

## *In This Issue:*

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- Best Practices Corner
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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 People.*

This territory is covered by the ["Treaties of Peace and Friendship"](#) which Mi'kmaq and Wolastoqiyik (Maliseet) people first signed with the British Crown in 1726. The treaties did not deal with surrender of lands and resources but in fact recognized Mi'kmaq and Maliseet or Wolastoqiyi title and established rules for what was to be an ongoing relationship between nations.

## *Did you know...*

that when it comes to management of the Brad d'Or Lake and it's watershed, the protection of its wetlands is the responsibility of Nova Scotia's Department of the Environment. Protection of the Lake's shore line and its many barachois ponds (over 400) is the responsibility of the Province's Department of Natural Resources while protection of the Lake itself is the responsibility of the Federal

## Strength in Differences By: Teresa MacNeil

When environmental issues arise concerning the Bras d'Or Lake and its watershed, there is a support system that can help identify ways for people to live well; economically, socially, and environmentally within a chunk of Cape Breton Island that is home to about 22,000 people.

Three non-governmental organizations fulfill that role although from somewhat different mandates. Together, they demonstrate a special spirit of harmony. They are the Bras d'Or Stewardship Society, CEPI or the Collaborative Environmental Planning Initiative, and the Bras d'Or Biosphere Reserve Association. They cover the Lake and its watershed with rather similar, but non-conflicting purposes. They work together well, time after time.

It is surprising to find such harmony among like-minded organizations operating within the same small territory. Anyone not watching closely would dismiss them as independent entities with strange names tripping over each other around the Bras d'Or Lake. Not so. My experience with the UNESCO Biosphere Reserve over the years reveals some reasons why. There is the usual point of generous persons who contribute time and understanding to help each organization set and reach its goals. There are joint committees where individuals get to know and trust each other. But, despite their common concerns, each has a very particular, seldom-mentioned difference. Together, the three comprise a remarkable strength. The Stewardship Society has the freedom to be a strong advocate. The Biosphere Reserve Association has the capacity to advance successful best practices from other Biospheres throughout the world, while CEPI's strength rests with its various institutional resources, including its First Nations base. We are indeed fortunate to have the benefit of all three.

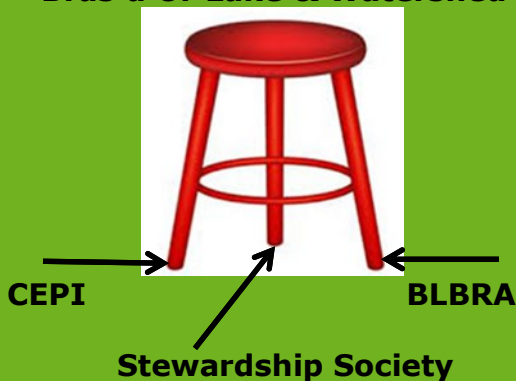
Their differences are evident in the following brief descriptions:

Established in 1998, the [Bras d'Or Stewardship Society](#) promotes appropriate strategy for conservation, restoration and protection of the Lake. It advocates for change, supports lake-related projects and studies, and regularly circulates a newsletter. Supported by membership fees and donations, it is governed by a board of directors of volunteers and has no designated office or paid staff. In a recent letter to members of the Stewardship Society, Henry W. Fuller, Interim President, informed of "a special general meeting to be held on Saturday, April 14, 2018." Two motions approved by the Society's Board of Directors will be presented to the membership to the effect that "the Bras d'Or Stewardship Society will be dissolved as per Nova Scotia Joint Stock Company articles of dissolution";

Government's Department of Fisheries and Oceans because it is an inland sea (or estuary) of the Atlantic Ocean.

On a cultural note, the term "barachois" is used in Atlantic Canada, Saint Pierre and Miquelon and Mauritius Island to describe a coastal lagoon separated from the ocean by a sand or shingle bar.  
<https://en.wikipedia.org/wiki/Barachois>

### Bras d'Or Lake & Watershed



### Speaking of septic systems...

The over use of bleach is perhaps one of the main "enemies" of a healthy septic system. There are some good alternatives for bleach and some of them may surprise you because you already have them. Bleach alternates include:

- Hydrogen Peroxide. Don't let the name fool you; hydrogen peroxide is a non-toxic disinfectant.
- Baking Soda. Great for breaking down those pesky stains in the laundry or the mildew in your shower.
- Vinegar. A natural sanitizer.
- Lemon Juice.
- Tea Tree Oil.

The best use? Easy to [create mixtures](#) that act the same way as name brand products.

and, "any funds remaining after all debts and financial obligations be given to the Nova Scotia Nature Trust for maintaining or acquiring property in the Bras d'Or Lakes watershed."

The [Collaborative Environmental Planning Initiative](#), or CEPI, established in 2005 through a Charter signed by federal, provincial, municipal and First Nations' governments, has as its purpose the fostering of an overall management plan for the Bras d'Or watershed. CEPI is funded by two Federal and three Provincial departments. It has formal partnerships with provincial, municipal and local organizations whose mandates relate to its objectives. These resources enable CEPI to have an office and staff located in Eskasoni.

The [Bras d'Or Lake Biosphere Reserve Association](#) formed in 2006, five years prior to the designation of the Bras d'Or Lake and its watershed as a UNESCO Biosphere, is also a collection of volunteers. They work to fulfill its international designation as a good place to live, work and play. They oversee projects that foster sustainable economic development within the Lake and its watershed. They have no mandate to advocate for change. They rely on membership fees and donations and have registered charity status. Without an office or paid staff, their Board of Directors convenes regularly in communities throughout the watershed.

Viewed closely, the differences among these organizations are sufficiently important that losing any one would cripple the Lake's environmental support system. Together, they function for the Lake and its watershed much like a three-legged stool. The legs might not look the same but their respective mandates allow them to bear weight equally.

## The Local Picture: A Word or Two about On-Site Sewage Disposal Systems - Part 1

**Best Practices Corner** By: Lynn Baechler, M.Sc., Hydrogeologist

Let's assume you have the best type of on-site sewage disposal (OSSD) system installed by a "certified installer", in a location on your property that has been selected by a "professional engineer" (P. Eng) or "qualified person" (QP) (as determined by the Nova Scotia Department of Environment (NSE)). The "best type" of on-site sewage disposal system was chosen by the P. Eng. or QP based on soil conditions, distance to water table, slope, property size, set back distances from wells, streams, lakes, property lines and any other features regulated to minimize adverse environmental effects. NSE has an abundance of resource material concerning 'on-site sewage disposal systems' both on their construction and maintenance. These can be found at <https://novascotia.ca/nse/wastewater/resources.asp>

Once the OSSD system is installed our work begins. We, as homeowners are ultimately responsible for keeping the system in good working order; ensuring our domestic waste does not impact the ecological integrity of our own property nor the land and watercourses adjacent to our property. We must teach our children and others what products can and cannot be flushed down our toilets and sinks (listed in the resource material of the NSE website). We try to conserve water in order not to overload our OSSD system. We ensure vehicles and heavy equipment don't cross the disposal

### MORE TIPS FOR MAINTAINING YOUR SEPTIC SYSTEM

Discharge all sewage waste from the house into the septic tank. Don't run waste water from laundry or saunas directly into the drain field as the detergent or soap scum will quickly clog soil pores and cause failure.

Do not add "starters" to your septic system. Enough bacteria are available in the wastes flushed into the septic tank. Even after the tank has been pumped, enough bacteria will be provided when you use the system again.

Although tanks that are away from lakes or rivers may not need it every year, annual pumping is excellent insurance near shorelines. Click [here](#) for more information.



Here's a short but interesting [video](#) on Environment Canada's weather satellite.

### Have a look at this...

Nasa satellite photo taken Feb. 23, 2018 (Thanks to Kalin Mitchell)



beds, crushing the pipes. We remove trees with large roots or keep them from growing near any part of the OSSD system. We divert surface water, rain gutters and shallow groundwater away from the disposal field to prevent the field becoming water logged. We have our septic tank inspected and pumped out by a licensed contractor every 3 to 5 years depending on its size and the number of people living in the home. And we keep records of maintenance and pump outs.

For folks living along the shores of the Bras d'Or Lake your OSSD system is likely positioned between your home and the Lake. Besides abiding by setback distances from the Lake and other watercourses, elevation should also be considered. The OSSD must be sited to minimize damage from storm surges and gradual water level increases in the Lake. Continued erosion of the shoreline, especially in low lying terrain, ensures the demise of many OSSD systems before impacts are felt on other property infrastructure. If our OSSD systems fail, we may see the effects around the Bras d'Or Lake or in the tranquil barachois ponds dotting the shoreline. Hopefully with proper OSSD system construction and maintenance, the Lake and barachois ponds which presently provide recreational pleasures (swimming, boating, fishing, etc.) will continue to evolve in a positive way, long into the future.

## Climate Norms in the Biosphere by: Annamarie Hatcher

As March is upon us you are probably wondering whether that old groundhog was right. To give us an inkling of what we can expect in the Biosphere in March, we may be able to look at climate normals. This three-decade average of climatological variables is produced once every 10 years and the 1981–2010 dataset is the latest release by Environment Canada. [http://climate.weather.gc.ca/climate\\_normals/index\\_e.html](http://climate.weather.gc.ca/climate_normals/index_e.html)

Baddeck is the only station within the Bras d'Or Lake Biosphere for which we have a 'climate normals' dataset available. So, what can we learn from that dataset?

1. Snow has been recorded in all months between October and May. We can consider Baddeck a rather snowy place with an average annual recorded fall of 312 cm, about 9% higher than Sydney and an impressive 29% higher than Halifax's Stanfield airport.
2. In March the amount of snowfall is virtually the same in Baddeck and Sydney (around 48 cm), and both are about 25% higher than the amount recorded at Halifax's Stanfield airport
3. So, are you thinking that it is time to pull those shorts out of the darker recesses of your closet? In Baddeck the average daily temperature in March is  $-2.3^{\circ}\text{C}$  according to the climate norms of 1981 to 2010. However, an extreme maximum was recorded in 1993 at  $17.0^{\circ}\text{C}$ . Don't get too excited yet. An extreme minimum was recorded in 1883 of  $-31.1^{\circ}\text{C}$ , definitely inhibiting the wearing of shorts outside!

How do these data compare? At Halifax's Stanfield airport, the daily temperature in March is 50% warmer, on average, than the two Cape Breton stations. In terms of the extremes, Sydney's warmest daily temperature was close to that in Baddeck (recorded in 1945) but the extreme daily low was not nearly as severe, at  $-25.6^{\circ}\text{C}$ . (recorded in 2001). In comparison, Halifax's Stanfield airport had an extreme low 12.5% higher than the two Cape Breton



NASA satellite photo taken last year on Feb. 21, 2017.



And now a look back to that brutal winter three years ago. Nasa satellite photo taken Feb. 21, 2015



You may want to bookmark this [site](#) to access other NASA photos.

### *Creating a Cape Breton brand of top-quality hardwood*

"By creating a brand, a Cape Breton brand, of sustainably harvested top quality hardwood we can raise the game a bit." Kari Easthouse. Read [article](#) here.



*Could you find some wee fairiy folk out and about this March counting coins from a pot of gold at the end of your rainbow, please consider **donating** to the BLBRA. Tax receipts are issued for donations.*

stations (recorded in 1989) and an extreme daily high temperature which was 50% higher, at 25.6° C (recorded in 1998). This is probably not enough to convince you to take your March sunny getaway vacation in Halifax rather than the Caribbean, is it?

So, what does all of this tell you? There are two cautions that I want to put out there. Firstly, an average is just that. If you put an apple on your head and trust a friend to shoot it with an arrow the following may happen. He sends the first arrow just to the right of your right ear and the second just to the left of your left ear. He didn't hit the apple but, on average, you are dead. The second caution is that the Biosphere environment is changing rapidly with warming ocean temperatures and increasing sea levels and incidences of extreme weather events. Perhaps we should consider the climate normals as just a rough guide. How can a poor rodent be expected to keep up?



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## Meet the Residents: The smelt (Kaqpesaq)

(By Annamarie Hatcher)

The popular local fish known as smelt (*Osmerus mordax*) is an inshore species. They live in coastal waters and move into freshwater to spawn. Their Mi'kmaw name 'Kaqpesaq' translates to 'when the snow has finished' which is the time when movement into their freshwater spawning grounds occurs. The adults feed in the shallow coastal waters of the western North Atlantic from Virginia to southern Labrador. Adults grow to about 18 to 23 cm long and have a long, slender body. However, they move into the Bras d'Or estuary as early as November feasting on the silverside minnows and sand shrimp until the spawning run into the rivers in March or April. Local anglers take advantage of this and catch smelt through holes in the ice or from shore in warmer winters like this one. Smelt are a significant link in the Bras d'Or estuary food chain. They are voracious predators, often capturing silverside minnows that are ½ their size. However, they are also a forage fish, a significant food source for animals further up the food chain such as salmon, grey seals, mergansers and bald eagles. Let's not forget the two-legged residents of the Biosphere. Nothing says winter like a feed of fresh fried smelts! Let's say thanks to the humble smelt!

### Acknowledgements:

Thanks to Tom Johnson (Eskasoni Fish and Wildlife and Bras d'Or Lake Biosphere Board of Directors) and to Skyler Jeddore (Bras d'Or Lake Biosphere official Fish Watcher) for sharing their smelt stories.

**Support the Bras d'Or Lake Biosphere. Join the BLBRA. Your voice matters. Mobilize it through membership.**

## BLBRA Meetings

OUR NEXT MEETING IS AT...

|             |                 |
|-------------|-----------------|
| Whycocomagh | Thurs., Apr. 12 |
| St. Peter's | Thurs., May 10  |
| Iona (AGM)  | Thurs., Jun. 21 |

### NOTE:

Meeting times are 1:30 -4:30 pm.  
**All are welcome.**

*Please note that there is no BLBRA meeting in March and so no newsletter will be published.*

### Contact Us:

website - <http://www.blbra.ca>  
Or email us at: [contact@blbra.ca](mailto:contact@blbra.ca)

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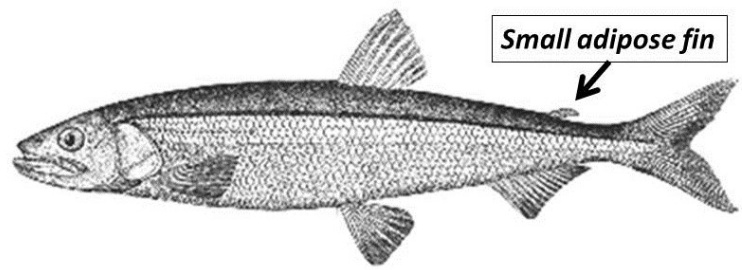
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## Smelt or Kaqpesaq (Osmerus mordax)



*Smelt (Osmerus mordax), adult, Woods Hole. From Jordan and Evermann.  
Drawing by H. L. Todd. [http://www.gma.org/fogm/Osmerus\\_mordax.htm](http://www.gma.org/fogm/Osmerus_mordax.htm)*



## Up Coming Event - March 14



### Getting acquainted with Your Bras d'Or Lake Biosphere

**Maureen Cameron-MacMillan**  
and **Annamarie Hatcher**  
Members: Board of Governors  
Bras d'Or Lake Biosphere Reserve

**Save the date!**



**Date:** March 14, 2018  
**Time:** 7:00 pm  
**Place:** James McConnell Memorial Library  
50 Falmouth Street, Sydney

## Featured Trail By: Lynn Baechler

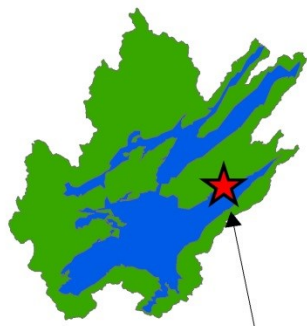
There are a number of trails throughout the Biosphere; some are well known and well used while others are less so. This issue features the popular Eskasoni Cultural Journeys – Goat Island Trail. The trail is well marked and includes abundant interpretative signage on Mi'kmaq culture and traditions. The trail consists of a 2.0 km groomed loop with a 0.3 km connecting trail. It's an easy hike and although considered a seasonal trail, it is suitable all year for either walking or snowshoeing. The Eskasoni Cultural Journeys – Goat Island Trail is a business venture of the Eskasoni Band. While people are free to walk the 2.3 km groomed trail, it may at times, be unavailable due to special events. Tours are hosted for cruise ships, schools and organizations from May 1 to November 15 annually. Tours are available by pre-booking. Restrooms and a gift shop with locally-made handicrafts are located on site. The parking area is usually plowed in the winter. The trail is maintained by [Eskasoni Cultural Journeys](#).

**View map on next page.**



# Eskasoni Cultural Journeys

## Goat Island Trail



You are here

### Trail Notes:

Approximate length from parking lot:  
 - main loop 2.0 km- follows shoreline  
 - a 0.3 km trail crossing the loop

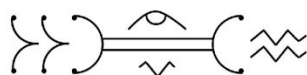
Early succession and  
 mature tolerant hardwood forest  
 Tolerant hardwoods interior of island  
 Mixedwood forest around shore  
 (Eastern hemlock, Eastern white pine,  
 Sugar maple, Yellow birch, Red maple)  
 Small barachois pond at east end  
 of trail

Benches along route  
 Cultural information sites along route

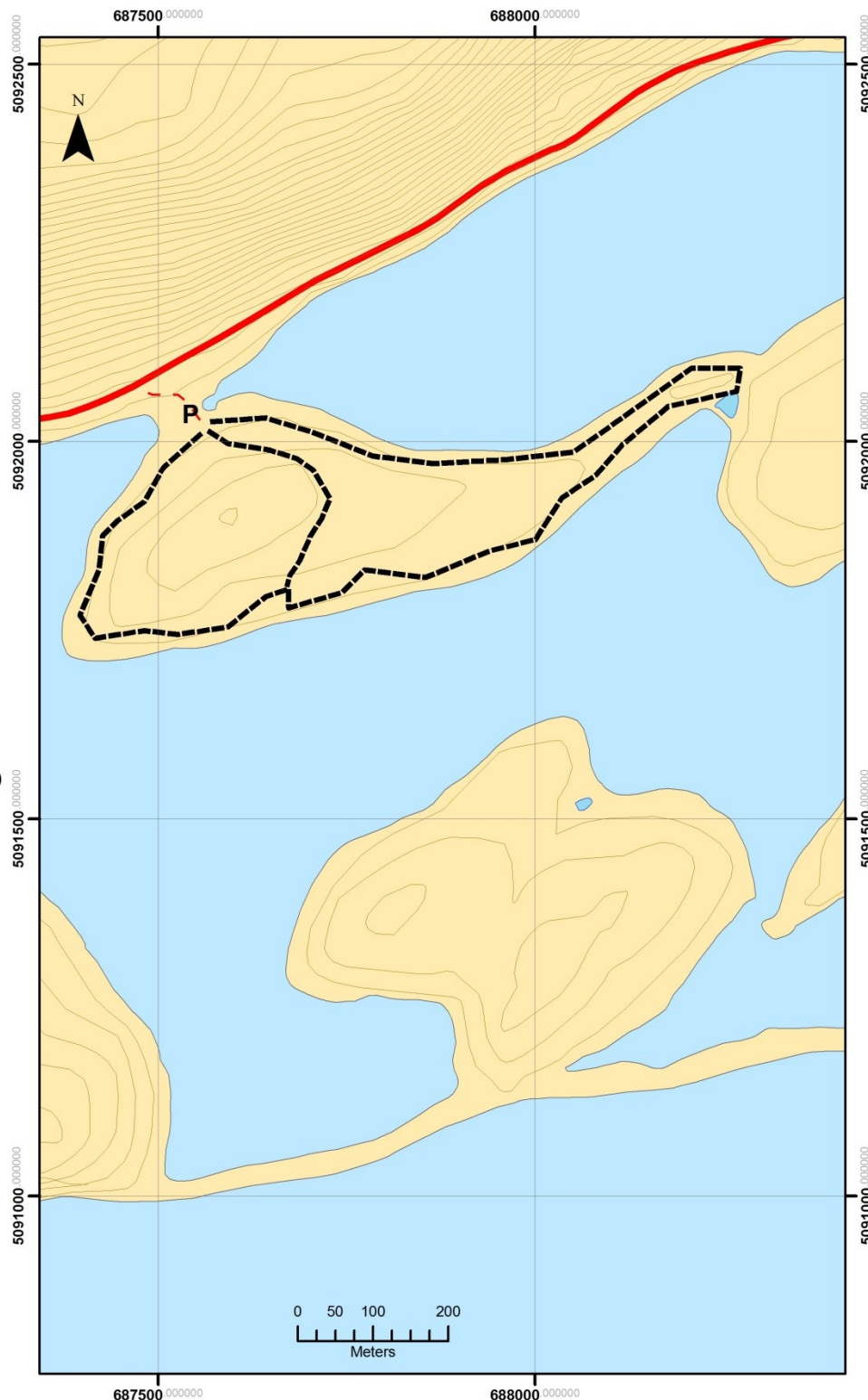
Parking  
 Restrooms and Gift Shop on site

The Trail is maintained by  
 Eskasoni Cultural Journeys

Maximum elevation - 20 m  
 EFFORT: Easy



[www.blbra.ca](http://www.blbra.ca)



Please carry out what you bring in, respect the landowner's property  
 and know you are on the trail at your own risk. Have Fun!

'Walking Around the Bras d'Or'  
 A project of the Bras d'Or Lake Biosphere Reserve Association

Basemaps downloaded from  
 GeoNova Portal  
 Service Nova Scotia and Municipal Relations  
 Projection: Universal Transverse Mercator  
 Geodetic Datum: NAD 83 CSRS UTM Zone 20  
 Contours (5 m)  
 LB: October 30, 2016  
 rvs: June 27, 2017