change information available
- Illustrate where sea-level rise impacts are happening through interactive mapping
- Show the need for incorporating sea-level rise into future planning strategies

Eskasoni Sea Level Rise Open House Goal:

By bringing together all the great sea-level rise knowledge, projects and
science that exists for the Bras d'Or lakes, the public can come and go as
they please moving through the space, stopping at booths, tables, panels
and have the opportunity to talk to and ask questions to those working in
the field. There will also be an interactive mapping exercise where the
public can note where they have witnessed coastal impacts along the Bras
d'Or Lakes. We hope to ignite discussion between people within
communities and have them feeling a bit more empowered about taking
action on sea level rise in their community, and have a better
understanding of what work is currently going on in the area related to sea
level rise.

**If you interested in bringing your work and skills to the
event or have any questions, send an email to Brittany
MacIsaac, the EAC's Coastal Outreach Coordinator and
email at coastaloutreach@ecologyaction.ca**

Wiskoqey: Black Ash



Emerald ash borer

<https://commons.wikimedia.org/w/index.php?curid=5325150>
<https://commons.wikimedia.org/w/index.php?curid=41430027>



<http://www.muiniskw.org/pgCulture1d.htm>



<https://www.best4hedging.co.uk/mountain-ash-tree-aka-rowan-tree-p123>

Mountain Ash pictured above is not a true ash tree.

Black Ash *by Annamarie Hatcher*

We have three types of ash tree growing in the Bras d'Or Lake Biosphere (white, green and black). The black ash (Mi'kmaw: wiskoqey) is a skinny, slow-growing tree which is intolerant of shade and grows well on wet sites along rivers and small brook bottoms or mixed in with alders. The compound leaves are darker on the underside and longer than the other two ash species at 25 to 40 cm. The trunk is gray in colour and smooth to corky on young trees and scaly on mature trees. As is the case for the other two species, inconspicuous flowers form before the leaves in early June. However, both sexes can be on the same or on different trees. The fruit is a winged, flatten, single seeded samara that is borne in terminal or lateral branches. Black ash is rare and is particularly susceptible to fungal diseases, poor growth and being stunted. Black ash is unique because it does not have fibers connecting the growth rings to each other. This property has made the black ash of great cultural significance to Mi'kmaq for basket making. Pliable wood strips can be separated by pounding with a mallet. [Basket makers](#) would crush the weaker spring wood layer and peel off the tougher summer wood in long strips. These were trimmed and used for weaving into [baskets](#) and for making a traditional musical instrument called a [Ji'kmaqn](#).



Our three valued species of ash trees in the Bras d'Or Lake Biosphere are all under threat because of a beautiful little beetle called the emerald ash borer, an invader from Asia that was first discovered in 2002 in Michigan and southwest Ontario. It has been destroying ash forests in Ontario and has spread to Quebec and New Brunswick. It is on its way to our Biosphere! It is the larval stage that causes mortality because it feeds on the inner bark and disrupts water and nutrient flow. Adult emerald ash borers are a dark metallic green colour with tiny bodies (8 mm long and 1.5 mm wide), black eyes and flat heads. This forest pest is monitored by the Canadian Food Inspection Agency (CFIA) under the federal Plant Protection Act, in order to prevent introduction and spread. The provincial status report on the species can be found at [this site](#) while this [video](#) will help you identify ash trees.

For more information on the emerald ash borer please visit: [Natural Resources Canada](#)

For more information on the regulations, and to report a potential sighting, please contact a local CFIA office or visit the [Canadian Food Inspection Agency website](#).

Support the Bras d'Or Lake Biosphere.
Your voice matters.
Mobilize it through
[membership](#).



Please note: There will be no meeting in July and therefore no newsletter.



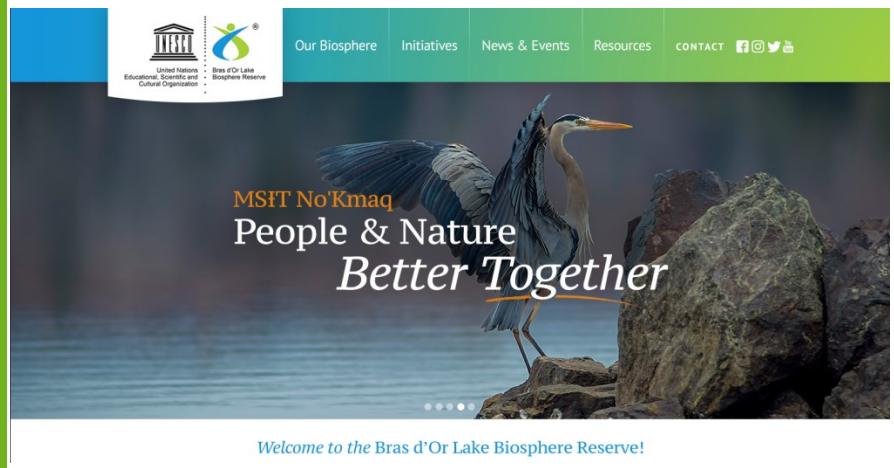
The BLBRA Communication Committee would like to thank all those who contributed articles to Biosphere Highlights especially Dr. Annamarie Hatcher for her many submissions over the last nine newsletters.

Contact Us: email us at: contact@blbra.ca or
Bras d'Or Lake Biosphere Assoc.
532 Chebucto St. P.O. Box 711
Baddeck, NS, B0E 1B0



The BLBRA welcomes your comments or suggestions. Let us know if you do not wish to receive this newsletter. Address your comments or suggestions [here](#).

Watch for our new redesigned Biosphere web site! Soon to be launched.



Bras d'Or Lake Biosphere Featured Trail

By Lynn Baechler

There are a number of trails throughout the biosphere, some are well known and well used while others are less so. In this issue of 'Biosphere Highlights' the Trail Committee of the BLBRA is featuring the popular Kidston Island Walking Trail, on Kidston Island, Baddeck. The trail is well marked and includes several different ecosystems of interest to budding naturalists. The Island is home to barachois ponds, wetlands, barrier beaches, early succession woodlands and remnant patches of tolerant hardwood forest (sugar maple and yellow birch). Along with many other native plants you will find purple and white fringed orchids, bunchberry, twin flower, blueberry, beach pea, American sea rocket, Seaside goldenrod and cattails, along with many types of ferns, mosses and lichens. Non-native plants include patches of Angelica, Multiflora rose, Japanese knotweed, and even a holly plant. Eagles, woodpeckers, warblers and swallows frequent the Island.

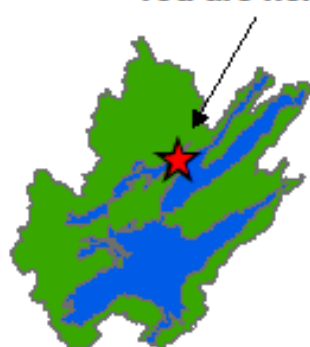
Views from all sides of the Island are scenic and are worthy of photographs from any angle. The lighthouse at the north end of the Island is especially picturesque. The Baddeck Lions Club operates a ferry daily to and from Kidston Island where swimming lessons are offered at the supervised beach. The ferry is free, although donations are welcomed. The Village of Baddeck maintains the trails, which consist of a 2.1 km circumference trail and two short trails (85 and 140 m) cutting across the island. These are easy hikes, with several places to sit and enjoy a picnic which makes it especially suitable for families. With luck a sailboat will pass by. Don't miss this trail; it offers both relaxing and learning opportunities! More about the Kidston Island walking trail and the history of the Island can be found [here](#).

See Map next page.

Village of Baddeck - Kidston Island

Hiking Trails

You are here



Trail Notes:

The trail is accessed by ferry from Baddeck (donations)
Length: Circumference trail - 2.1 kms
Cross island paths: 85 m (N) and 140 m (S)

Footpath around island, including beach walk at north end (lighthouse).
3 barachois ponds with various wetland plants, birds.
Woodland is generally young forest with remnant old hardwood trees

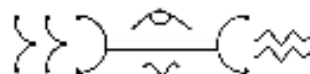
Top Elevation: 13 m

Vault Privies
Supervised beach
Picnic areas and benches

The trail is maintained by the Village of Baddeck
The ferry is operated by the Baddeck Lions Club

- Ferry wharf
- Lighthouse
- ★ Non-native (spreading) species
- Old Sugar maple

EFFORT: Easy



www.blbra.ca

