

~ *FUNDY TIDINGS* ~

Newsletter of the

Bay of Fundy Ecosystem Partnership (BoFEP)

August 2023 Issue

A. BoFEP and its activities:

1. BoFEP participation in CZC 2023 conference

On June 11-15th, 2023, BoFEP Chair Peter Wells participated in the Coastal Zone Canada (CZC) Conference, in Victoria, BC. The theme of this biennial conference was “connecting with the coast”. He gave a paper^[1] on the Bay of Fundy Ecosystem Partnership (BoFEP)’s activity and plans for ocean literacy (OL), four posters^[2] (one of which was a summary of recent EIUI-sponsored studies and progress), and chaired one session. The conference had around 500 attendees, had 4 days of concurrent sessions on a wide range of topics pertaining to coastal and ocean management, and a very diverse and information packed exhibit hall for groups across the sectors involved in ocean science, management, monitoring, and public engagement. [See full report](#). Also see: [Making Connections: The 2023 Coastal Zone Canada Conference](#) (Environmental Information: Use and Influence (EIUI) research group)

2. Proceedings of 2022 BoFEP/ACCESS Conference available online

The Proceedings of the 13th Bay of Fundy Ecosystem Partnership (BoFEP) Science Workshop and the Atlantic Canada Coastal and Estuarine Science Society (ACCESS) Conference held jointly on May 18-21, 2022, at the Cox Institute of Agricultural Technology on the Dalhousie University campus in Truro, NS is now available online. The theme was: “*Advancing Estuarine Science and Ocean Literacy in Atlantic Canada*”. [Conference Proceedings \(pdf\)](#)

3. Upcoming BoFEP Management Committee Meeting

The regular monthly meeting of the BoFEP Management Committee will be held via Zoom on Tuesday September 12 at 08:30 am. The sign in information and agenda will be circulated to Committee members closer to the date. Suggestions for agenda items should be sent to [BoFEP Chair](#) as soon as possible.

4. Become a BoFEP supporter.

Members are the heart of our organization. As a non-profit, volunteer organization, we rely upon donations and membership dues from individuals and organizations to operate our core activities and programs. Membership is open to any individual or group who shares its vision for protecting, conserving, and sustainably using the Bay of Fundy ecosystem. Membership fee for individuals is \$25 and for organizations \$100. Please take a moment to renew your support for BoFEP and the important work it does on behalf of the Bay of Fundy and its natural and human communities. [BoFEP Membership Form docx](#) [BoFEP Membership Form pdf](#).

B. Partners and other organizations:

1. Fighting feisty Phragmites!

The [Nature Conservancy of Canada](#) wants to stop the spread of one of Canada’s most damaging invasive plant species, the common reed Phragmites. This is an aggressive plant that spreads quickly and outcompetes native species for water and nutrients. Biochemicals are also released from its roots into the soil to hinder the growth of surrounding plants. It can grow so densely that it crowds out other species. This short video (2:20 mins) explains what can be done

to fight Phragmites. [The problem with phragmites: Dealing with an invasive species.](#) (CBC News)

2. NB Students recycle old fishing ropes to help homeless

Students at a middle school near Saint John have been working in shop class on a project they hope will help both the environment and people in need. Winding recycled fishing rope around wooden spindles, the students weave long mats with handles that serve as a dry, waterproof surface for sitting or sleeping for people experiencing homelessness in the Saint John area. The fishing rope is collected from purpose-built recycling bins on wharves along the Bay of Fundy. [New life for old fishing rope: students weave mats for people sleeping rough](#) (CBC News)

3. Storm Petrel studies on Kent Island sanctuary

Kent Island is a storm-lashed strip of land in the Bay of Fundy that has belonged to Bowdoin College since 1936. It is home to the Bowdoin College Scientific Station (BCSS) used by students and faculty for ecological field research. One of the longest running studies (seven decades!!!) focusses on the ecology of Leach's Storm Petrel. This National Science Foundation-funded project seeks to understand why this hardy seabird is sometimes able to defy ecological norms in its ability to grow, reproduce, and live a long life.

[What the Leach's Storm Petrel Can Teach Us](#) (Bowdoin College News)

[Unlocking Kent Island's secret life of birds](#) (CBC News)

[The wild history of Kent Island: How a tiny isle off Grand Manan became a scientific sanctuary](#) (CBC News)

[CBC Series Spotlights How Kent Island Became a Thriving Scientific Sanctuary](#) (Bowdoin College News)

4. Atlantic Salmon conservation focus of international meeting

The number of wild Atlantic salmon in Canadian and international waters has declined since the mid-1980s. Increased collaboration across borders is crucial to the long-term conservation and restoration of the species. Canada was honoured to host the 40th Annual Meeting of the [North Atlantic Salmon Conservation Organization](#) (NASCO) in Moncton, New Brunswick from June 5-8, 2023. This meeting provided the opportunity for meaningful dialogue and cooperation between parties to advance ongoing actions and explore new approaches to conservation and management. [North Atlantic Salmon Conservation Organization](#) (Mirage News)

5. Upcoming meetings on Right Whales

Registration for the North Atlantic Right Whale Consortium NARWC and the Ropeless Consortium Annual Meetings are now OPEN! The meetings will be held October 23-25, 2023, at the Halifax Convention Center, Halifax, NS. [NARWC Meeting details](#); [Ropeless Consortium Meeting details](#).

6. CARP works to enhance health of Annapolis watershed

The Clean Annapolis River Project (CARP) is a charitable, community-based, non-governmental organization incorporated in 1990 to enhance the ecological health of the Annapolis River watershed through science, leadership and community engagement. Since then, it developed many projects that address pertinent environmental issues in the Annapolis River watershed. These range from environmental monitoring to public education to habitat restoration to home assessment. Although the focus is the improvement of the local environment, many of the projects have resulted in economic, societal and health-related benefits and expand beyond the bounds of the watershed. [Learn more about CARP and its projects.](#)

C. Fundy/GOM and other news:

1. Tidal power in the doldrums?

The tidal power industry in Fundy has been abuzz with gloomy reports of bankruptcies, regulatory inadequacies, and excessive red tape. A small sampling of recent reports:

[Tidal power firm to place Canadian subsidiary into bankruptcy](#) (CBC News)

[Tidal power firm winds up Nova Scotia project, blames red tape and delays from Ottawa](#) (Globe and Mail)

[As tidal power firms ebb, Fisheries minister strikes task force to smooth regulation](#) (CTV News)

[Canada's most successful tidal energy company forced into bankruptcy by permitting issues](#) (Sea News)

[Sustainable Marine Energy placed into voluntary bankruptcy following permitting issues](#) (International Waterpower and Dam Construction)

[COMMENTARY: The end of ocean energy for Canada?](#) (Saltwire)

2. Not all doom and gloom for tidal energy

However not all the TP news has been negative. There was a smattering of articles supportive of the ongoing development of tidal energy. A small sample:

[Government of Canada establishes task force on sustainable tidal energy in the Bay of Fundy](#) (NewsWire)

[COMMENTARY: Putting tidal energy back on stream](#) (Saltwire)

[DFO offered tidal developer one-year lease for Minas Basin site](#) (Halifax Examiner)

[Riding the Energy Tide: The Global Expansion of Tidal Power](#) (Energy Portal)

[Premier Tim Houston says Bay of Fundy is a 'world class' resource](#) (1015The Hawk)

[Fisheries minister creates task force to clarify regulation of tidal power](#) (CBC News)

3. New book on Fundy Tidal Power Development

Hot off the press: a book entitled "Moondoggle: Franklin Roosevelt and the Fight for Tidal-Electric Power at Passamaquoddy Bay" has just been published by Downeast Books (ISBN: 978-1-60893-714-1; 644 pages; \$45.00.) It details the history of many pioneering tidal power efforts in the Bay of Fundy. Was Franklin Roosevelt's plan to use 26-foot tides in the western Bay of Fundy to generate electricity a "Moondoggle"—a wildly impractical scheme—as its critics claimed in 1936? Or was it visionary thinking and brilliant engineering—a clean source of perpetual power? Either way it was going to be the world's biggest electric power plant—and require seven miles of dams to enclose an incredible 150 square miles of the Atlantic Ocean off the coast of Maine and New Brunswick. Construction of Quoddy began during the Great Depression as part of President Roosevelt's "New Deal" in the 1930s. Then "Quoddy was killed." "Who killed Quoddy?"—that's been a mystery for nearly a century. [Buy it at Indigo Books.](#)

4. Fundy Tides explained

Ever wonder why the tides in the Bay of Fundy are the highest in the world??? Learn why as astrophysicist Michael Shara, Curator of Astrophysics at the American Museum of Natural History explains why they are so high, although probably not the highest in the universe! [The tide is high and here's why: An astrophysicist explains the science behind the Bay of Fundy's highest tides](#) 2.47 mins video (CBC)

5. Fundy tides and winter ice - a fearsome combination?

Minas Basin, an arm of the Bay of Fundy, boasting the highest tide range in the world, up to 18 meters between high and low tide. And despite being located at 45N, Minas Basin also experiences serious winter ice conditions, which influence its sediment and nutrient balance. The estuary is bordered by soft shale and sandstone cliffs, which erode rapidly under the attack

of tides and winter ice. We also need to consider the potential impacts of all this ice and erosion upon tidal power infrastructure deployed in the Bay of Fundy. Elizabeth Kusters, an Earth Scientist who was Managing Director of the Canadian Geoscience Council, and Adjunct Professor at Acadia University, discusses all this in an informative 2015 posting that is well illustrated with graphics and photographs. [Extreme tides and Winter ice](#) (Earth Science Society)

6. Protecting the corals and sponges of Fundy

The Fundian Channel contains the densest known concentrations of large gorgonian corals in Atlantic Canada, and unique glass sponge populations can be found within the proposed boundary. Local communities have long sought to implement protection measures for this unique ecosystem. This area is vital to connecting many other protections of deep-sea corals and sponges across the Scotian Shelf. Conservation efforts have already contributed to the establishment of the first deep sea coral protections in Canada in 2002. In 2018, Browns Bank was announced by Fisheries and Oceans Canada as an area of interest, with recent work being undertaken to finalize boundaries and conservation objectives. [Deep-sea corals and sponges in the Fundian Channel](#) (Globe and Mail) [Fundian Channel-Browns Bank Area of Interest \(AOI\)](#) (DFO) [Socio-Economic Profile \(Marine Harvest Activities\) Fundian Channel – Browns Bank Area of Interest](#) (DFO)

7. Invasive tunicates a burden for shellfish aquaculture

Scientists are monitoring dozens of sites in Nova Scotia and southern New Brunswick to see if the latest warm winter in Atlantic Canada accelerated the spread of slimy marine invertebrates. Six invasive sea squirts — or tunicate — species have become established in Nova Scotia in the last decade. The creatures cling to anything they encounter and have become a major problem in the shellfish aquaculture sector. They are 95 per cent water and heavy, weighing down ropes and increasing shear stress during storms and the risk of lost gear and product. [Slimy and spreading fast: Shellfish farms face biofouling 'invasion'](#) (CBC News)

8. Geological history of the Reversing Falls

300 million years ago, the Reversing Falls area in Saint John was where ancient continents collided. The area around Reversing Falls is the heart of the UNESCO designated Stonehammer Geopark. The geopark is a set of 61 geologically significant places spread over a 2,500-square-kilometre area, from Norton to St. Martins, along the coast of the Bay of Fundy to Lepreau Falls and across to Grand Bay-Westfield. Of those 61 sites, Reversing Falls is one of the most dramatic landscapes — and one of the most compelling stories of geological change. [Reversing Falls rock walk tells the stories beneath Saint John's feet](#). (CBC News)

9. Orca spotting along East Coast

It's rare for killer whales, or orcas, to be spotted in the waters of southern New England, but scientists from New England Aquarium spotted and photographed four of them swimming together 40 miles south of Nantucket. [Killer whales spotted in southern New England waters in rare sighting](#) (NBC Connecticut). The New England Aquarium said the only killer whale seen regularly in North Atlantic waters is "Old Thom," who is known to swim alone in the Gulf of Maine and the Bay of Fundy. He was last spotted in Massachusetts waters in May 2022 off Cape Cod. Speaking of old Thom, he turned again this summer and was spotted off Brier Island and Grand Manan where he was captured in a couple of short videos. [Whale makes repeat appearance in Bay of Fundy](#) (0:55 mins CTV News). [He's big, he's beautiful and he's back: Old Thom returns to the Bay of Fundy](#). (1:12 mins CBC News)

10. White sharks summering in Fundy Waters

There are many species of sharks in North Atlantic waters, including basking, Blue, Greenland, Mako and not forgetting the infamous Great White Shark. The GWS's are here from July to

November and prey on the abundant seal populations. Given their fearsome (and largely undeserved) reputation shark experts are urging more public education and monitoring. [Summer season brings calls for shark awareness and public education, experts say](#) (CTV News). The [Ocearch](#) group has been tagging and tracking GWS's off the east coast for a number of years, possibly explaining the seeming recent increase in sightings. [A 10-Foot, 500-Pound Great White Shark Spotted Off the Coast of Portland, Maine](#) (WCYY). And just to prove they're there, a man fishing from a boat near Grand Manan was visited by an inquisitive GWS and managed to capture a short video (0:18mins) of the too close encounter. [Eye-to-eye contact with great white shark was 'just incredible,' Grand Manan man says](#) (CBC News). [Great white sharks are washing up on Canadian beaches — but experts claim this could be a good thing. Why there may be more shark sightings off the coast of N.B.](#) (CBC News).

11. Study on impacts of plastics on sea turtles in NW Atlantic

A paper entitled "[The leatherback turtle \(*Dermochelys coriacea*\) and plastics in the Northwest Atlantic Ocean: A Hazard assessment](#)" (Heliyon 8 2023) by Noémie Blais and Peter G. Wells considers the risks to marine wildlife associated with encounters with floating and submerged plastic debris. This study is a hazard assessment of plastics for this turtle's sub-population, using 2010–2019 data from the national Great Canadian Shoreline Cleanup (GSCS) program. The type of plastic items and their abundance along shorelines of three Atlantic Provinces NS, PEI and NL were evaluated and compared to plastic items known to interact with leatherbacks. The study shows that such items pose a hazard to leatherbacks through ingestion and entanglement, based on published studies.

12. Concerns persist about proposed NB nuclear reactor

On June 30, NB Power [registered an environmental impact assessment](#) with the province of New Brunswick and filed a licence application with the Canadian Nuclear Safety Commission (CNSC) to prepare a site on the Bay of Fundy for the ARC-100, an experimental small modular reactor (SMR) still in early design. Making information public about the project, which includes not just a nuclear reactor new aquatic infrastructure in the Bay of Fundy and new radioactive storage, will be difficult if not impossible without a federal impact assessment. So, too, will testing the veracity of claims made about the project's safety, risk, and impacts. But so far, a federal impact assessment has been denied. [Will this experimental nuclear reactor escape federal scrutiny?](#) (National Observer) [COMMENTARY: Will an experimental nuclear reactor on the Bay of Fundy escape federal impact assessment?](#) (NB Media Co-op)

13. Watch puffins on live cam!!!

Watch puffins on this live cam overlooking a "loafing ledge" on Seal Island, 21 miles off the coast of Maine. The loafing ledge is a prime spot for puffins to congregate, with plenty of "exit routes" in every direction in case a hawk or gull attacks. Note the decoys in the picture! There are also links to puffin cams inside and just outside a burrow, although there is not much action there this late in the season. [Puffin Loafing Ledge](#) (Why Evolution is True)

14. Sandpipers visit to Fundy still inspires awe

Every summer more than a quarter of a million semipalmated sandpipers return to the Bay of Fundy. It's here where they feed and double their weight in order to make their remarkable 72-hour migration down to South America. Every year amazing photos and videos capture the aerial spectacle. [Semipalmated sandpipers flock back to the Bay of Fundy](#) (CTV News). [Sandpipers Begin Epic Journey To Bay Of Fundy](#) - video 5:37 mins (Global News)

15. Protection of islands for migratory birds

The federal government wants to designate three isolated Nova Scotia islands as national wildlife areas to protect migratory birds. The move would provide additional protections to

prevent destruction of habitat, restrict access and limit human use of the sites. The proposed wildlife areas are St. Paul Island, located 24 kilometres off northern Cape Breton, Country Island in Guysborough County and Isle Haute in the upper Bay of Fundy. [Ottawa moves to protect 'exceptional' Nova Scotia island bird sanctuaries](#) (CBC News)

16. Fundy vulnerable to sea level rise?

Local media have expressed increasing concern about the potential impacts of rising sea level on Fundy shorelines, particularly areas around the inner bay. The worry is that it wouldn't take much of a rise to make Nova Scotia an island, effectively severing road, rail and communications links with the mainland. The following is small representative sampling of articles about the threat and possible mitigation measures:

[Rising Sea Levels Will Isolate People Long Before They're Underwater](#). (Hakai Magazine)

[Halls Harbour citizens making progress on \\$20-million waterfront protection project](#)

(Saltwire)

[Will Nova Scotia soon become an island?](#) (The Saxon)

[Tantramar historic dike system an engineering masterpiece, historian says](#) (CBC News)

[Time and tide won't wait: Memramcook, N.B. needs solutions to how the tides are changing the Bay of Fundy landscape](#) (Saltwire)

[N.B. community leaders happy to see Chignecto Isthmus funding application](#) (Global News)

[Chignecto flood fix doesn't need to be so expensive: prof.](#) (Telegraph Journal)

17. Rising ocean temperature a threat to Gulf Stream?

DFO data shows that the average sea surface temperature in July reached record highs for eastern areas of the Grand Banks, the waters off the South Shore of Nova Scotia, and parts of the Bay of Fundy. The Bay of Fundy is sitting at 14.85 C which is just over the record of 14.81 C set in 2022. What is the cause of the turnaround? Sea surface temperatures in the western Atlantic are primarily influenced by atmospheric conditions, in other words, the weather. [Ocean water temperatures around Maritimes reaching record highs for July](#) (CTV News). One worrisome potential impact of such rising ocean temperature is its likely effect on the [Atlantic Meridional Overturning Circulation](#) (AMOC), This vital ocean current system, which includes the Gulf Stream, helps regulate the Northern Hemisphere's climate bringing warm, tropical waters north and cold water south. A controversial new study warns that AMOC could collapse anytime from 2025 and unleash climate chaos. This could cause temperatures to plummet, ocean ecosystems to collapse and storms to proliferate around the world. However, some scientists have cautioned that the new research comes with some big caveats. [Gulf Stream current could collapse in 2025, plunging Earth into climate chaos: 'We were actually bewildered'](#) (Live Science)

18. New book features images of Hopewell Rocks

Every year, thousands of visitors from around the world descend the staircase at Hopewell Rocks to walk on the ocean floor. Many of those visitors have been greeted by author and photographer Kevin Snair, who spent years working as an Interpretive Guide for the Hopewell Rocks Park. His new book " *Bay of Fundy's Hopewell Rocks*" combines his luminous descriptions of tidal action and geology with his stunning photography to capture the breathtaking experience of New Brunswick's famous natural wonder. [Bay of Fundy's Hopewell Rocks](#) (Atlantic Books). Also, Global's Eilish Bonang connects with author and photographer, Kevin Snair, to talk about his recently published book. [Hopewell Rocks Recognized in new Book](#) Video - 5:38 mins (global News)

19. Fundy shoreline data made more accessible online

The [ShoreZone](#) portal gathers information on the biology and geology of coastal areas and makes maps of important characteristics. This permits connecting people, locations, and data

using interactive maps. These maps describe coastal habitats and are used in many ways, including oil spill preparedness and response, coastal science and planning, search and rescue, and coastal trip planning. The mapping is done using video and still photos taken from the air, usually from a helicopter flying at low altitude. Coastal geologists and biologists onboard the helicopter describe the terrain and vegetation they see. Together the images and narration help the mappers classify and map the coast. Such mapping has been completed for over 90% of Alaska and all of Oregon, Washington, and British Columbia. Datasets from around the Bay of Fundy are now being added to the system by building on Environment and Climate Change Canada's (ECCC's) shoreline character dataset used to inform emergency response, but that can also be used in many other ways. [East Coast ShoreZone](#).

20. Study targets impact of ghost fishing gear

There is a new study entitled "[Environmental and economic impacts of retrieved abandoned, lost, and discarded fishing gear in Southwest Nova Scotia, Canada](#)". (Marine Pollution Bulletin, Volume 192, July 2023, 115013). The team of Dalhousie University scientists working with the Department of Fisheries, fishing captains, volunteers and different fisheries organizations found that the area off Nova Scotia's southern tip is littered with bundles of snarled rope, drifting lobster pots and abandoned buoys that foul the marine environment and take a bite out of the industry's bottom line. This study builds on a 2021 baseline assessment and provides recommendations for improving ghost gear management in the region and highlights collaborative methods that can be employed elsewhere. [Dal study shines spotlight on threats from lost fishing gear](#) (Dalhousie University News)

21. Lobster stocks healthy in Maritimes

Lobster populations off all three Maritime provinces remain strong and the \$1.7-billion fishery is sustainable, according to the latest assessments (2022) from Fisheries and Oceans Canada (DFO). It's good news for coastal communities, but warming ocean temperatures caused by climate change is a potential cloud on the horizon. So far, increasing water temperatures don't appear to have affected lobster stocks in Atlantic Canada. ([Stock assessments show Maritime lobster population strong, fishery sustainable](#) (CBC News). [Maritime Canada's lobster population is strong. So why are scientists worried?](#) (Global Seafood). [Maritime lobster doing well, fishing is sustainable](#). (The Saxon)

22. Lobster study not rocket science!!!!

Some research being conducted out of the University of New Brunswick is garnering interest — and humour — online, as a PhD candidate studies the movement of lobsters in the Bay of Fundy. The researcher attached large, black cylindrical satellite trackers to 20 lobsters to record their migration. The trackers have been described as torpedoes, space rockets and some unmentionable items. [Is that a rocket on that lobster? No, it's just a satellite tracker](#) (CBC News)

D. ADMINISTRIVIA

Fundy Tidings is circulated, usually quarterly, to members of BoFEP and others who have expressed an interest in BoFEP and its activities. If you know someone who might like to receive Fundy Tidings, or if you would like to be removed from the Fundy Tidings mailing list, e-mail a request to:

seapencom@gmail.com Back issues are available at [Fundy Tidings Archive](#)

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