

# ~ *FUNDY TIDINGS* ~

Newsletter of the

Bay of Fundy Ecosystem Partnership (BoFEP)

May 2021 Issue

## A. BoFEP News:

### 1. BoFEP SC Meeting coming up fast

Plans are now being finalized for BoFEP's next Steering Committee meeting, which will be conducted remotely via Zoom in June. A Doodle Poll has been circulated to all SC members to pinpoint a date/time convenient for the majority of members. Please complete and return ASAP. The meeting agenda will be circulated shortly.

### 2. BoFEP member input invited for Fundy Colouring Book

Sondra Eger and Erica and Darren Porter are developing a colouring/activity book about the life, resources and activities in the Bay of Fundy. It will be scientifically accurate and represent the diversity of marine life and conservation, research, and other activities in the Fundy region. The developers are striving to build connections and collaborations throughout the region in producing a book that will be a resource to enhance school curriculum. There are a number of ways that BoFEP members can get involved in this exciting, and fun project that supports ocean literacy about an incredible ecosystem. These include: funding, content development, pre-ordering, and helping to share our book through your networks to name a few. For more information, or to get involved, please contact Sondra Eger [seger@mun.ca](mailto:seger@mun.ca) or visit the [Info Sheet and Call for Support](#).

### 3. Radio podcast invites input from BoFEP members

Coastal Routes Radio invites BoFEP members to take part in sharing their research through a new portal for science communication that helps make science accessible and digestible. For details check out [Coastal Routes Radio Pubcasts](#). Or, if you'd rather just listen to inspiring local stories of innovation and adaptation in Atlantic Canada, check out the [Series opening teaser](#) or listen to an early episode "[Coastal Routes Radio Volume 2 - Coastal Connections: Stories from the Atlantic](#)" that recently launched! This volume is co-hosted by Jackie Bauman and Sondra Eger and will feature many guests and collaborative episodes. If you have some research you want to share or want to get in touch directly please contact Sondra Eger at [seger@mun.ca](mailto:seger@mun.ca).

### 4. Please support BoFEP with a new/renewed membership

Members are the heart of our organization. We rely on your continuing financial support to aid us in promoting a healthy, diverse and productive Bay of Fundy ecosystem. Membership is open to any individual or group who shares its vision for protecting, conserving and sustainably using the Bay of Fundy. The annual membership fee for individuals is \$25 and for organizations \$100.

[BoFEP Membership form MS Word](#)      [BoFEP Membership form PDF](#)

***Please take a moment to join/renew (or make a donation!) today.***

## B. Partners and other organizations:

### 1. Feds invest in Huntsman Marine Science Centre

The Federal government recently announced an investment of more than \$525,000 to St. Andrews-based Huntsman Marine Science Centre. This will support the non-profit group in its extensive work in research, education and tourism, focused on aquatic science. As well, the

Government is making a contribution to help Huntsman pursue industry development activities that will generate new opportunities for New Brunswick in the ocean economy. [Huntsman Marine Science Centre continues to provide vital research and development activities](#) (Mirage News)

## 2. Monitoring chemical contaminants around GOM

Gulfwatch is an international toxic chemical monitoring program, conducted by the Gulf of Maine Council on the Marine Environment (GOMC) since 1991. The chemicals of interest have largely been those on the US EPA standard toxic chemicals list, and include metals, PCBs, pesticides and PAHs. The program is based on the long running US Mussel Watch Program, designed to use the blue mussel *Mytilus edulis*, as the indicator organism of chemical contamination. The archival mussel tissue and whole organism samples, previously housed at the Bedford Institute of Oceanography (BIO) in Dartmouth, NS, are now in freezers at the HMSC, St. Andrews, NB. The samples are crucial for future analyses of chemicals of emerging concern. [Gulf of Maine Contaminants Monitoring Program](#). (GOMCME)

## 3. New book critical of salmon aquaculture

Alexandra Morton's new book "Not on My Watch" details her decades-long attempt to bring science to bear on the BC aquaculture industry. The book shows that research, persistence, and going to court when needed can all make a difference. [Alexandra Morton Book Should Galvanize Action on Salmon](#) (The Tyee; ASF)

## 4. Interview with Sustainable Marine Energy CEO

Harnessing the power of the tides is not for the squeamish, with the roster of trials and failures long and distinguished. Jason Hayman and his Sustainable Marine Energy crew are putting their tech to the test in one of the harshest spots on the planet, the Bay of Fundy. [Riding the Tides: Interview with Jason Hayman, CEO, Sustainable Marine Energy](#) (Marine Technology News)

## 5. Local group protects land from forestry threat

The [Arlington Forest Protection Society](#) was established in 2020 to protect and conserve forests along the North Mountain of the Annapolis Valley in order to preserve biodiversity, create wildlife corridors, and prevent clear-cutting of mature and old growth forests through the acquisition and/or donation of land to the Society. The *Society* took ownership of 46.7 acres on January 18, 2021.

## 6. DFO establishes aquatic research centre in Moncton

The federal government has announced a huge investment of \$700 million to create the Atlantic Science Enterprise Centre in Moncton, NB. Billed as a leading-edge world-class facility, the new Atlantic Science Enterprise Centre will focus on improving sustainability of fresh and saltwater resources along with monitoring and protecting ecosystems on Canada's East Coast. [Feds To Create \\$700M Aquatic Science Centre In Moncton](#) (91.9 The Bend Radio; ASF)

## 7. First Nations participate in Maine salmon restoration

A century ago, populations of North Atlantic salmon flourished within Maine's rivers before eventually becoming endangered. Now, Maine's indigenous tribes, such as the Houlton Band of Maliseets, are working with the Environmental Protection Agency to help restore the fish by figuring out the hardiest strains of the species. [Maliseets are looking for the strongest salmon to repopulate Maine waters](#) (Bangor Daily News; ASF)

# C. Fundy/GOM and other news:

## 1. DFO's aquaculture policies: east vs. west coast?

The President of the Salmonid Council of Newfoundland and Labrador, highlights the ways DFO is treating net-pen operations differently on Canada's two coasts. In particular, he notes the grants to subsidize operations in NL compared with requirements to remove cages in the Discovery Islands in BC. [East Coast Aquaculture vs West Coast Aquaculture](#) (ASF)

## 2. DFO drags fins on aquaculture impacts on wild salmon

NTV focused attention on how DFO has failed to research fully the impacts of open net-pen salmon on wild Atlantic salmon. Short (2:24 mins.) video clip. Focus on NFLD, but also relevant to Fundy region. [DFO under scrutiny for impacts of aquaculture on wild Atlantic salmon](#) (ASF NTV News)

## 3. Increasing scrutiny of aquaculture projects in Maine

Questions are being asked about the range of salmon aquaculture projects now being considered for Maine, including open net-pens near Acadia National Park. The need for a robust permitting framework is highlighted. [Maine Voices: Regulators should question large-scale aquaculture](#) (Press Herald; ASF)

## 4. Push to save iBoF salmon

Fifty years ago, 40,000 inner Bay of Fundy salmon returned to 32 rivers that empty into the Bay of Fundy between New Brunswick and Nova Scotia. By the late 1990s, that number had dropped to 200. A few years later, there was a season when no fish came back at all. The population would have been lost forever if researchers at Fundy National Park in New Brunswick hadn't started preserving a live gene bank of wild salmon. [Returning Fundy's Fish to the Wild](#) (Hakai magazine)

## 5. NB to protect more salmon habitat

Conservationists are feeling hopeful that the new Nature Legacy initiative will lead to protection of ten per cent of the province's land, up from the current 4.6 per cent. It's good news for wild Atlantic salmon, as many important headwaters and cold-water features are slated for protection. [New Brunswick maps out protection for Atlantic salmon habitat](#) (ASF)

## 6. Windsor causeway opening for fish passage?

Fisheries Minister Bernadette Jordan ordered the province to allow fish passage up the Avon River. The ministerial order to the Nova Scotia Department of Agriculture, which operates the half-century-old, gated aboiteau on the Avon River, ran until April 3. However, it is what comes after April 3 that matters to those arrayed on either side of the debate over the future of how the province manages what is allowed to pass up and down the Avon River. [Jordan orders gates opened on Avon River.](#) (Chronicle Herald). [Federal order for Windsor causeway fish passage could extend 12 weeks](#) (CBC.ca)

## 7. Conflict over dam removal in Maine

A state policy shift is pitting the Maine Governor and conservationists against the owner of the dams as well as some communities dependent on their tax value. The state is backing improved passage for migratory fish as the Federal Energy Regulatory Commission is overseeing relicensing of one of the dams. [Maine step toward removing Kennebec dams pits Janet Mills against Brookfield](#) (Bangor Daily News, ASF)

## 8. New bridge restores tidal flow to Petitcodiac

After decades of contentious debate, a bridge meant in part to restore fish passage is nearing completion on the Petitcodiac River. In April, the causeway closed to traffic to allow the final steps in the \$61.6-million project paid for by the federal and provincial governments. [Water](#)

[flowing under new Petitcodiac bridge an emotional sight for advocate](#) Includes short 2:27min video (CBC News)

## 9. Solar powered oyster farming in Fundy

D'Eon Oyster Company uses a brackish-water lake at the mouth of the Bay of Fundy, which is an ideal environment for growing oysters, but the area's extreme tides made it difficult to access the leased areas and transport the oysters back to land for be readied for market. The solution? A floating, solar-powered processing barge where workers could clean and sort the oysters on the company's schedule, right on the water. [Here comes the sun: Oyster and algae growers harness solar power](#) (aquaculturealliance.org)

## 10. Fundy algae yields fishless fish oils

[Mara Renewables Corporation](#) is developing a fish oil product that doesn't rely on fish. Using marine microorganisms found in the Bay of Fundy, the company is working with Acadia University, Nature's Way Canada and Algorithm Ingredients to discover newer sources of Omega 3. [Nova Scotia projects get \\$10M boost from Ocean Supercluster](#) (Saltwire)

## 11. Recycling New Brunswick's waste plutonium?

On March 18 the federal government handed \$50.5 million in taxpayer funds to a private UK company, Moltex Energy, to develop a technology to extract plutonium from used nuclear fuel from the Point Lepreau reactor on the Bay of Fundy. Premier Higgs referred to the technology as "recycling," although less than one percent of the material in the spent nuclear fuel will be available as fuel for the Moltex reactor. Experts on nuclear waste are alarmed about the process, pointing out that the process will create new, toxic liquid radioactive waste streams that will be very difficult and expensive to manage. To date, there has been no public consultation, no Parliamentary debate, indeed no open democratic process whatsoever for New Brunswickers or all Canadians to learn about the facts and implications of New Brunswick's plans and to decide if Canada should go down this path. [Who's minding the nuclear file? Oversight needed for New Brunswick's risky plutonium plan](#) (nbmediacoop.com) See also: [April 2021 edition of Nuclear Reaction, the Maritime voice against more nuclear reactors](#), published by the Coalition of Responsible Energy Development in New Brunswick

## 12. Lobster larvae and oil don't mix well

Researchers at the Huntsman Marine Research Centre in Saint Andrews are trying to find out how an oil spill in the Bay of Fundy might affect New Brunswick's most important fishery. A lot of crude oil and other petroleum products pass through the bay on tankers headed to and from the Irving Oil Refinery, and any spill could negatively affect the lobster habitats, confirming much earlier studies in the region that showed that larvae and oil don't mix well. The research is in its final year, and a preliminary paper on the toxicology results has already been released. [Assessing the Toxicity of Individual Aromatic Compounds and Mixtures to American Lobster \(\*Homarus americanus\*\) Larvae Using a Passive Dosing System](#) Toxicol. Chem. 40(5), Jan. 2021.

## 13. NS continues to drag its feet over forestry reform

There is still no word on how Nova Scotia plans to implement a key recommendation from the Lahey report (which was released in 2018) that would see Crown Land designated into zones, as environmental advocates express frustration over a lack of answers and action from the government. As work continues toward implementation, a growing number of people are calling for a moratorium on all clear cutting until the Lahey guidelines are in place. [No answers to how key land model will work in N.S. as frustration grows over delays](#) (CBC News)

## 14. Nova Scotia Guts Biodiversity Act

A [Biodiversity Act for Nova Scotia \(Bill 4\)](#) was proposed for the second time on March 11, 2021. However, less than two weeks after tabling the new Biodiversity Act, the Nova Scotia government has announced the removal of all sections that provide enforcement tools to protect biodiversity in the province. These changes were made following a province-wide misinformation and fear-mongering campaign led by the forestry industry lobby group, Forests Nova Scotia. In response to this pressure the Province announced the removal of the sections which enabled the Province to create Biodiversity Emergency Orders, and removed the power to create offenses and fines under the Act. The Province's announcement also reconfirmed that Biodiversity Management Zones can only be designated on private land with landowner consent.

[EAC Responds to Changes to Nova Scotia's Biodiversity Act](#) (Ecology Action Centre)  
[Nova Scotia plans changes to Biodiversity Act less than 2 weeks after bill tabled](#) (CBC News)

[Statement in response to the Government of Nova Scotia's plans to amend the Biodiversity Act prior to law amendments](#) (nsadvocate.org)

[We need a Biodiversity Act with teeth, before it's too late](#) (nsadvocate.org)

[David Patriquin: Why we need a clearcutting moratorium – a brief history lesson](#) (nsadvocate.org)

[How the Biodiversity Act was killed](#) (Halifax Examiner)

#### **15. AI peers through Fundy's murky waters**

Artificial intelligence software developed in Nova Scotia is making it easier and faster to detect marine life in the turbulent and cloudy waters of the Bay of Fundy — a milestone in the effort to monitor the potential impact of tidal turbines.. The Bay of Fundy is so murky with churned sediment, researchers use elaborate fish finders that emit echo locating pings to "see" what's swimming in the water column. The tides also generate huge amounts of air bubbles that obscure fish and other marine life. [AI software developed in N.S. provides glimpse into wild and murky Bay of Fundy](#) (CBC News)

#### **16. "Citizen scientists" make phenomenal Fundy fossil finds**

Researchers from the New Brunswick Museum say some exciting fossil discoveries have been made in the last year, including another big find by citizen scientists in the Grand Lake area. They found what turned out to be a large dragonfly wing fossil. It's currently being studied at the National Museum of Natural History in Paris, France and an article about it is expected to be published soon in an international scientific journal. [300-million-year-old dragonfly wing among several significant pandemic fossil finds](#) (CBC News)

#### **17. NS geology an international mash-up of ancient rocks**

What's the quickest way to see the Scottish Highlands and Africa? Take a trip to Nova Scotia. The southeastern Canadian province is a mash-up of continental fragments whose landscape testifies to the power of glacial and tidal forces. Slightly smaller than West Virginia, the province is easy to get around and is packed with geological sites without being overwhelming. [Travels in Geology: Nova Scotia: A driving tour of Pangaea](#) (Earth Magazine)

#### **18. Seascapes and fossil tours attract visitors to Cape Enrage**

One of New Brunswick's most popular tourist destinations is hoping to welcome visitors back this summer. Cape Enrage is renowned around the world for its iconic lighthouse and its stunning views of the Bay of Fundy tides. But last summer, the site was forced to close due to the COVID-19 pandemic. With hopes of the Atlantic Bubble reopening by summer, staff are hoping business will be better this year as they offer new guided fossil tours for visitors. ['A beautiful sight': New Brunswick's Cape Enrage to welcome back visitors with new fossil tours](#) (CTV News Atlantic)

## 19. An overview of NB's Stonehammer Geopark

New Brunswick's Stonehammer UNESCO Global Geopark contains many wonders. From footprints of the first animals to walk the planet, to billion-year-old fossils, to the birthplace of the Atlantic Ocean and the collision point of Africa and South America, it's all part of the park. But where exactly the park is remains a mystery to many tourists and locals alike. [Dishing the dirt on the elusive Stonehammer Geopark](#) (CBC News)

## 20. Rising sea level a threat to Fundy coastal areas

Rising sea levels are threatening farmland, towns and a major transportation route along the Nova Scotia-New Brunswick border. The provinces, along with the federal government, are getting ready to release a \$700,000 study this spring. It will put forward three recommendations for dealing with the threat to the Trans-Canada Highway and CN Rail track that cut directly through the isthmus. [Climate crossroads](#) (CBC News)

21.

## 21. Fundy marshes help in climate change fight.

They may be among the most misunderstood landscapes, but scientists say Canada's swamps and marshes have a big role to play in combating climate change. Gail Chmura, a professor in the department of geography at McGill University, studies the salt marshes around the Bay of Fundy, between Nova Scotia and New Brunswick. She describes these wetlands as *"grassy meadows that are flooded by the ocean tides twice a day."* *They're mostly comprised of grasses with a few wildflowers in the mix. "And that's what makes them such a good carbon sink, because they have tremendous root systems that store the carbon dioxide that the plants take out of the air."* [Canada's swamps are the secret weapon to fighting climate change, say experts](#) (CBC Radio: What on Earth)

## 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:

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