~ FUNDY TIDINGS ~

Quarterly Newsletter of the Bay of Fundy Ecosystem Partnership (BoFEP) February 2021 Issue

A. BoFEP and its activities:

1. BoFEP Management Committee active

The BoFEP Management Committee meets regularly via Zoom and is actively engaged in developing a detailed work plan for the coming year. A meeting of the whole Steering Committee is being contemplated for this spring, again via Zoom. This will be an opportunity to review the new long-term strategic plan for the organization as well as to sign off on the 2021-22 work plans. Participants will also be invited to enhance their direct engagement with BoFEP by contributing to the implementation of aspects of the work plan. The organization is also making efforts to strengthen linkages with environmental or other groups that share an interest in the Bay of Fundy. In particular, we are engaging with the education committee of the Cliffs of Fundy Geopark Association. BoFEP is also trying to encourage paid membership in BoFEP, as this is currently our principal source of Funding.

2. BoFEP - series of short Fundy videos planned

Although BoFEP's planning for its next biennial Fundy Science Workshops has been temporarily stalled by Covid-19 associated health regulations (we are hoping that conditions will improve sufficiently for us to hold the next in the Spring of 2022!), the Management Committee has been pressing ahead with various other projects. One of these is a proposed series of short videos (10 mins?) featuring BoFEP members, and other researchers from around the Bay, talking about issues or topics pertaining to the Fundy ecosystem. These would be posted online and made accessible via links from the BoFEP website. If you are interested in joining the implementation committee, or would like to make a presentation (or wish to recommend someone else to do so!) then please contact seapencom@gmail.com

3. 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.

4. Finds from the Fundy Issues archive

The BoFEP website has an <u>archive of all the Fundy Issues</u> prepared over the years. Below, they are grouped into general themes rather than order of publication.

A. The Bay of Fundy Ecosystem Partnership

Heeding the Bay's Cry: The Bay of Fundy Ecosystem Project

B. Ecology of the Bay

- <u>Keystone Corophium: Master of the mudflats</u>
- Salt Marsh Saga: Conserving Fundy's Marine Meadows
- Alien Invasions: Introduced Species in the Bay of Fundy and Environs

C. Changes in the Bay

- Tides of Change: Natural Processes in the Bay of Fundy
- Whither the Waters: Tidal and Riverine Restrictions in the Bay of Fundy
- Fundy in Flux: The Challenge of Understanding Change in the Sea
- Whither the Weather: Climate Change and the Bay of Fundy
- Fundy's Fascinating Fossils: The Unique Palaeontology of the Bay of Fundy

D. Wildlife of Fundy

- Sandpipers and Sediments: Shorebirds in the Bay of Fundy
- Right Whales-Wrong Places? Right Whales in the Bay of Fundy

E. Fisheries and Aquaculture

- The Seaweed Forest: Rockweed Harvesting in the Bay of Fundy
- Farming Fundy's Fishes: Aquaculture in the Bay of Fundy
- Expanding Fundy's Harvest: Targeting Untapped Treasures
- <u>Fishing in Fundy: Harming Seafloor Habitats?</u>
- Fundy's Wild Atlantic Salmon: Doomed or Simply Down?
- Managing Fundy's Fisheries: Who Should Write the Rules?

F. Pollution and Monitoring the Health of the Bay

- Dredging Fundy's Depths: Seabed Mining in the Bay of Fundy
- Fundy's Watery Wastes? Pollution in the Bay of Fundy
- Dykes, Dams and Dynamos: The Impacts of Coastal Structures
- Gulfwatch: Putting a Little Mussel into Gulf of Maine Marine Monitoring
- Taking Fundy's Pulse: Monitoring the Health of the Bay of Fundy
- Contaminant Concerns: Heavy Metals and the Bay of Fundy
- Parlous POPs: Persistent Organic Pollutants in the Bay of Fundy
- Flushed with Tide: Municipal Effluents in the Bay of Fundy

G. Managing Fundy's Coastal waters

- Fundy's Minas Basin: Multiplying the Pluses of Minas
- Putting the Fun in Fundy: Possibilities and pitfalls of Ecotourism
- Living Lightly on Land and Water: Native People and the Bay of Fundy
- Saving Special Places: Protected Areas and the Bay of Fundy
- The "Cause" in Causeway: Crossing the Avon River at Windsor
- Tweaking Tidal Technology: Harnessing Fundy's Phenomenal Tides?

B. Partners and other organizations:

1. Obituary: Laurie Murison

Members of BoFEP and indeed the whole Bay of Fundy conservation community were greatly saddened to learn of the passing of Laurie Murison in early January. Laurie was the co-director of the Grand Manan Whale and Seabird Research Station and was widely recognized for her passionate work to save North Atlantic right whales and historic lighthouses. She also worked hard to enhance knowledge of the diverse marine life in the lower Bay of Fundy. <u>Grand Manan researcher remembered as 'great whale</u> champion,' devoted community volunteer (*CBC News*)

2. BoF Discovery Centre Association Newsletter

The <u>autumn issue of "In with The Tide</u>", the quarterly Newsletter of the Bay of Fundy Discovery Centre Association is now available online. Lots of interesting articles from otters, to dumping day, to the new community greenhouse and much more!!!

3. History of MEL-BIO published

The Marine Ecology Lab at the Bedford Institute of Oceanography has long played a key role in research about the marine waters of eastern Canada and far beyond. The history of this world renowned institution is now definitively recorded in *"A history of the Marine Ecology Laboratory, Bedford Institute of Oceanography (1965-1987)"* by Donald C. Gordon Emeritus Scientist Department of Fisheries and Oceans. Download PDF copy (165 pp)

4. Blue Beach Fossil Museum Society

Blue Beach, a world-class and world-famous fossil site, has long been known by Paleontologists and Geologists for its unique treasures and evidence for the invasion of the land by the earliest vertebrates (creatures with backbones) to leave the sea. <u>The Blue Beach Fossil Museum Society</u> invites you to

become a partner in the building of a world-class science museum in Avonport, Nova Scotia. <u>DONATE</u> <u>NOW!</u>

5. BIO Oceans Newsletter available

The January issue of Voicepipe, the newsletter of the <u>Bedford Institute of Oceanography Oceans</u> <u>Association</u>, is now available online. In addition to social activities, the OA is concerned with the history of BIO and with enhancing public knowledge about the oceans. <u>Membership is open to anyone</u> who shares the Association's goals.

6. Clearer fisheries regulations called for

The Unified Fisheries Conservation Alliance (UFCA), a newly formed alliance of commercial fishery stakeholders, is calling on the Government of Canada to establish clear, lasting, responsible, regulatory oversight for all fisheries – commercial, food, social, and ceremonial. <u>Atlantic Canadian Commercial fishing Industry Calls for Clear Regulatory Oversight for All Fisheries (Perishable News)</u>

7. Training to help distressed marine animals

The <u>Marine Animal Response Society</u> is training Maritimers so they can leap into action and help when an animal is found dead or in distress. The Nova Scotia-based society's marine animal medic course moved online last month. It's free and <u>open to prospective volunteers</u> who want to get a sense of how they can lend a hand. <u>New</u> <u>online course trains Maritimers who want to help marine animals in distress</u> (*CBC News*)

8. MTRI Annual Science Meeting

The <u>Mersey Tobeatic Research Institute's</u> annual science meeting will be held via Zoom on three mornings (9a.m. -noon). The sessions will include plenary talks, oral presentations, and group discussions organized around the following topics:

Tuesday, May 4 Wednesday, May 5

- Environmental Impacts of Climate Change
 Community Climate Action
- Thursday, May 6 Youth Climate Action

An online poster session, followed by an online social, will be held on May. 5 from 6:00 - 7:00 PM. For more information please contact info@merseytobeatic.ca

C. Fundy/GOM and other news:

1. Aquaculture notes

In a major victory for the future of wild Pacific salmon, DFO has announced it will phase out some open net-pen salmon aquaculture sites off Vancouver Island. <u>Full report</u> (ASF). However, several aquaculture companies in BC are fighting back. <u>Foreign Owned Salmon Farms Take Canada to Court</u> (ASF) In the meantime it seems that open pen aquaculture is still being warmly embraced on the east coast, although changes may soon be afoot. DFO has released <u>a discussion paper on the development of Canada's firstever federal Aquaculture Act.</u> The <u>Ecology Action Centre has made a detailed submission</u> which includes legislative and regulatory recommendations aimed at preserving the integrity of aquatic ecosystems, marine biodiversity and coastal livelihoods across the country. Meanwhile land based aquaculture is steadily making headway as a much more environmentally friendly alternative to open pen aquaculture. The *Narwhal* has published a three part series on the future of Atlantic salmon aquaculture. Closer to home <u>Hamilton's Fish Farm</u> is a family-owned business located in Centrelea, Nova Scotia that proudly produces high quality hand-raised, land-based fish in response to the rising global demand for environmentally responsible seafood.

2. New approach to forestry in NS?

More than two years after the Lahey Report on forestry practices called for its development, the provincial government has publicly released a <u>draft version of a new management guide</u>. Nova Scotians are invited to provide their feedback on the new Forest Management Guide, which outlines the silviculture prescriptions and timber harvest methods allowed on Crown land. You can submit your feedback by 19 February 2021. See also <u>New draft forestry management guide now open for public comment</u> *(CBC News)*

3. Right whale rescue, reproduction and remote sensing

In mid December a humpback whale was saved by the Campobello Whale Rescue Team (CWRT) after being found badly entangled in the Bay of Fundy. The whale had "multiple wraps of rope around the head and body and the tail" that was weighing it down. It took the team several hours and many cuts with specialized knives and a cutting grapple to free the mammal. Entangled Humpback Whale Freed In Bay Of Fundy (91.9 The Bend). After several devastating years of decline due to ship strikes, fishing gear entanglements, and low birth rates, 2021 is seeing a glimmer of hope for these huge mammals. The birthing season generally takes place in waters off the southern U.S. coast from December to March. This year scientists have recorded 13 successful births, although a 14th calf was found dead on a North Carolina beach in November. Cautious hope for right whales (Radio Canada International) It is exciting to note that Satellites, recognition software, artificial intelligence and a childhood dream are also coming together in a project to protect endangered right whales in Canadian waters. Olivia Pisano, a Dalhousie University PhD student, will help position satellites that are now capable of spying whales. OFI-led project uses satellites to track endangered right whales in real time. (Dal News). Childhood dream to save whales is coming true for Dalhousie student (CBC News)

4. Retrieving lost fishing gear

DFO says more than 63 tonnes of lost fishing gear was retrieved from the Atlantic Ocean in 2020 as part of a government program to reduce marine pollution. Most of the so-called "ghost gear" were traps and pots from lobster and crab fishing. Eighty percent of it was collected from the Bay of Fundy and the coastal waters off Nova Scotia, with rest from the Gulf of St. Lawrence and Newfoundland waters. <u>63</u> tonnes of 'ghost gear' removed from Atlantic Ocean in 2020: Fisheries Department (Global News). <u>Canada funds retrieval of tonnes of lost fishing gear</u> (*Radio Canada International*). <u>Ghost gear</u> retrieved **in** MODG waters (*Toronto Star*)

5. Canada/US slash GOM haddock quota

Canada and the United States have agreed to a large quota cut for the haddock stock that straddles their shared fishing grounds on Georges Bank south of Nova Scotia. Harvesters and processing plants in southern Nova Scotia are looking at a 45 per cent reduction in the total allowable catch for 2021. <u>Canada, U.S. agree to slash</u> <u>Georges Bank haddock quota by 45%</u> (*CBC News*)

6. NB planning nuclear energy expansion?

The province and NB Power are promoting two more nuclear reactors (Small Modular Reactors - SMRs), to be built next to the existing reactor at Point Lepreau on the Bay of Fundy. It seems that NB Power and the government are thinking that one of the nuclear reactors will "recycle" the existing deadly (high-level) radioactive waste that Lepreau is making and storing nearby. The report includes a 31-minute video that gives an overview of the proposed nuclear reactors, their links to climate action, the financial risks involved, and radioactive waste. <u>More nuclear reactors (SMRs) for New Brunswick?</u> (*NB Media Coop*)

7. Publications on chemical contaminants in GOM

We call you attention to two publications deal with the question of chemical contamination of sediments and mussel tissue in the Gulf of Maine. The first, "Monitoring chemical contaminants in the Gulf of Maine, using sediments and mussels (*Mytilus edulis*): An evaluation" [*by Adria A. Elskusa, , Lawrence A. LeBlanc , James S. Latimer , David S. Page , Gareth C.H. Harding, Peter G. Wells.*] The objective of this paper is to determine whether contaminant data on mussels and sediments can be used interchangeably, or not, when assessing the degree of anthropogenic contamination of a water body. The second, "Data Report – The Collection and Analysis of Bay of Fundy Sediment Under Contract between the Association of US Delegates to the Gulf of Maine Council on the Marine Environment and Eastern Charlotte Waterways for Contaminant Monitoring and Analysis". Gulf of Maine Council on the Marine Environment. 91p. [*by Latimer, James S., David S. Page, Adria A. Elskus, Lawrence A. LeBlanc, Gareth C. H. Harding, and Peter G. Wells.*]

8. Paper on Integrated coastal and marine management in Fundy

We direct your attention to a newly released paper "Integrated coastal and marine management: Insights from lived experiences in the Bay of Fundy, Atlantic Canada" by Eger, S. L., & Courtenay, S. C. Ocean and Coastal Management. Available online 29 January 2021, 105457. The paper examines 'the

governance gap' regarding the operationalization (*Don't you just hate that word!!!*) of integrated coastal and marine management in the context of the Bay of Fundy, Atlantic Canada where a diversity of habitats and activities (e.g., eelgrass beds, mudflats, and estuaries) exist, along with a rich cultural attachment of coastal communities to marine resources. <u>Abstract, highlights and Table of Contents</u>. <u>U. Waterloo</u> <u>dissertation upon which the paper is based</u> (2.32 MB)

9. Fundy Geological Museum finds ancient tracks

Researchers at the <u>Fundy Geological Museum</u> in Parrsboro, NS are eagerly studying amazingly wellpreserved ancient footprints found on the shore last summer by a visitor. These trackways belong to Arthropleura, an ancient insect closely related to modern millipedes and centipede, as well as ancient horseshoe crabs and were made during the late Carboniferous period (304–314 million years ago). <u>Fundy Geological Museum studying evidence of ancient life found along the Parrsboro Shore</u> (Global News) Fossil find near Parrsboro a snapshot of life 300 million years ago (Chronicle Herald)

10. Paper on tidal power risk for Fundy fish

A newly published paper outlines the risks of tidal power development for fish stocks in the Minas Basin and Passage. "A review of the fishes and fisheries Of Minas Basin and Minas Passage, Nova Scotia, and their potential risk from tidal power development" by Michael J. Dadswell and Roger A. Rulifson. <u>Proceedings of the Nova Scotian Institute of Science (2021) Volume 51 Part 1, pp. 39-125</u>. (*Table of contents only*) For a PDF copy of full paper please contact: <u>Mike.Dadswell@acadiau.ca</u>

11. New floating tidal power array deployed in Fundy

The tidal energy community is abuzz these days with news of a new floating turbine array that was deployed on February 1st, 2021 in Grand Passage between Long and Brier Islands on Digby Neck. <u>Sustainable Marine Energy LTD</u>. received \$28.5 million from Ottawa to support this initiative which consists of a large floating platform with six underwater turbines deployed like outboard motors.

Fundy tidal power project nears finish line (Daily Commercial News)

Harnessing the Bay of Fundy: New platform has turbines like a boat's outboard motor (Yahoo News Canada)

<u>Sea trials to begin for next contender trying to master Bay of Fundy's tides</u> (*CBC News*) <u>Canada's First Floating Tidal Energy Array Launched Near Bay of Fundy</u> (*To Do Canada*)

12. Momentum building to remove dams

There are growing calls for, and slow progress being made, greater efforts to remove dams on various GOM watershed rivers to allow free fish passage, particularly Atlantic salmon. <u>Kennebec federal dam</u> relicensing battle has future of salmon at stake. (ASF and Portland Press Herald), while in Canada: <u>NB</u> Power files EIA for removal of Milltown Dam (CCNB and ASF)

13. Ancient walrus skulls dredged from Fundy

Scallop fishermen from St. Mary's First Nation dredged up a prehistoric walrus skull in the Bay of Fundy in 2016 and another was brought up in the same area in 2019. The First Nation donated the skulls to the NB museum, which estimated they were up to 10,000 years old. Walrus haven't been seen in the Bay of Fundy since the 1700s. The museum conservators subjected the fragile skulls to a long slow conservation process. They are now stored at the museum in a custom-made case, locked in a metal cabinet in the geology collection. Walrus skulls thousands of years old are cleaned up and preserved at NB Museum (CBC News)

14. New article on Geography of New Brunswick

The online Canadian Encyclopedia includes an interesting new article on the <u>Geography of New</u> <u>Brunswick</u>. It includes sections dealing with: Geology, surface, water, climate and conservation.

D. ADMINISTRIVIA

Fundy Tidings is circulated 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: <u>seapencom@gmail.com</u> Back issues are available at <u>Fundy Tidings Archive</u>