

VOICEPIPE

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July 2016

The Newsletter of the BIO-Oceans Association



“Don't work through lunch” Glen Morton 2016 Beluga Award Winner



Penny Doherty, Chair of the BIO-OA Beluga Award Committee, presents the 2016 Beluga Award to Glen Morton.

Glen Morton was presented with the 16th Beluga Award by Penny Doherty, Chair of the BIO-OA Beluga Award Committee, to a packed audience of friends and co-workers in the William Ford Auditorium at BIO on 26 May 2016.

Two tributes were presented. One delivered by a “hologram” of Tim Lambert who praised Glen for his enthusiasm and the interesting ways Glen has dealt with scientists' crazy ideas. Glen often said, “Leave it to me. I'll get back to you.” And he did. Glen's one fault according to Tim was having a hard time saying no. Tim extolled Glen's community spirit. “Community spirit is fostered by positive people like Glen” he said. Glen always had time for the community, often with one or two students in tow, not only instilling technical skills but also personal skills. Glen's work on a large list of technical instruments put BIO on the map for instrument development, as he always used a different but simple methodology. However, he didn't have a vivid imagination for naming his

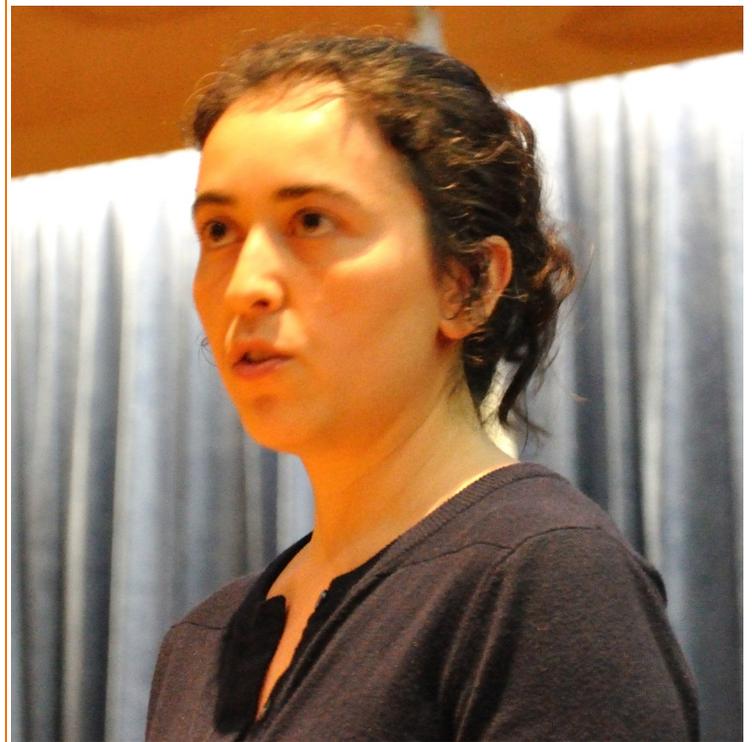
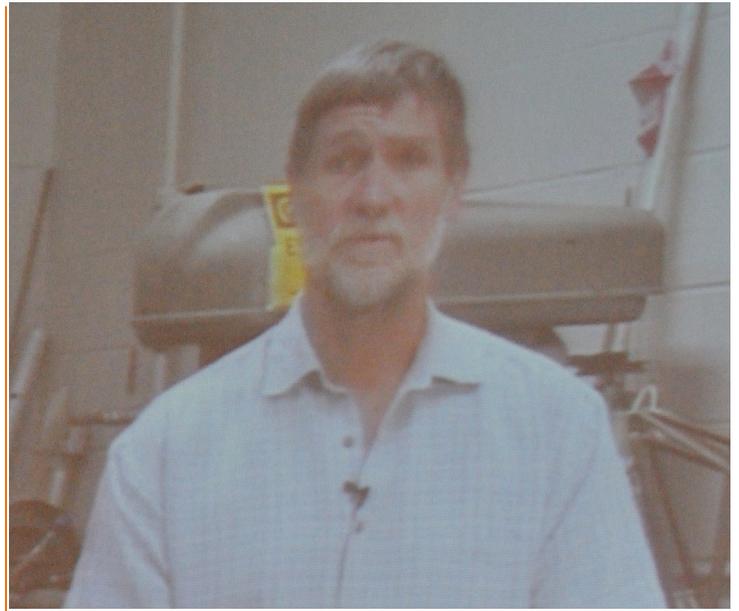
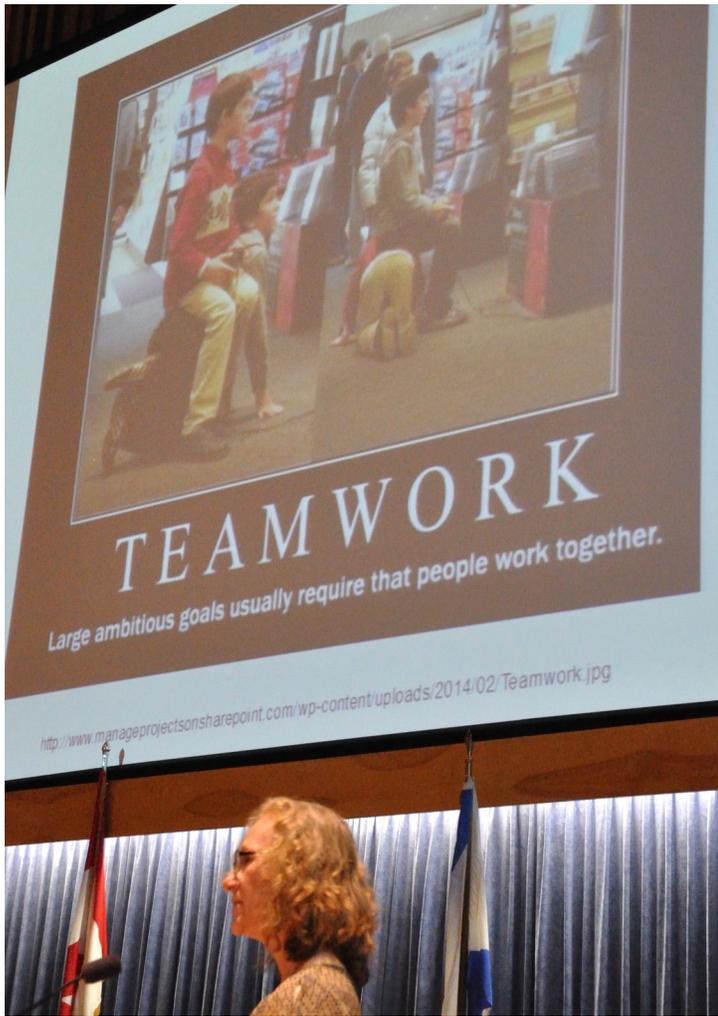
**McNab's Island
Guided Tour
17 August 2016
Contact Mike Hughes
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Contents

“Don't work through lunch” Glen Morton 2016 Beluga Award Winner	1
From the President	4
World Oceans Day on the Halifax Waterfront	5
New Book about the Science -Policy Interface Now Available!	8
11th BoFEP Science Work- shop a Great Success	9
Reimagining Halifax Harbour	10
Editor's Keyboard	11
About the Association	11
Optimism is the theme of the 2016 Ocean Literacy Con- ference	12



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Photos: clockwise from top left: Penny Doherty, Chair of the BIO-OA Beluga Award Committee, speaks to the significance of the Beluga Award; Tim Lambert extolls the virtues of Glen via video; and Monica Bravo delivers her tribute to Glen.

designs. For example, there was *BOSS*, *Son of BOSS* and *Brother of BOSS*.

The second citation was delivered by Monica Bravo. She called Glen a great mentor who built up her confidence and taught her how to use many instruments and how to use them safely. He helped her make connections at BIO and was always a good sounding board for ideas. He was engaged in social activities at BIO especially when they involved music and food. Glen apparently had a weakness for cookies and rhubarb-strawberry crumble.

The tributes were followed by the presentation of the Beluga Award by Penny Doherty, Chair of the BIO-OA Beluga Award Committee.

Glen took the podium and started off his speech with the comment that there were too many superheroes and that

they had degenerated to the point that they mostly fought amongst themselves. He suggested there was a true Canadian superhero Captain Beluga who solved problems not with extraordinary powers but with patience, fairness, diplomacy, hard work, integrity and a firm handshake. He thanked Warren Joyce for nominating him and everyone that provided letters of support. He thanked the workers in the machine and welding shops because he said, "You can't sample mud with a design on the computer screen." He very rarely dreaded coming to work as a mechanical design technologist unless it was a day when he was sailing on a ship. His job



Photos: clockwise from top left: Glen Morton delivers his thank you speech; Claudia Currie (Beluga Award 2014) presents Glen with the Captain Beluga superhero cape (aka the tablecloth); and Claudia Currie and Barry MacDonald (Beluga Award 2015) place the Beluga Award crown on Glen's head.

at BIO was a pretty good job in comparison to his other jobs as a mechanic and at the sawmill.

Glen then shared the story of his first lesson in physics when as a boy he had crashed into the driveway coming downhill on his bike. From this he learned never to start a project with, "Hey watch this?" and not to use your face to stop yourself.

He also shared the story of his stroke, which he survived in part because he and a co-worker had repaired his phone the day before so he was able to call 911. He went on to thank everyone who visited him in hospital and rehab and especially to those who took him out for real food.

He wound up his speech with three pieces of advice:

1. Don't work through lunch
2. Relationships are the most important part of a job
3. Keep perspective and your sense of humour

Glen had complained during his speech that the previous year's Captain Beluga had not passed on the Captain Beluga Cape. Claudia Currie then proceeded to remove the yellow table cloth from the table where the Beluga Award had rested and tie it around Glen's neck, the Captain Beluga superhero's cape. This was after she and Barry MacDonald, last year's award winner, had placed the Beluga Award crown (a shark's head cap with a tiara) on Glen's head. The crown was a tradition started by Claudia that was passed on to Barry last year.

Glen and his family then joined members of the BIO-OA Executive for lunch at Trendz Cafe and Wine Bar in Dartmouth.

In her introductory remarks for the ceremony, Penny Doherty encouraged the audience to start thinking about who of their co-workers were worthy recipients of the Beluga Award for 2017. Beluga Award nomination forms are available at www.bio-oa.ca.



FROM THE PRESIDENT

Summer is upon us and I hope everyone is taking advantage of the warm weather to enjoy the Maritimes. I am looking forward to our summer event, the tour of McNab's Island, 17 August (rain date – 18 August). We will

be spending the day exploring the island with lots of time to chat and renew friendships. For more information, contact Mike Hughes or see Nelly Koziel at BIO to pay in advance and ensure a seat on the boat.

While summer means a certain slowing of activities, OA members are continuing work on a variety of projects. One that will be central to our organization over the next year is the planning for BIO EXPO 2017, led by Andrew Cogswell and Claudia Currie, with the event being positioned as part of the Canada 150 celebrations. The open house is always a great opportunity to showcase the work of BIO and the contributions of its staff, past and present. Our members are actively assisting in the planning for BIO's next open house scheduled for September 2017. In past years, OA members played a key role as volunteers in making these events a great success and I have no doubt that next year's event will be equally successful. Stay tuned for more information as we get closer to the event and watch for the call for volunteers that will be coming.

Another 2017 project is the new exhibit at the Canadian Museum of Science and Technology. Museum curator Dave Pantalony has contacted us to begin preparations for an exhibit highlighting advances in ocean technology, with a number of exhibits from BIO. He has been working with Dave McKeown to arrange interviews with people that helped develop the technology or have stories about its use. We look forward to the resulting display that should open next year at the Ottawa-based museum. It is a validation of the hard work and dedication the OA placed on maintaining an archive of the technology developed at the institute over the years. Kudos to Dave McKeown and the others that led this project over the years.

Another project related to BIO's history is Don Gordon's work preparing a chronology of BIO covering the fifty years from 1962 to 2012. Don's current draft highlights major events at the institute and yearly listings of staff, research highlights, ships and facilities, technology, conferences, awards, and important visitors. Building on some earlier work by Dale Buckley and Carol Broome, Don draws on information from the Annual

and Biennial Reports that were produced by BIO up to 2009. This work should be invaluable to anyone interested in the history and work of the institute. Don has completed his first draft and circulated it for comment. The OA executive will consider this project at an upcoming meeting and discuss next steps for ensuring the wide distribution of the material.

A second item for an upcoming executive meeting is next phase of our marketing for the *Voyage of Discovery*. We have been successful in selling a significant number of books and have amassed a profit of approximately \$8000. The executive will need to consider what our strategy should be to market the remaining books and to decide what we should do with the profits. This will be the subject of our September meeting.

The executive is also working on ways to increase the OA's visibility with current staff at BIO. We are working on a presentation deck that describes the organization and its work that could be used at staff meetings and be posted on our website. We recognize as well that our website needs to be updated and that we need to make better use of social media to connect with BIO employees and others interested in our work. These were themes of the rejuvenation committee struck last fall that provided such great ideas for renewing the OA.

A continuing concern for the executive of the OA is the lack of a 1st Vice President. A committee of two (Mike Murphy and Don Gordon) was established to identify possible candidates and discuss the opportunity with them. They have spoken to a number of candidates to date, and hope to come to a successful resolution by the September executive meeting. They would welcome any suggestions.

Enjoy your summer – it only comes once a year.

Mike Murphy, President



Mike Murphy and Mike Hughes (Secretary *protem*) at the BIO-OA AGM on 26 May 2016.

World Oceans Day on the Halifax Waterfront

by Andrew Sherin

The Maritime Museum of the Atlantic (MMA) hosted an Oceans Day event on the Halifax waterfront on Friday 3 June 2016. The event had displays from many organizations with a focus on the ocean including the World Wildlife Fund, Mi'kmaq environmental organization named the Maritime Aboriginal Aquatic Resources Secretariat, the Nova Scotia Sea School and the ever popular with the small-person crowd, the Halifax Mermaids.

New this year was the Greater Halifax Partnership promoting their *Halifax: Canada's Ocean City* campaign. The Bedford Institute of Oceanography (BIO) was one of the principal leaders in marine technology R&D mentioned in their Oceans Economy and Sectors.

Also participating for the first time was Oceana Canada an independent charity established to restore Canadian oceans to be as rich, healthy and abundant as they once were. It is affiliated with the international family of Oceana organizations and Robert Rangeley is their Director of Science, formerly with the World Wildlife



Mermaid Nessie encourages her audience to use their imaginations.

Fund.

Of course, BIO had a major presence at the event. The “dead fish” display is a popular exhibit with the day-care set, a big portion of the visitors at the event. There was a particular focus on marine protected areas (The

HALIFAX CANADA'S OCEAN CITY

GREAT DEPTHS

Given its strategic location, the ocean-related focus of its post-secondary institutions, and the depth of its science-based workforce, it's no surprise that Nova Scotia is a world leader in oceans. With 7,579 kilometres of coastline, Nova Scotia is home to more than an estimated 480 oceans-related PhDs, 200 companies and 60 high tech innovators. The province's capital city, Halifax, is the hub of oceans related business and research.

Areas of concentration and expertise include: acoustics, sensors and instrumentation, marine geomatics, marine biotechnology, marine unmanned surface and underwater vehicles, marine data and communications systems, and naval architecture.

Ocean sectors served include: defence and security, shipbuilding and marine transportation, ocean science and observation, offshore and coastal energy, and aquaculture and fisheries.

NOVA SCOTIA HAS ONE OF THE HIGHEST CONCENTRATIONS OF OCEANS-RELATED PhDs IN THE WORLD (EST. 480)

MORE THAN 100 RESEARCHERS AND ACADEMICS ACROSS NINE FACULTIES AT DALHOUSIE UNIVERSITY

600 SCIENTISTS, ENGINEERS AND OTHER RESEARCHERS WORK OUT OF THE BEDFORD INSTITUTE OF OCEANOGRAPHY

INCLUDING SPIN-OFFS, OCEAN-RELATED INDUSTRIES GENERATE APPROXIMATELY \$4.5 billion OR 12.2% OF NOVA SCOTIA'S GDP

20% OF ALL RESEARCH AND DEVELOPMENT BUSINESSES IN NOVA SCOTIA ARE IN THE AREA OF OCEAN TECHNOLOGY

OVER 200 COMPANIES, WITH MORE THAN 60 INNOVATORS OF NEW PRODUCTS AND SERVICES

OCEANS RESEARCH

IS BEING DONE BY NOVA SCOTIA UNIVERSITIES, NOVA SCOTIA COMMUNITY COLLEGE (NSCC), AND PUBLIC AND PRIVATE COMPANIES AND INSTITUTIONS

BIG OCEANS PROJECTS AT DALHOUSIE UNIVERSITY	
CANADA EXCELLENCE RESEARCH CHAIR	\$34m
OCEAN TRACKING NETWORK	\$128m
MARINE ENVIRONMENTAL OBSERVATION, PREDICTION AND RESPONSE NETWORK (MEOPAR)	\$25m

ABOUT 35,000 NOVA SCOTIANS ARE DIRECTLY EMPLOYED IN THE OCEANS SECTOR

HALIFAX PARTNERSHIP
CONNECT COLLABORATE PROSPER
CanadasOceanCity.com

ANCHOR INSTITUTIONS:
DALHOUSIE UNIVERSITY
BEDFORD INSTITUTE OF OCEANOGRAPHY
DEPARTMENT OF NATIONAL DEFENCE
NOVA SCOTIA COMMUNITY COLLEGE (NSCC)



Photos: top from the left: Farrah Stevens, Oceans and Coastal Management Division, BIO, Sarah Deller, Katie Hastings and Aimee Gromack, all from the Species at Risk Division, BIO; left: Warren Joyce, Population Ecology Division, BIO.

Gully and the Musquash Estuary), sharks and whale vocalizations.

Absent this year was a display from the NRCan contingent at BIO. In past years the 3D model of the Halifax Harbour and the harbour bottom CAM attracted many visitors.

Your editor, MMA staff and the staff from the Halifax Partnership discussed ways we could increase the participation of high school and university students in the MMA's Oceans Day event. This visitor demographic would be more valuable to many of the organizations that take the effort to set up displays and staff them for the day.

The MMA Oceans Day event provides a rare opportunity for networking with organizations and their staff with a common objective of a healthy ocean.

The dedicated MMA staff that organize this event each year as a contribution to International Oceans Day are to be congratulated.



Photos: clockwise from the top: Hilary Moors-Murphy, Catalina Gomez, Ocean and Ecosystem Science Division, BIO, and Nicole Chorney, JASCO Applied Sciences at the whale vocalizations display (JASCO is the supplier of underwater acoustic equipment used by BIO to record whale sounds); Gary Pardy, Oceans and Coastal Management Division, BIO and tattoo artist, affixes a tattoo to a young visitor's hand; and Maxine Westhead, Oceans and Coastal Management Division, BIO presents a "dead fish" specimen from The Gully to a future fisheries biologist.



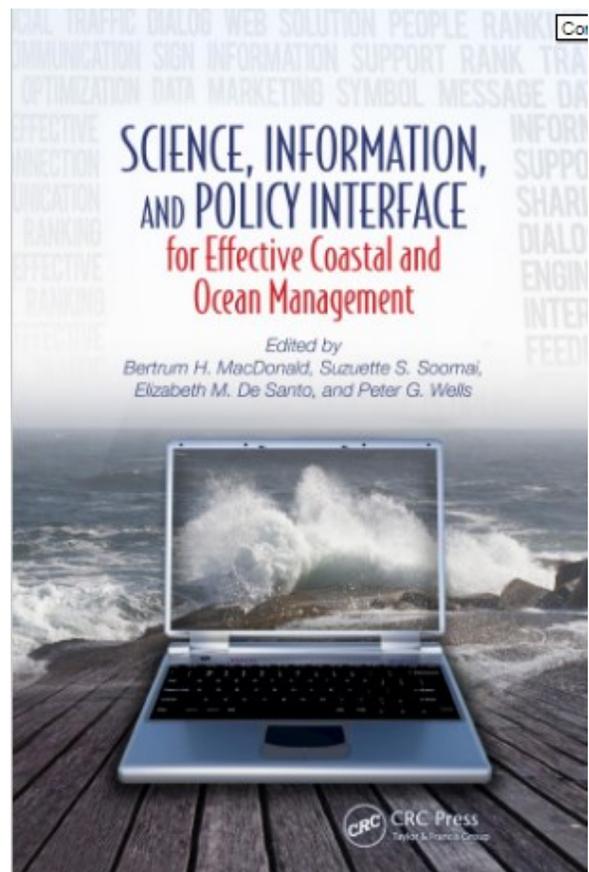
Photos: Lobster vs Tiger: the DFO lobster mascot (aka Gary Pardy) faces off with the Dalhousie University Marine Affairs tiger mascot, who apparently likes to snorkel. Absent this year from the skirmish was the panda from the World Wildlife Fund.

New Book about the Science-Policy Interface Now Available!

The Environmental Information: Use and Influence (EIUI) research team at Dalhousie University is very pleased to announce that *Science, Information, and Policy Interface for Effective Coastal and Ocean Management* is now available from CRC Press (a division of Taylor & Francis).

The book brings together an international team of over thirty authors to examine the role scientific information plays in policy and decision-making for the management of the world's coasts and oceans.

Peter Wells, a member of the BIO-OA Executive and NSIS liaison, is an editor. Andrew Sherin, *Voicepipe* editor and Heather Breeze, DFO, BIO, are chapter authors.



11th BoFEP Science Workshop a Great Success

(reprinted from the Fundy Tidings Newsletter)

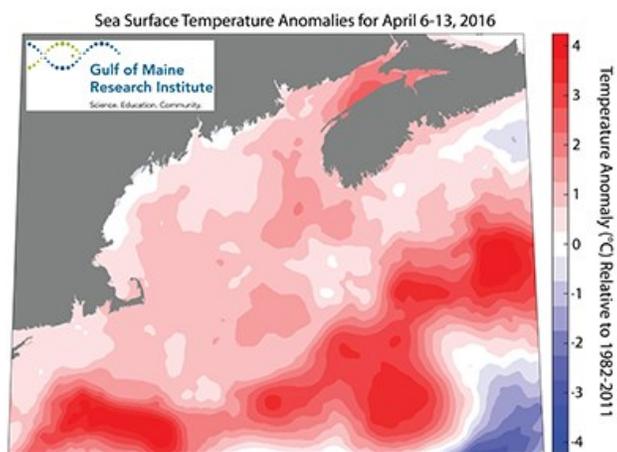
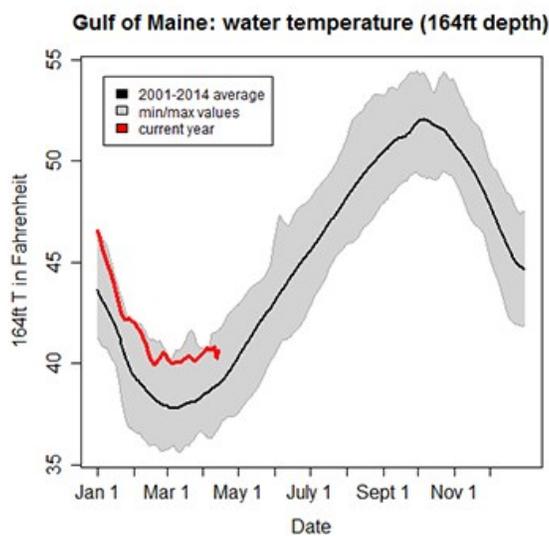
The challenges for science, policy and society in the Bay of Fundy were amply laid out by the speakers at the thirteen sessions at the Bay of Fundy Ecosystem Partnership (BoFEP) Science workshop held in Fredericton in June. From new technologies for monitoring to how bitumen moves in the Bay of Fundy, the niche of Stripped Bass in the Fundy ecosystem, tidal power, new governance mechanisms for marine resources and more, speakers presented new research to help us manage an ecosystem in flux. The sessions began at the side of the Saint John River with a welcoming and drumming ceremony conducted by Elders of the Saint Mary's First Nation. The Elders and others shared their experiences with the River either through legend, spoken memory or personal stories. Workshop keynote speakers included Dr. Katherine Mills, Associate Research Scientist at the Gulf of Maine Research Institute and Brent Suttie the New Brunswick Provincial Archaeologist. Mills cautioned that management regimes need built in capacity for flexibility as we see ecosystem changes brought on by water temperature shifts, citing the example of earlier lobster movement in central New England as water temperature increases sooner in the spring. Suttie told us that our former view of the age of settlements in the Bay of Fundy region is off by several thousand years, as 13,000 year old artifacts have been found in the Pennfield, NB area, challenging some of our concepts of the ice age in the region. Suttie said it is now believed that SWNB was the first area in the region that deglaciated and where vegetation and habitation occurred.

The two day workshop closed with talks by anthropologists working on and with governance structures for marine management and a general discussion on the restriction to implementing effective co-management approaches and ways to move forward with co-



View of the Wolloostook (Saint John) River.

management. The session also highlighted the need for closer work between the social scientists and the biological scientists. The field trip after the workshop, allowed participants an opportunity to experience the flora and fauna of the Oromocto River with very knowledgeable guides, provided by the Province of New Brunswick. The workshop provided valuable information for BoFEP to use in future project development, in work planning and in developing the agenda for the next BoFEP Workshop scheduled for 2018. A book of abstracts of the presentations made at the workshop is available online at www.bofep.org



Caption: Water temperature in the Gulf of Maine for 2016 from the Gulf of Maine Research Institute's lobster landings forecasting project. The project attempts to forecast the timing of the peak for lobster landing based on water temperatures to help seasonal planning by the lobster industry in Maine.

Reimagining Halifax Harbour

The Atlantic Chapter of Sierra Club Canada Foundation with support from Halifax Water is launching a project to engage citizens in re-connecting with Halifax Harbour. The idea of the Halifax Harbour being polluted and even dangerous is deeply ingrained. As we make the Harbour cleaner, the project hopes to shift this perception and for people to start to see the Harbour as central to our well-being and our community. Imagine a more naturalized, conserved area, celebrating the species that are there now and those which can rebound.

The Halifax Harbour project is part of an Atlantic-wide, inter-generational program promoting actions to foster a greater understanding of and appreciation for our working ports as living ecosystems. It aims to overcome public perceptions that our working ports are polluted and remain limitless sinks, through the interpretation of water quality standards and regulations and ecosystem awareness.

The objectives of the program are:

- To create a framework for building awareness of what harbours are like today - meeting national clean water objectives of swimmable, drinkable, fishable waters.
- To provide experiential learning for people to learn more and therefore to care more about harbours and empower pollution prevention stewardship.
- To change the negative perceptions some have of Atlantic harbour ecosystems based on misinformation of the complex ecosystem interactions.

The Halifax Harbour Project has two main elements. First, an Art & Music Contest where the goal of the contest is to have visual and audio artists share their memories, experiences and concerns about their Harbour by developing a collection of online materials that active citizen scientists can browse online and download. The contest will run at a regional level and will promote environmental education and result in the production of creative expressions of place about the rich cultural centres that are our coastal harbours. Secondly, an Interactive Look & Listen Harbour Kiosk where the public will be invited to re-imagine and reconnect with their harbour by interacting with the kiosk. Visitors will have the opportunity not only to learn about the Harbour through a web portal, but also to discover the quality of the water and contribute to the local knowledge of the ecosystem.

The mobile kiosk will be located on the waterfront in September. The public will be asked in October to artis-



tically reimagine the Halifax Harbour in 2050, what can be different for the next generation?

While on the waterfront, the public will use the kiosk to re-imagine and re-connect with their Harbour. The visitor can record real time data such as water clarity, temperature, and species observed. The public will have the opportunity to become engaged in promoting ecosystem function and protecting local species.

The kiosk will be a crowd-sourced history of the Harbour with species at risk, seasonal variations and include points of interest from a watershed perspective. The kiosk will be hosted in the high traffic boardwalk on the waterfront, with scientific instrumentation hanging into the ocean. The user will upload an observation and add this to a data trend line on the web. The user will have generated a fact about the Harbour, a species observation, a measurement of the tide, the waters temperature, anything of interest that has an observable range. In addition to this fact, they will also be able to download a story, visual artwork or piece of music to help inspire their ideas of a different future.

For more information visit RAH2050.org or contact Kelly Schnare, Re-Imagining Atlantic Harbour Coordinator, Atlantic Chapter, Sierra Club Canada Foundation, 902-401-6204, kschnare@gmail.com

Noteworthy Reads will return in October

Editor’s Keyboard: This issue of the *Voicpipe* is full of good news. I would encourage all readers to listen to Elin Kesley’s keynote speech on Ocean Optimism from the Ocean Literacy Conference (see page 12). Your President and I attended the conference and I was impressed by the level of energy in the sessions and conversations. I would encourage the BIO-OA to strike up a collaboration with CaNOE. Other good news of course is the crowning of the 2016 Beluga Award recipient. Leave it up to Claudia to add some fun to the

event. The Oceans Day event at the Maritime Museum of the Atlantic (MMA) continues to be a very positive event for networking. Present at the MMA event was *Halifax: Canada’s Ocean City* an encouraging initiative of the Greater Halifax Partnership that recognizes BIO’s contribution to the city’s economy, assets and society. BIO, DFO was very visible at the MMA event and the age demographic of the people staffing the displays suggests a real revitalization of the employee contingent at BIO is underway. Good news! *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

Optimism is the theme of the 2016 Ocean Literacy Conference



Presenters in the session on “Connecting people to education through ocean literacy” at the 2016 Conference on Ocean Literacy held at Dalhousie University 7-12 June 2016. From the left, Justine McMillan, Verity Thomson, Haley Guest, and Kerri McPherson.

The Canadian Network for Ocean Education (CaNOE) held the 2016 Ocean Literacy Conference at Dalhousie University, Halifax, Nova Scotia from 7-12 June 2016. The theme of the conference was **Ocean Optimism**.

Dr. Elin Kelsey delivered the keynote lecture entitled “The wild success of ocean optimism and the wonderfully contagious nature of hope.” Dr. Kelsey is a professor in Environmental Education and Communication at Royal Roads University in Victoria, BC and a Research Fellow at James Cook University in Australia. She is currently working on a project on social media, teenagers and conservation activism at the Monterey Bay Aquarium in Monterey, California. She is one of the founders of the #OceanOptimism Twitter hashtag which has 59 million tweets since June 2014.

She began her lecture by describing how we traditionally attempt to change behaviours, “If they knew better, they would act better,” being the usual mantra. Terror management theory however suggests that reminding people of a big problem over and over results in them responding less, not more and with the ironic outcome of self-medication through shopping. A study in Australia found that one quarter of Australian children are so troubled about the state of the world that they honestly believe it will come to an end before they get older. Scientists inadvertently contribute to fear since they are problem focussed. The problems are taken up by traditional media outlets which contributes to the feeling in the population of urgency, fear and hopelessness.

Instead, she suggested telling stories of success like the changing attitudes towards sharks, the global downfall of the single use plastic bag, and the expansion of marine protected areas. *Big Blue Live*, a broadcast jointly produced about Monterey Bay by the BBC and PBS had more views than the BBC series *Downton Abbey*.

People need to be convinced they have the agency for change, collective hope and action. She ended her lecture with a challenge; “How do we spread wild contagious hope for the oceans?” Her full lecture can be viewed at <http://oceanliteracy.ca/2016-conference/>



Haley Guest (left) Ocean School Dalhousie, delivers her presentation in the session on “Connecting people to education through ocean literacy” at the 2016 Conference on Ocean Literacy. BIO-OA President Mike Murphy (right) was a volunteer.