

VOICEPIPE

Issue 78

August 2018

The Newsletter of the BIO-Oceans Association

“Make the workplace fun at least half the time”



Melanie MacLean, chair of the BIO-OA's Beluga Award Committee congratulates Andrew Cogswell after presenting Andrew with his Beluga.

Andrew Cogswell received his Beluga at a ceremony on 17 May 2018 in a crowded BIO Auditorium in the presence of his family, friends and BIO colleagues.

In Andrew's Beluga acceptance speech he told the audience that when he arrived at BIO 15 years ago he recognized that he was joining a team of superheroes and that science could be fun. His experience working in the Parker Street Food Bank made him recognize that we need to be open to the wider community need. He encouraged the audience to recognize the other Beluga worthy persons sitting in the auditorium.

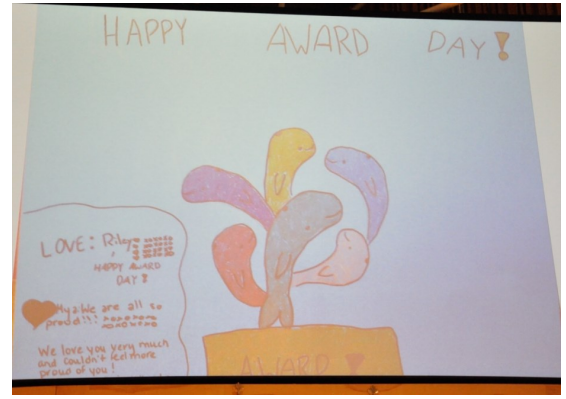
Andrew said he made lots of mistakes but they were all a learning experience. He called upon the audience to “marinate” in their mistakes, don't “drown” in them. Recognize which mistakes you were responsible or partially responsible for and make changes that you can.

17 October 2018
Fossil Garden Dedication
2-4 pm
BIO-OA 20th Anniversary
@ Brightwood 7-9 pm

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Photos: clockwise from top left: Andrew and his family listen to testimonials (from the left) Melanie MacLean, Beluga Award Committee Chair, Glen Vye, Andrew's father-in-law, Beth Vye, Andrew's mother-in-law, Erin, Andrew's wife, Andrew, Mya and Riley, Andrew's daughters; Award Day greeting card drawn by Andrew's daughter Riley; Andrew wearing the Beluga 'crown' presented by Claudia Currie, President of the BIO-OA and 2014 Beluga Award recipient; Barry MacDonald; and Nikole Bingham-Koslowski, delivering their testimonials. Photo to the right: Andrew and his family.

He recounted a conversation with his grandmother as he described one of his mistakes while in university when he was spending his allowance on the wrong things and running out of money. His grandmother gave him some money which he initially refused. His grandmother responded that "Someday you will help others, so take the money and remember this".

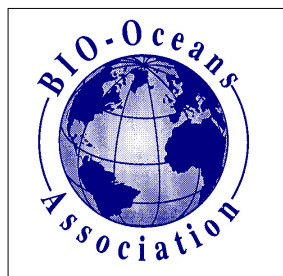
Andrew stated that we are part of the Halifax community and have a social responsibility to it.

He counselled that one needs to differentiate between your circle of influence and your circle of concern and



take action on the issues of concern that touch upon your circle of influence. You can always expand your circle of influence to meet your circle of concern.

He challenged the audience to be the change you wish to see in the world (after Gandhi) and make the workplace fun at least half the time.



From the President

It is with great sadness that we announce the resignation of Claudia Currie as President of the BIO-OA due to significant family health demands. Claudia's contributions to BIO-OA and BIO are

really too numerous and significant to mention in full. For the BIO-OA in addition to her too brief time as President, she has been the social coordinator and chair of the Beluga Award Committee. She is herself a recipient of the Beluga Award. I am sure our membership wishes Claudia all the best for her future endeavours and a quick return to health for her family.

At last, the fossil garden in the courtyard of BIO will be dedicated on 17 October 2018. It has been a work of passion for Claudia and others, has been the recipient of several donations and will commemorate the contributions of several scientists who worked at BIO over the years. I would encourage all who can to attend and tour this unique collection of ancient plants.

Twenty years ago a few people at BIO had a vision of an association of retired and current staff whose objectives were to provide a forum for continued contact between present and former employees of BIO and to promote preservation of the history of BIO and artifacts associated with oceanographic research. A reception to celebrate 20 years of accomplishments of the BIO Oceans Association will be held at the Brightwood Golf and Country Club also on 17 October 2018. Special invitations have been sent out to the founders of the Association and we hope many of them will be able to attend.

I want to draw your attention to the article by François Malenfant about his adventures in the western Arctic as a student working for GSC Atlantic at BIO. This article was reprinted from the 'Below the Waterline – GSC at BIO blog' which readers can follow at http://www.science.gc.ca/eic/site/063.nsf/eng/h_97423.html where there are several other articles about the recent work at GSC Atlantic at BIO.

Ocean literacy is a topic in several of the articles. I believe BIO-OA amended its objectives to add ocean literacy to its Memorandum of Association. We should probably take some action to address this objective in the near future.

Andy Sherin

First Vice President

Save the Date Wednesday 17 October 2018

1400-1600

Dedication of the Fossil Garden

In the Courtyard at BIO

1900-2100

Reception to celebrate the 20th Anniversary of the Founding of BIO-Oceans Association

**Brightwood Golf and Country Club
227 School Street, Dartmouth, Nova Scotia**

Update on the CSS Acadia

We have had a call from Andy Fillmore's (MP for Halifax) office and have requested a meeting with him. To date a meeting has not been scheduled.

We have received one response to our letters to federal government Ministers requesting the federal government assist the province in the restoration of the CSS *Acadia*. The Honourable Catherine McKenna, Minister of Environment and Climate Change and Minister responsible for National Historic Sites sent us a letter on 30 May 2018. Her letter contained information about funding programs to help ensure the protection of heritage places. Unfortunately these programs only provide small amounts of funding i.e. up to \$10,000 for projects to develop technical and planning documents or up to \$100,000 to conserve threatened components of a heritage place to ensure its physical integrity. The next call for proposals for these funding programs is planned for the fall of this year. It is unclear if the province would be eligible for these funds. We have asked Parks Canada for clarification on this matter. Minister McKenna also directed us to tools to search for foundations, corporations and government departments that support heritage conservation and the 'This Place Matters' website that holds a crowd-sourcing competition. We will explore these avenues while continuing to challenge the provincial government to invest in maintaining the legacy of the "Grand Old Lady".



The panel for the 14th Elisabeth Mann Borgese lecture, 8 June 2018. From the left: Vice Admiral (retired) Glenn Davidson, Dr. Susanna Fuller, Dr. Wendy Watson Wright and Hugh Williamson.

Well ahead of her time

The 14th Elisabeth Mann Borgese lecture was held on World Oceans Day, 8 June 2018, at Dalhousie University with the theme *Peace and Equity in Ocean Governance: Possibility or Pipe Dream?* The evening featured a panel moderated by Dr. Wendy Watson Wright, CEO of the Ocean Frontier Institute. On the panel were Hugh Williamson, Dalhousie University, Dr. Susanna Fuller, Oceans North and Vice Admiral (retired) Glenn Davidson.

Mr. Williamson led off the panel presentations with a recounting of Elisabeth's remarkable life and career. Elisabeth was inspired by Arvid Pardo's statement that the oceans were a "common heritage for mankind." Mr. Williamson finished his presentation by stating that since much of Elisabeth's vision for ocean governance was only starting to become real, that she was a person "well ahead of her time."

Science is not enough

Dr. Fuller recounted how her interest in oceans began with a transatlantic crossing in 1991 at the same time as the collapse of the cod stocks. She turned her focus to the science policy interface as she came to understand that scientific evidence was not enough to realize change in ocean management and governance. She did confess that change can take a long time. Despite the slow pace of overarching international agreements, there is evidence of progress within marine sectors such

as seabed mining, plastic, ocean noise, dumping and shipping. Although the pace is slow, she said "the oceans are worth it."

UNCLOS a triumph for humanity

Vice-Admiral Davidson began with the statement that UNCLOS was a triumph for humanity. However he said there continues to be major challenges from several quarters since nations are motivated principally by self-interest and the pursuit of economic opportunities. Firstly, for nations that have ratified international agreements, their obligations take second place to national interests. Secondly, nations may pay lip service to the obligations of the agreements but ignore the rules. Thirdly, after being ruled against by tribunals, nations will attempt to revisit the rules to their advantage. These behaviours are in addition to real criminal activity on the oceans including illegal or unreported fishing, piracy, and drug and human trafficking. He suggested that nations who have not yet ratified the existing international agreements should be encouraged to do so. Monitoring and enforcement is necessary but requires resources especially for smaller nations. He said it is essential to maintain the capability to enforce the agreements' rules.

During questions, Vice Admiral Davidson was not optimistic for ocean governance in the next 40 years. He was concerned that there was more potential for military conflict.



Photos: From the left: Vice Admiral (retired) Glenn Davidson presenting, Dr. Susanna Fuller, presenting, and Hugh Williamson, answers a question.

Mr. Williamson declared himself to be an optimistic pessimist suggesting that better governance would follow a crisis.

Dr. Fuller challenged that it was up to this and the next generation to make a difference and to not give up on improving the governance of humankind's common heritage, the ocean.

“The oceans are the very foundation of human life...”

From <http://www.un.org/Depts/los/index.htm>



A Bench in Memory of Frances Wagner

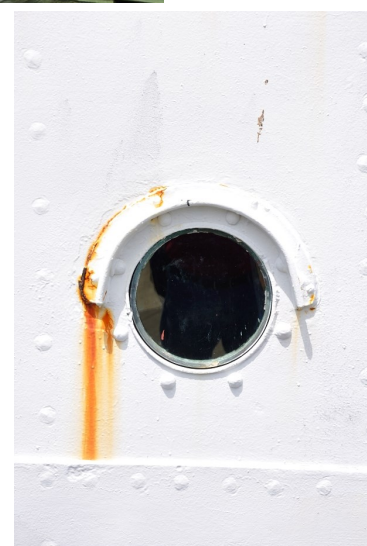
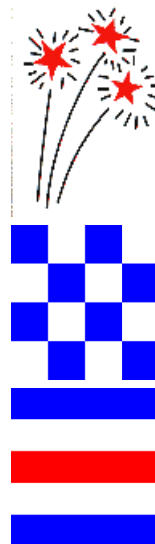
The following letter was received by Bosko Loncarevic from friends of Frances, Anne and Jan

Spring Greetings, We received pictures of the bench [placed in memory of Frances Wagner] in situ on the hill at the Uniacke Estate. It is situated just as one would come out of the forested area and climb on the Drumlin Trail at the Uniacke Estate. The site manager says this is where records suggest that Uniacke buried his favourite horses so Frances is in the company of equines if not dogs.

Having walked the trail last fall to choose a spot we can attest that it is a welcome rest spot after the climb.

When we get time we'll get up there and get a picture of the view down over the house and grounds.

Best Wishes, Anne and Jan



A pictorial essay on the state of the CSS *Acadia*

The real crisis for the CSS *Acadia* can not be seen in these pictures of the rusty superstructure. The real problems that threaten the continuation of the naval and scientific legacy of the “Grand Old Lady” are hidden from view. The weather deck is deteriorating and allowing water to leak below decks.



BIO Today From the field: Exploring coastal change in the Arctic

by François Malenfant*

I came to Inuvik, NWT (Fig.1) in the middle of May to work as a Coastal Geoscience Field Assistant with Natural Resources Canada, and so far, it has been a remarkable experience. Whether it's the landscape, the community, the culture, the wildlife, the weather, or the constant sunlight at this time of year, I'm always reminded of how lucky I am to be here. I'm not sure how someone can grow up four thousand kilometers away from a place, yet feel so attached to it.

Pelly Island, NWT

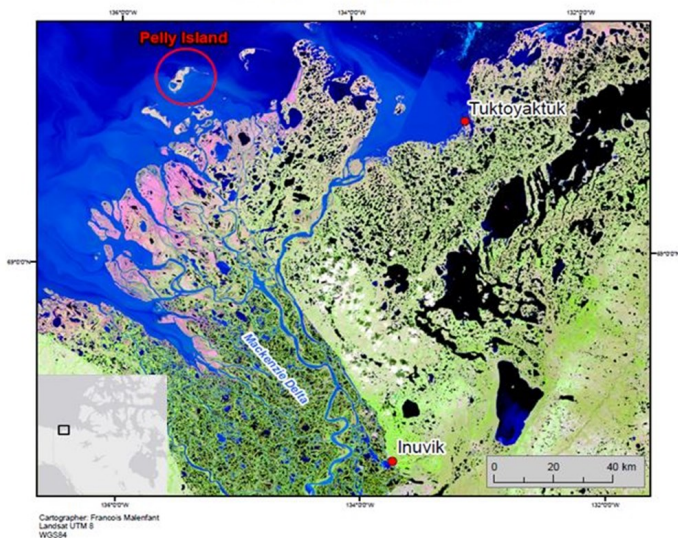


Fig.1 Locator map for Pelly Island, which is situated on the edge of the Mackenzie Delta, NWT.

As a graduate student from Saint Mary's University, I have the exciting opportunity to work with Natural Resources Canada (NRCan) on climate change and Arctic coastal research. My thesis work involves an examination of nearshore dynamics and coastal erosion on Pelly Island (Fig.1), which is one of the fastest eroding islands in the world. Pelly Island is a small, remote piece of land approximately 100 km from the nearest community which is Tuktoyaktuk (Fig.1). As part of my studies, I have embarked on a 3.5 month expedition to the Canadian northwestern Arctic under the supervision of NRCan researcher Dustin Whalen, who has been studying coastal and climate driven changes in the Arctic for 14 years. I'm just getting started, but I'm already gaining hands-on experience programming seabed instruments (Fig.2), analyzing permafrost core samples taken this past winter (Fig.3), posting photos and videos on a local community social media page (Mackenzie – Beaufort

Break-Up) which monitors ice break up in the Mackenzie Delta (Fig.4), and making connections with the local people most affected by the changes in the environment here (Fig.5).

In addition to collecting and analyzing data for climate change research, my work this summer includes helping other science teams in field expeditions in remote areas across the Inuvialuit Settlement Region. I will spend almost six weeks living and working in an isolated field camp environment, where I will be collecting data to document coastal landscape change. During this time, I will be deploying seabed instruments, setting up a weather station, flying drones and exploring and observing this amazing landscape firsthand.

Growing up in rural New Brunswick, I spent much of my time playing in nature. This is where my passion for the outdoors began, and I believe it was the catalyst for my desire to study landscapes. During my undergraduate



Fig. 2) The yellow casing and song board with all the D cell batteries attached to it is one of five hydrophones which I've programmed. The white cylinder is one of six instrument loggers which I've programmed, in this case we have a Conductivity Temperature Depth (CTD) logger.

studies in geoscience, I gained some experience studying permafrost landscapes and their unique features but there's nothing like seeing them in person. During my flight to Inuvik from Edmonton, I was lucky enough to have clear skies during the flight. This allowed me to identify some unique permafrost features such as thermokarst lakes (Fig.6).

Once I arrived in Inuvik, one of the first things that puzzled me was seeing the low-lying metal structures that snake their way all around town (Fig.7). I was informed by locals that these metal structures are called utilidors (Fig.7) and they are used to provide above ground plumbing in permafrost landscapes. The locals also say the best way to travel and explore the region is either by snowmobile in the winter, or by boat in the summer. The abundance of braided rivers in the Mackenzie Delta act as highways for boat travel during the summer, and frozen highways for snowmobile travel during the winter. This is part of the reason why monitoring ice breakup in the region is so important, as during the ice breakup, it is not possible to travel by snowmobile and it can be dangerous by boat.

This expedition is proving to be a life-changing experience, and I look forward to providing more updates as the field season unfolds. For real-time updates on my adventures, follow me on Instagram: @geofrank247

* François Malenfant is a student working with GSC Atlantic at BIO.



Fig.3 Permafrost core samples taken from Tuktoyaktuk Island required quick analysis to avoid thawing while out of the freezer.



Fig.4 I took daily photos of this exact area of the East Channel and posted them to a community social media page (Mackenzie – Beaufort Break-Up) to monitor the ice breakup.



Fig.5 I was fortunate to have the opportunity to share my knowledge of climate change and coastal erosion with East Three Secondary school students. The amount of obvious climate change in the region, and the associated research, has made an impact on the younger generation. They have a lot of existing knowledge, understanding and first-hand experience on the subject.

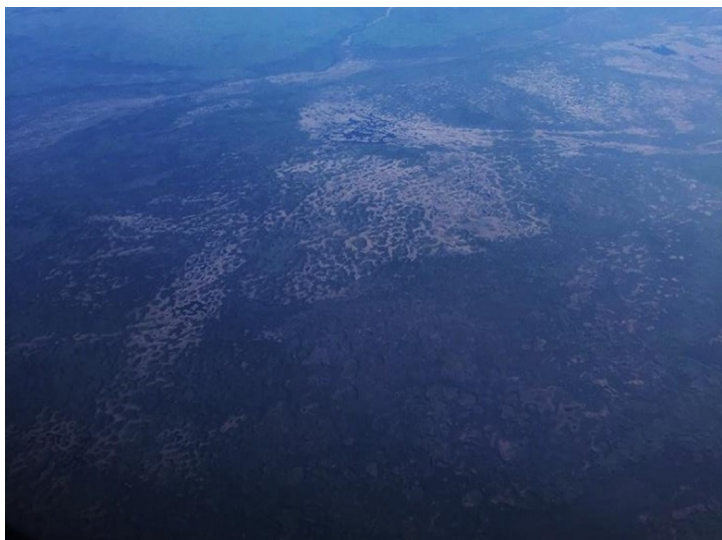


Fig.6 A mosaic of thermokarst lakes seen from the airplane on my way to Inuvik.



Fig.7 The utilidoor system in Inuvik provides above ground plumbing in this permafrost landscape.

10 days + 1 on the Rock

by Andy Sherin

Your editor had the privilege of spending ten days in St. John's, NL attending two conferences, meeting old and new friends and colleagues, being "screeched in", and enjoying the fresh fish.

Firstly, I endeavoured to beat Hurricane / Post tropical storm Chris to the Avalon Peninsula by leaving a day early thanks to Air Canada's travel alert flexibility. Other airlines cancelled flights and several delegates were unnecessarily delayed by several days since the storm was not as severe as forecast in St. John's. As some residents of St. John's told me it was only a little worse than a regular windy day in the city. That being said west of St. John's suffered some significant rainfall and local flooding,

The first conference I attended was the National Symposium for the Canadian Ocean Education Network (CaNOE) held at Memorial University's Marine Institute from 13 – 15 July 2018. The focus of the symposium was on an interactive workshop to develop a set of ocean literacy (OL) principles that corresponds to the Canadian setting. A set of OL principles has been developed in the USA for several years and has been expanded to a OL framework that recommends how the principles would fit with a science focussed K-12 curriculum. Readers can visit [http://oceanliteracy.wp2.coexploration.org/ocean-literacy-](http://oceanliteracy.wp2.coexploration.org/ocean-literacy-framework/)



The view of Signal Hill and the Narrows through the windows of The Rooms museum and art gallery in St. John's, NL. The Rooms was the venue for the gala evening for the 2018 Coastal Zone Canada Conference.

[framework/](#) to learn more. The results of the workshop will feed into the establishment of an OL strategy for Canada being developed by the newly formed Canadian Ocean Literacy Coalition. A second workshop focussed on promoting World Oceans Day led by the volunteer committee from Halifax's World Oceans Week initiative.

Wendy Watson Wright CEO of the Ocean Frontier Initiative (OFI) in her opening keynote stated "to ensure sustainability we need to advance ocean literacy". She quoted Sylvia Earle who said "With every drop of water you drink, every breath you take, you're connected to the sea".

She announced that the first video from OFI's Ocean

School (110 minutes, 360° experience) would be released this fall. Ocean School is a project that is partnering with the National Film Board to produce immersive ocean experiences. A team has been assembled to address learning units. She said that Ocean School would engender a personal connection with the ocean. She challenged the audience to “convince someone there is only one ocean and we can’t afford to mess it up”.

Diz Glithero, Students on Ice and the C3 Expedition gave the second keynote entitled “**Conservation Ethic, Agency and New Narratives**”. She shared her experience with experiential learning beginning with her tenure as a teacher at a poorly performing school in Kingston, Ontario. They turned the school yard into a boatyard and the students built boats for part of the



This learning activity combined with related classroom instruction turned the school around with much higher levels of student academic success. Subsequently her experience as a teacher in Bella Bella, British Columbia taught her that everyone is a co-learner, both student and teacher. She cultivates learning experiences so students learn they are part of something larger and they can be agents of change. She identified youth / adult partnerships as co-participants in projects was a priority identified by youth. C3 celebrated Canada as an ocean and Arctic nation and a vehicle to learn about the past especially the indigenous experience. She identified five thoughts on indigenous / non-indigenous relations 1. Non-indigenous Canadians should express gratitude for indigenous knowledge. 2. The media paints limited and extreme pictures of indigenous communities when in truth they are resilient and innovative. 3. All answers for positive change already exist in places, that are locally relevant and culturally appropriate. 4. International and national initiatives need to better connect. 5. Despite the necessary difficult conversations, there is hope, but we need to roll up our sleeves and get to work. She ended with the challenge to come together to drive change for a more ocean literate citizenship.

The second conference I attended was the Coastal Zone Canada (CZC) conference, held every two years in a Canadian coastal city since 1994. The conference opened on 15 July 2018 with the public lecture by Shei-

la Watt-Cloutier, a Nobel prize nominee and author of the memoir the **Right to be Cold: One Women’s Story of Protecting Her Culture, the Arctic and the Whole Planet**. She stated that Arctic people are being asked to pay the price for the unsustainable actions of the larger world. “We cannot wait until it is too late to deal with climate change impacts. In the Arctic it is already late.” The best approach, she said, is to frame the stories of climate change impacts in the language of human rights. She suggested that the agents for change will be the youth of the north and south. We have not acted because of a lack of imagination, not imagining a different way. She quoted an elder telling her “we need to create more mother based systems.” Politics and economics hasn’t worked well, there is a need to return to magic and a true connection with nature; a need to return to Inuit wisdom reflecting the character built on the ice of resilience and meticulousness; and a need to create dependency freeing institutions. There is much good happening in the Arctic, there are some bright shiny stars especially in film, music, sport and art.

The conference closed with a challenge from Larry Hildebrand, one of the Godfathers of CZC. He asked, will we meet the Sustainable Development Goals, which have a target of 2020? Is the Blue Economy feasible; can we get more out of an already depleted ocean? He questioned the attitude that S&T would fix things with new inventions so there was no need to take responsibility now. The challenges the coastal and marine environment face include climate change, more people to feed, and governance structures not up to the task. To meet the challenges we need to overcome resistance to integration, increase ocean literacy, plan to adapt and start adapting.

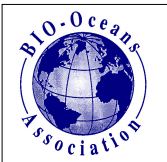
He asked does the ocean need saving or do we?

His last slide listed the following challenges for today and tomorrow:

- Shifting distribution of marine living resources
- Global population growth, coastal development
- Short timeframe to achieve SDG targets
- Developing a blue economy from a degrading ocean resource
- Overcoming lack of integration
- Will S&T and innovation save us?
- Moving from coastal zone management to marine spatial planning

Editor's Keyboard: My apologies for the lateness of this issue of the *Voices*, I waited until my return from St. John's NL to complete it. The highlight of this issue is of course the award of the Beluga to Andrew Cogswell. I found his acceptance speech moving and I hope I have adequately portrayed it for my readers. I am continuing the column of BIO Today. I anticipate "stealing" articles that have been published by DFO and NRCan at BIO. I know the two solitudes don't routinely share these stories with each other, maybe the *Voices* can be a channel for sharing to both commu-

nities. I have recently stepped down from the board of the Canadian Network for Ocean Education (CaNOE). Readers may remember an article in the *Voices* on their 2016 Symposium in Halifax. It was an ocean literacy learning experience for me and I now better understand the importance and power of citizens, young and old, understanding the ocean and its impact on their lives and their impact on the ocean by the life choices they make. I will devote an article on this topic for the next few issues as a strategy for ocean literacy is developed and encourage the OA to contribute. *Andy Sherin*



ABOUT THE BIO-OCEANS ASSOCIATION

The Bedford Institute of Oceanography Oceans Association (BIO-OA) was established in 1998 to foster the continued fellowship of its members; to help preserve, in cooperation with the Institute's managers and staff, BIO's history and spirit; and to support

efforts to increase public understanding of the oceans and ocean science. Membership is open to all those who share our objectives. Most current members are present or past employees of BIO or of the federal departments of Environment, Fisheries and Oceans,

and Natural Resources (or their predecessors) located in the Halifax Regional Municipality. Membership is \$10.00 per year, \$40.00 for five years, or \$150.00 for a lifetime membership.

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Unless otherwise credited all photographs were taken by Andy Sherin

BIO at World Oceans Day 2018 at the Maritime Museum of the Atlantic



Photos: clockwise from the top left: Some of the BIO-DFO team at the annual event to celebrate World Oceans Day at the Maritime Museum of the Atlantic on the Halifax Waterfront (from the left) Jazmine Hayden, Katherine Hastings, Derek Fenton, Marty King, Sarah Deller, Jennifer MacDonald, Leah McConney, Elise Will, Emily Chisholm, Jessica Wingfield, Clair Evers, Hilary Moors-Murphy; the whale sounds team (from the left) Clair Evers, Jessica Wingfield, Gabrielle Macklin; the COINAtlantic 'tuna' with contributed scales; Jasmine Hayden's finger and message "Wear Blue, Tell Two :)" Jasmine places a 'scale' with the message on the COINAtlantic 'tuna'; and the 'dead fish' (aka MPA) display team (from the left) Daniel Houlihan, Elise Will, Emily Chisholm, Leah McConney.



BIO-DFO staff were prominent exhibitors at the annual World Ocean Day celebration event at the Maritime Museum of the Atlantic in Halifax on 8 June 2018 along with many other oceans related organizations whose exhibits were set up in the small boat gallery and outside.