

VOICEPIPE

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The Newsletter of the BIO-Oceans Association

Kate Jarrett: 2017 Beluga Award Winner



Penny Doherty, Chair of the Beluga Award Committee presents the award to Kate Jarrett.
Photo Credit: Kelly Bentham

Michael Parson's Testimonial

It's my pleasure to share a few details of Kate's career with you today, as well as several stories from her co-workers. Kate's exemplary work ethic, her many contributions to BIO projects and activities, and her strong dedication to the BIO community make her a very deserving recipient of the Beluga Award.

I've known Kate since I first started working as a Research Scientist with Geological Survey of Canada Atlantic (GSCA) in 2002, and have been her Section Head and supervisor since February 2015. I use the term "supervisor" somewhat loosely, as it's generally Kate who lets me know what needs to be done, how she plans to do it, and why she often requires a small

Volunteers Needed

BIO Expo 2017

Contact: Claudia Currie
Claudia.currie@canada.ca

Contents

Kate Jarrett: 2017 Beluga Award Winner	1
From the President	5
Meet your new Membership and PR Executive Member	5
In Memoriam	5
13 th Annual Elisabeth Mann Borgese Ocean Lecture: Marine Protected Areas—For Whom?	6
<i>Voyage of Discovery</i> travels to Montreal	7
Letters to the Editor	7
Noteworthy Reads	8
Editor's Keyboard	11
About the Association	11
BIO at Oceans Day at the Maritime Museum of the Atlantic	12



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Photos: top: Kate's daughter Jessica and husband Kevin enjoy the slideshow of Kate's life before the ceremony; bottom (Photo Credit: K. Bentham): Michael Parsons delivers the testimonial.

army of students and part-time workers to help her accomplish these Herculean goals.

Throughout her career with GSCA, Kate has played a key role in the success of marine geoscience programs on all three of Canada's coasts. Her expertise in the collection and processing of marine sediment samples and associated data has been an essential component of GSC research cruises since the 1980s, and she continues to be an important player in all of the marine field programs led out of GSCA. Kate's main contribution has been her ongoing role as an unsung hero and team leader working in the background to ensure things run smoothly on each cruise.

As Manager of the GSCA Core Lab from 2002 to 2009, Kate provided expert technical support for all cruises led out of GSCA, from pre-cruise planning to post-cruise

sample processing, analysis, and archiving. In the lab, Kate oversaw the characterization of sediment cores following international standards and ran a well-organized lab that was the envy of many of our research partners. One of her primary strengths is her meticulous attention to detail—Kate has a well-deserved reputation at the GSCA as a stickler for procedure. Everyone who accesses the GSCA Core Lab quickly learns that the key to success is to make sure you fill out the right paperwork and follow directions and procedures carefully. This attention to detail has helped to ensure that scientific data are of high quality, that results are comparable over time, and that samples and data are easily discoverable and accessible to future researchers.

Since 2009, Kate has been Curator of the GSCA Marine Geoscience Collection Facility and fully responsible for proper life-cycle management of all samples and associated documentation. This collection is a significant national asset, which houses 40 years' worth of curated and archived marine samples and data. Under Kate's leadership, the collections facility was significantly upgraded and expanded in 2016 at a cost of more than \$300,000. As Curator, one of Kate's greatest contributions has been her ongoing work to compile and digitize thousands of records that were previously only available in hard copy. Many of these records are now available online and discoverable by both internal and external clients. In addition to dealing with legacy data, Kate also tracks the sampling and navigation metadata for all recent GSC cruises, completes the final QA/QC on these data, and ensures that all information is properly uploaded in our online Expedition Database. Completing all of these tasks has required numerous students, casual employees, and expert input from other staff at GSCA. Kate has assembled and led these teams over many years, tenaciously pursued funding for these projects from GSC Management, and worked in close partnership with teams from across the country to ensure that our sample and data holdings are managed in a way that meets or exceeds international best practices.

In addition to all of her ongoing field and office duties, Kate has been a long-standing contributor to many BIO committees, outreach activities, and other workplace initiatives. She is passionate and very knowledgeable about workplace safety, and is presently Laboratory Representative on the GSCA Occupational Safety and Health (OSH) Committee and an observer on other BIO OSH committees. Kate leads OSH inspections for many of our labs and offices and also coordinates usage of dosimeters for all GSC staff working with radiation sources. With



Kate delivers her thank you speech.

regard to outreach, Kate is a member of the GSCA Communications Committee, frequently participates in exhibits for the public, and volunteers much of her own personal time to produce the GSCA's *"Below the Waterline"* employee newsletter on a quarterly basis. Finally, Kate has single-handedly managed the BIO Government of Canada Workplace Charitable Campaign book sale for the last several years, and has previously coordinated GSCA employee contributions to the campaign.

And now, I'd like to share with you just a few quotes from the various letters of support received for Kate's Beluga nomination...

"In every job Kate does at BIO, she exemplifies an unselfish effort and by her positive outlook and high standard of performance she encourages cooperation and fosters teams to work together at every turn, her efforts consistently over-deliver on demands and solve problems that are challenging staff. She is modest, unassuming, hardworking, cheerful; in short, Kate is a dream to work with!!"

"Kate is easily one of the hardest workers I know and on a daily basis she contributes greatly to not only the science community, but to the overall BIO community as a whole. Her work is dedicated and thorough and she is like an Energizer bunny who just keeps going and going. If you need to know anything and/or need help with

anything, go see Kate! She will know - and if she doesn't - she will find out! She can always be relied on to lend a helping hand."

"As the scientific data collections curator, Kate has a very hard job. She has to manage tens of thousands of samples and records and deal with requests for data and new data acquisition all the time. Her level of detail and persistence to do a good job speaks for itself with how organized the database and collections are. I truly applaud her for that, as what she has created, continually updated and is now managing is truly a treasure of this institute and the marine geological community as a whole."

"On a personal note, Kate has made it possible for our Celtic music group to rehearse in the core lab over lunch hours, raising morale and increasing our enjoyment at work. I also know Kate is a long-time supporter of the Parker Street Food Bank Christmas Dinner campaign. In my opinion, Kate embodies the qualities that the Beluga Award was intended to recognize and celebrate. I can think of no one more deserving of the award."

And finally, I'd like to share a few brief stories about Kate's many contributions to BIO on land and at sea. The first is from Steve Blasco, former marine geophysicist at GSCA, member of the Order of Canada and a recent recipient of the Massey Medal from the Royal Canadian Geographical Society:

"Only accolades can describe Kate Jarrett and her contributions to the Institute. Kate is competent, committed and conscientious in the delivery of her work. In the field you never need to worry about the acquisition, processing and documentation of samples from the seabed. Always ready to assist in a good natured manner - be it tracking down lost data or accessing curated samples or records from the catacombs of the Institute - even when given little notice by demanding, ill-natured scientists."

Next up are a few memories from Dr. Calvin Campbell, a fellow Research Scientist here at GSCA and frequent Chief Scientist for many cruises:

"I've sailed with Kate many times over the years. In work, there are two types of people; those that make your life more difficult and those that make your life easier. Kate is without a doubt the latter."



Claudia Currie, 2014 Beluga Award winner, and newly elected President of the BIO Oceans Association presents Kate with the Beluga crown.

"Kate is an incredible mentor to students, visitors, and staff. She leads by example and is tireless at sea. It is hard to imagine another person as unselfishly dedicated to the preservation of our collections and who has such a firm grasp of their value. This dedication underpins Kate's instruction on how to deal with samples, from the time they are collected at sea, subsampled, loaned out, and eventually moved to ambient storage. This is part of the reason why you'll often hear the refrain "Ask Kate!" when dealing with a particularly complicated sample in the lab, whether it's damaged core liner, "extra sample," a labeling issue, etc."

"Another of Kate's special skills is her ability to lead and organize many individuals towards achieving a goal...sometimes without the individuals even realizing it. For example, in 2015 and 2016, she coordinated the mobilization of our entire core processing lab into the GP lab on Hudson. This was no small feat and included the setup of five separate instruments and ensuring that they would be operational "at sea." She also determined the most efficient work schedule that allowed rapid processing of cores which kept pace with the rate at which cores were collected. There is a saying in oceanography that your job at sea is "whatever needs to be done" or "to come back with the data, and you'll be expected to do everything that is safe and prudent to achieve that goal". Kate exemplifies this ideal."

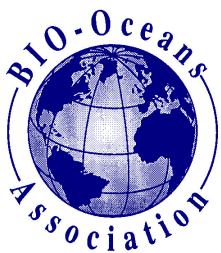
"At sea, Kate is always concerned about the comfort of staff, and the importance of somehow maintaining a work-life balance when working 12+ hour days in less than ideal conditions. I distinctly remember a particularly long and successful cruise in 2002 (David Piper was the chief scientist) where Kate, knowing that morale was

declining as we were into week 4, held a "spontaneous gathering" in her cramped cabin 36 (then known as the "female cabin" on Hudson). At some point during the gathering, someone did a head count at arrived at 14 people in the cabin at the same time...impressive and perhaps good training for our upcoming transition to Workplace 2.0. During that same cruise, a visiting PhD student who was working in the lab with Kate was feeling quite nauseous after lunch. I recall the fellow was making gagging noises that were particularly unpleasant to those working in the lab. Eventually he left to get sick over the side rail but didn't make it...instead there was a mess all over the deck outside the lab...an unpleasant scene. Feeling sympathetic to the guy's situation, Kate relieved him of his lab duties for the rest of the day, but not before she made him clean the deck."

The final story comes from Dr. Kate Moran, a former scientist at GSCA, assistant director in the White House Office of Science and Technology Policy, and presently the President and CEO of Ocean Networks Canada at the University of Victoria:

"Kate Jarrett is Brobdingnagian among her peers (...for those uncultured types like me who aren't familiar with this reference, Brobdingnag is the name of a land in the novel Gulliver's Travels that is populated by a race of human giants). Kate and I worked together for many years. She excelled at everything — working at sea, sampling and testing at sea, analyzing sediment cores, keeping equipment operating, ensuring data quality, writing papers, coordinating unwieldy teams of scientists, and even keeping everyone fit by leading aerobics! I don't know of anyone more dedicated than Kate Jarrett — she always worked beyond expectations and never ever let anyone down. Over the time we worked together, Kate was a self-learner where improving her knowledge and skills was part of her work DNA. And she shared her knowledge generously with students and colleagues. There are many graduate students from around the world who owe Kate Jarrett for key elements of their successful theses research that earned them degrees. She has an uncanny ability to transfer knowledge without the recipient even realizing it. And to top it off she's a lot of fun to be with — especially when she uses the "duck" word to great effect. Congratulations Kate — you deserve this recognition and more."

In closing, I'd ask you to please join me in congratulating Kate Jarrett, winner of the 2017 BIO Beluga Recognition Award.



FROM THE PRESIDENT

As I approach the half way mark of my first 100 days in office, I am pleased to say that it is great to be volunteering with you as BIO Oceans Association's (OA) President.

Congratulations to Kate Jarrett as she received her 2017 Beluga Award; a true unsung Hero, who I am proud to have been a part of her well overdue recognition.

There are many things happening around the BIO campus these days. Extensive renovations are underway to bring the building up to modern standards, such as; the Murray Building is now air conditioned, new roof, new windows (Will they open? Not likely), new water mains (all roads will be dug up), final plans are underway for a city street to loop around to BIO, a rebuild of the Strickland Building is keeping it lively in the depot and the jetty, and a facelift for the outreach area by the cafeteria is almost complete.

If you want to know about BIO science and policy accomplishments, you will not get that information from a *BIO Review*. You will have to do internet searches on various departmental websites and dig down further to find out if that work was completed at BIO. OA is currently making an effort to revive *BIO Reviews*. They are key to preserving our history.

Our Association is also embarking on a mission to save the CSS *Acadia*. If you are interested in working in any capacity towards saving this unique piece of Canadian marine science and BIO history, contact Andy Sherin.

Finally, 2017 is another milestone year! Canada is 150, BIO is 55, GSC is 175 and this year BIO holds its 10th Open House called BIO EXPO2017 (EXPO) to celebrate. Come to the EXPO website www.BIOEXPO2017.ca and watch as the event builds toward opening day. The dates for the EXPO is 20-24 September 2017.

The OA is heavily engaged in making EXPO a successful event. We are participating in every way we can. First, the OA has an exhibit and **crew are needed** to help work the exhibit for the 5 days of the Open House. Please contact me if you have any spare time, we will fit you in.

In addition, route and parking **crew are also desperately needed!** These are fun jobs as you get to witness the public's excitement as they take in the EXPO.

Please take a minute to consider coming to BIO for a nostalgia moment and becoming part of us again.

We have two social events on the calendar: 1. The McNabs Island tour on Tuesday 8 August (rain date Thursday 10 August). Contact Mike Hughes by 31 July hughes@bellalliant.net, and 2. A reunion of OA members on the EXPO site the night before the EXPO opens. In the cafeteria tent on the jetty, the Tuesday Night Jazz Band will play. We welcome all OA members to join us in the GSC 175 tent, beside the cafeteria tent, and enjoy hors d'oeuvre and non-alcoholic beverages. The exhibits will all be set up for viewing. I hope all members will consider attending, after all, it will be the only time the parking at BIO will be simple. The reunion starts at 7 pm. Don't miss this, come have some fun. Carpe diem.

For more information about volunteering for EXPO, or any of the projects OA is working on, contact me.

Claudia Currie, President



Photo: Jennifer Hackett (left) takes on responsibility for PR and Membership on the BIO-OA Executive shown above with Clive Mason who has handled this role commendably for many years.

In Memoriam

Colin Langford, died 2 January 2017, Canadian Hydrographic Service, BIO.

Brian David Beanlands, died 18 May 2017, Ocean Physics, BIO and 2011 Beluga Award recipient.

Nelly Koziel, died 26 May 2017, GSC Atlantic, BIO and member of the BIO-OA Board.

Raymond St. Clair Hiltz, died 22 June 2017, Chemical Oceanography, BIO

Anita Aimee Kavanaugh, died 27 June 2017, BIO Library

13th Annual Elisabeth Mann Borgese Ocean Lecture: Marine Protected Areas—For Whom?



The Ocean Lecture Panel: from the left: Maxine Westhead, Section Head, Protected Areas and Conservation Planning, Oceans and Coastal Management Division, Department of Fisheries and Oceans; Ken Paul, Director of Fisheries, Atlantic Policy Congress of First Nations Chiefs Secretariat; Paul Barnes, Director – Atlantic Canada & Arctic, Canadian Association of Petroleum Producers; and Veronika Brzeski, Executive Director, Cape Breton Fish Harvesters Association.

The 13th Annual Elisabeth Mann Borgese Ocean Lecture was held on Oceans Day, 8 June 2017 at Dalhousie University in Halifax. The theme *Marine Protected Areas—For Whom?* was addressed by a four member panel (see picture above) representing government, First Nations, and industry (oil and gas and inshore fishing) perspectives moderated by Sean Brilliant, Manager – Marine Programmes, Canadian Wildlife Federation. Although all panelists saw value in Marine Protected Areas (MPAs), there were differing views on the processes leading to their definition. Veronika Brzeski, Executive Director, Cape Breton Fish Harvesters Association, in particular expressed dissatisfaction with most meetings being held in Halifax and decisions made in Ottawa. She stressed her view that MPAs needed to be community lead.

From the United Nations' Oceans Conference in New York (5-9 June 2017), Dr. Ratana Chuenpagdee, Memorial University, Dr. Susanna Fuller, Ecology Action Centre, and Kevin Stringer, Associate Deputy Minister, Department of Fisheries and Oceans addressed the audience through an internet connection. Mr. Stringer stated that "DFO is back" and is striving to rebuild relationships both nationally and internationally. All three speakers expressed positive views on what was being accomplished in New York. A summary of the conference and the **Call for Action** can be found at <http://enb.iisd.org/download/pdf/enb3233e.pdf>



Photo: Live from New York! (top) Dr. Ratana Chuenpagdee, Memorial University and (bottom) Dr. Susanna Fuller, Ecology Action Centre.

Voyage of Discovery travels to Montreal

Copies of the *Voyage of Discovery* were presented by the BIO-OA for the second year in a row to student post-

er and oral presentation winners at the Atlantic Coastal and Estuarine Science Society conference, this year held at a McGill University in Montreal 17-19 May 2017.



Photos: from the left: Laura McKay, Honourable Mention, undergraduate poster, McGill University; Melanie Bishop, Honourable Mention, graduate poster, UNB; Matthew Penney, Winner, undergraduate oral presentation, Cape Breton University; Allen Beck, Winner, graduate poster, UNB; Spencer Virgin, Honourable Mention, graduate poster and graduate oral presentation, UNB; Jan Wollenberg, Winner, graduate oral presentation, McGill University. Cash awards for the winners were provided by Hoskin Scientific. Not represented in the photographs is Morgan Sadler, Winner, undergraduate poster, McGill University. Photo credit: Spencer Virgin

Letters to the Editor

28 February 28, 2017

[Editor's Note: The letter to Dr. Lassonde from Dr. Li was copied to Alan Ruffman and was intended to also be a response to Mr. Ruffman and published in the *VoicePipe*.]

Dear Dr. Lassonde,

The A. G. Huntsman Award for Excellence in the Marine Science belongs to the portfolio of medals and awards associated with the Royal Society of Canada. The association between RSC and the Award, which is administered by the A.G. Huntsman Foundation, stretches back to the inaugural year of 1980. For these many years, a representative of the RSC has always served on the Board of Directors of the Foundation, most usually this has been the sitting President of the Academy of Science. Every year, the Foundation invites the President of the Academy of Science to bestow the Huntsman Medal to the award recipient at a public ceremony held at the Bedford Institute of Oceanography in Dartmouth, Nova Scotia. My earlier response to Mr. Ruffman's e-mail of February 18 was not copied to you, but instead to Professor Jamal Deen. For your information at this time, I attach here my response to Mr. Ruffman on February 19 [previously published in *VoicePipe* 73]. The A.G. Huntsman Foundation greatly values its relationship with the RSC. I would like to assure you that the Foundation supports greater representation of under-represented groups as it pursues the objectives of the Corporation.

Sincerely,

Bill Li

President, A.G. Huntsman Foundation

17 May 2017

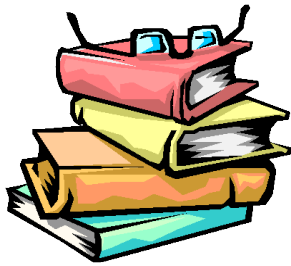
Dear board members of the A.G. Huntsman Foundation, A few days ago, the BIO-Oceans Association published its newsletter for May 2017. http://www.bedfordbasin.ca/newsletters/73_MAY2017.pdf On pages 6 and 7 of the newsletter, you will find in the "Letters to the Editor" an edited version of the e-mail communications between Alan Ruffman and me in February. Because of editorial redactions, the original tone and colour of Mr. Ruffman's communications to me have been altered. As I indicated to the Editor, my second letter was nominally addressed to Dr. Maryse Lassonde (President of the Royal Society of Canada), but actually intended as a reply to Mr. Ruffman. The Editor chose not to publish this response.

If you have any concerns about the matter of women awardees of the Huntsman medal, or about the manner in which the communications have been handled, please let me know. It is a role of Board members to ensure the vitality of the Foundation.

Regards,

Bill Li

President, A.G. Huntsman Foundation



NOTEWORTHY READS: BOOK REVIEWS IN BRIEF

David N. Nettleship
Book Editor & Reviewer

'BOOK EDITOR'S PICKS FOR SUMMER READING'

The *Noteworthy Reads* section is an effort by BIO-OA to produce a representative list of recent noteworthy book publications related to the marine sciences and other subjects of general interest. The listing is not intended to be comprehensive or complete, but merely an attempt to highlight a number of 'good reads' that may be of interest to OA members and associates. Most books listed are available at local bookstores and public libraries. Book prices are regular retail in Canadian funds, but discounts of 20-30% are normally available on line at: e.g., amazon.ca or chapters.indigo.ca. Contributions of book reviews to 'Noteworthy Reads' are welcome – send via e-mail to David Nettleship: dnnlundy@navnet.net (phone: 902-826-2360).

SPECIAL PUBLICATION:

THE IMPORTANCE OF POLAR ICE

Wadhams, Peter. 2016. *A Farewell to Ice: A Report from the Arctic*. Allen Lane (Penguin Randomhouse), London, UK. 240 pp. Hardcover, \$36.00 (ISBN 978-0241009413).- In fourteen chapters, Peter Wadhams, former director of the Scott Polar Institute and professor of Ocean Physics at Cambridge University, UK, takes the reader from a brief introduction of the blue Arctic, polar ice, and the history of ice on the planet and modern cycle of ice ages to the more complex issues of the greenhouse effect, the recent and rapid buildup of carbon dioxide, methane, and nitrous oxide in the Earth's atmosphere, and what it all means to the global climate system and the planet's future. Wadhams' report from the Arctic is an alarming account of a rapid loss of sea ice on the surface of the Arctic Ocean from roughly 8 million square kilometres in the 1970s to about 3.4 million by 2012, a catastrophic decline that continues unabated. In a balanced and readable text supplemented with numerous instructive colour plates and figures, the science of sea ice is explained and the implications of its loss to the global climate and subsequent rising global temperature are identified. Simply put, the melting of sea ice decreases the amount of solar radiation reflected back into space accelerating the warming cycle, which in turn thaws frozen sediments causing the release of methane, a highly potent greenhouse gas, into the atmosphere. The overall picture of the near future is dismal – incredible flooding, fires, droughts, and storms – with

widespread human suffering and mortality throughout Africa, Asia and the Americas. As summed up in a recent *The Guardian* review: "The warning this book gives us about the consequences of the loss of the planet's ice is emphatic, urgent and convincing". Without question, '*A Farewell to Ice*' should be read by every citizen of planet Earth with a follow-up response that forces governments to 'wake up' and take immediate and forceful action to reduce the impact of human activity on the current and future state of the climate, and by doing so help prevent a catastrophe to humankind and other multi-cellular organisms that inhabit the planet. Read, learn, and act!

General Reviews

Aldridge, John and Anthony Sosisuski. 2017. *A Speck in the Sea: A Story of Survival and Rescue*. Weinstein Books, New York, NY. 280 pp. Hardcover, \$35.00 (ISBN 978-1602863286).- Looking for a marine adventure book to read while basking in the sun this summer? Well if so, '*A Speck in the Sea*', a gripping sea story of an at-sea event that occurred on 24 July 2013 to John Aldridge, skipper of the lobster boat MV *Anna Mary*, may be the perfect book candidate. During a fishing trip offshore in the cold New England waters, Aldridge falls overboard into the sea at night with his partner, Anthony Sosinski, asleep below unable to rescue him. Aldridge's first-person narrative of the mishap demonstrates the incredible determination of an experienced seaman to survive and delivers several important messages to all boaters. Most importantly, prior to departure, is the check of all safety equipment on board and a thorough review of procedures to be followed when working alone on deck, especially at night, and the proper response in the event of an accident. Aldridge gives a moving account of the 'if-onlys' and 'I should have dones' that went through his mind as he struggled to stay alive in the cold Atlantic water and not fall asleep and drown. In the end, the U.S. Coast Guard team spotted a miniscule speck on the vast sea that turned out to be Aldridge, and succeeded in bringing him to safety. Details of the rescue effort – the knowledge applied and the modern 'search-and-rescue' technologies used – are provided, most informative and reassuring to all sea-going voyagers and their families.

Egan, Dan. 2017. The Death and Life of the Great Lakes. W.W. Norton, New York, NY. 364 pp. Hardcover, \$36.95 (ISBN 978-0393246438).- An alarming science report on the past, present, and imperiled future of the Great Lakes, the world's largest freshwater system. Egan gives a detailed review of two centuries of human exploitation, largely by overfishing, excessive pollution, and the focus on requirements for navigation. The introduction of a myriad of aggressive invasive species via the St. Lawrence Seaway through biologically contaminated ballast water dumped by foreign freighters combined with ever-increasing farm-fertilizer runoff have had a devastating impact on the Great Lakes ecosystem, best exemplified by the massive seasonal toxic algae blooms in Lake Erie. Egan summarizes in considerable detail the damage already done to water quality including the unsuccessful attempts to 'engineer' solutions such as the introduction of predatory fish species to limit numbers and distribution of noxious species. He also presents disturbing forecasts for the future including the new threats posed by climate change and commercial for-profit water diversion proposals. This vivid portrait of the present status and future prospects of the Great Lakes water system is essential reading for policymakers, and should be read by the millions of people that rely on the Great Lakes for drinking water.

Emery, Nathan. 2016. Bird Brain: An Exploration of Avian Intelligence. Princeton University Press, Princeton, NJ. 192 pp. Hardcover, \$37.95 (ISBN 978-0691165172).- Ever wondered about intelligence in birds as they fly about in our backyards and forests? Perhaps not, but after reading animal cognitive biologist Nathan Emery's book 'Bird Brain', your view of our avian friends will take on a different light. This engaging book combines the latest science on avian cognition with a uniquely attractive layout that informs through a very well written text and exceptional colour illustrations. Emery takes us on an incredible journey into the social and physical worlds of birds through an examination of the structures and functions of the avian brain and mind demonstrating the similarities between birds and mammals. Each of the seven chapters comprising the volume – major topics include: communication and song learning, social behaviour, navigation, self-recognition, higher reasoning and innovation, and tool use – carries a central theme relating behaviour and cognition to intelligence. This fascinating and concise book tells us what intelligence is, and how the brains of birds process information in ways similar to the great apes. The 'bird brain' myth is now gone, replaced by awe and respect for the

high degree of intellect displayed by some of our distant feathered relatives. Read, learn, and enjoy!

Felt, Hali. 2012. Soundings: the Story of the Remarkable Woman Who Mapped the Ocean Floor. Henry Holt, New York, NY. 339 pp. Hardcover, \$34.50 (ISBN 978-0805092158).- This is the story of Marie Tharp, the geologist and draftsman who was the little known woman behind one of the greatest scientific accomplishments of the twentieth century. In 1948, she joined the geophysical laboratory at Columbia University headed by Maurice Ewing and began a life-long project of mapping the ocean floor using echosounder data from around the world. This was at a time when most scientists were male and the few women in science were relegated to low-level positions. The marriage of artistry and science in her highly original work produced the first comprehensive maps of the ocean floor. These maps provided striking detail, especially of the mid-ocean ridges, and laid the groundwork for proving the controversial theory of continental drift. This well researched and written book traces the evolution of her career and her close relationship with her co-worker Bruce Heezen. It also contains a wealth of history on the Lamont Geological Observatory and the development of the understanding of plate tectonics. This book is an absolute must read for all geologists. Like Rosalind Franklin, who played a major role behind the scenes in the discovery of DNA, Marie Tharp was one of the unsung heroines of science. [D.C. Gordon]

Finch, Robert. 2017. The Outer Beach: A Thousand-Mile Walk on Cape Cod's Atlantic Shore. W.W. Norton, New York, NY. 336 pp. Hardcover, \$35.95 (ISBN 978-0393081305).- Here is a summer read perfect for any lover of ocean shorelines, seascapes, and beaches. The subject and joy of this collection of essays by accomplished writer/radio broadcaster Robert Finch, though as vivid and gripping as it is, transcends the topic of the wonders of Cape Cod's beauty and rich history into the realm of the connection between oceans and humankind. The reflections, natural history observations, and pearls of wisdom generated by walks along the shoreline presented by the author are universal in their meaning and understanding of the world environment we live in. Finch's recollections of over forty years of walking along the Cape's outer beach, culminating in over 1,000 miles travelled, comprises endearing prose that teaches, moves the mind, and feeds the soul. Descriptions of his observations and experiences while beach walking abound through the essays – the surf, shifting sands, glacial bluffs, visual excitement, ocean

salt smell, sea surface, winds, wave action and consequences, and other facets of shoreline dynamics – culminating in the overriding conclusion that change is inevitable and natural forces dominate. This collection of incisive essays will delight aficionados of Cape Cod and everyone captivated by ocean beaches and shorelines, but will also stir curiosity about larger issues of life and living. Relax and enjoy this beautiful book, preferably on a favourite beach!

Godfrey-Smith, Peter. 2017. Other Minds: The Octopus and the Evolution of Intelligent Life. HarperCollins, London, UK. 263 pp. Hardcover, \$29.75 (ISBN 978-0008226275).- Here is a book that captivates on multi-fronts, from evolutionary biology and the philosophy of science to the wonders of underwater scuba diving and exploration. Godfrey-Smith is a leader in the philosophy of science and skillfully links science and philosophy with firsthand accounts of his cephalopod encounters. He explains the findings of new research that demonstrates clearly the high degree of intelligence of cephalopods – squid, cuttlefish, octopus – and how they shed light on the origin and nature of consciousness. The descriptions and explanations focus on the remarkable abilities of the octopus with comparisons to the human brain and mind, details that produce a captivating and exciting story. This is a volume for anyone interested in the nature of life, processes of evolution, and the development of the mind, both human and cephalopod. A fascinating book full of new ideas and considerations!

Heinrich, Bernd. 2016. One Wild Bird at a Time: Portraits of Individual Lives. Houghton Mifflin Harcourt, Boston, MA. 210 pp. Hardcover, \$40.00 (ISBN 978-0544387638).- Want to sit back and enjoy the summer, have a read of this book! Here are 17 short stories of individual species found around Bernd Heinrich's cabin retreat in Maine including flickers, crows, starlings, woodpeckers, Barred Owls, hawks, vireos, nut-hatches, Blue Jays, chickadees, Redpolls, Red-winged Blackbirds, Phoebe, Grosbeaks, Woodcock, grouse, Crested Flycatchers, and many others. Most are likely known to the majority of readers, but Heinrich brings them to a startling new presence by prose that captivates the uniqueness and beauty of each species, both in form and behaviour, in a way that only an accomplished animal behavioural ecologist could do. He shows the great value in observing even the most common birds, satisfying one's own curiosity and even the chance to learn new information about them. Written for a general audience, *One Wild Bird at a Time* is the perfect read for anyone, bird lover to naturalist, enthused by the outdoors and

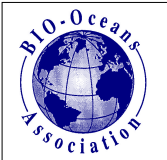
seasonal activities of familiar backyard birds.

Stavridis, James. 2017. Sea Power: The History and Geopolitics of the World's Oceans. Penguin Press, New York, NY. 384 pp. Hardcover, \$37.00 (ISBN 978-0735220591).- Retired US Navy admiral James Stavridis provides a thorough history of the oceans and gives an update of their individual strategic importance. The book is divided into separate chapters on each of the world's major water bodies including: the Atlantic, Pacific, Indian, and Arctic oceans, plus the Mediterranean, the Caribbean, and the South China Sea. Two chapters focus on criminal activity on the seas and the current naval strategy employed by the United States, and one devoted to specific problems: piracy, overfishing, and the overall destruction of the marine environment. In the final chapter, Admiral Stavridis underlines the importance of naval power now and in the near future – based upon firsthand knowledge from his role as Supreme Allied Commander of NATO – and identifies the South China Sea and the Arctic Ocean to be the regions most likely to be involved in confrontations between major powers. Stavridis calls for cooperation and careful planning by global rivals, and is optimistic that these goals can be achieved (a view, however, that may change as the current US presidential administration moves forward). Overall, a most readable and informative examination of the oceans, past and present, and the role that naval power has played in shaping the world we live in today, a force that will continue to do so for decades to come.

White, Jonathan. 2017. Tides: The Science and Spirit of the Ocean. Trinity University Press, San Antonio, TX. 335 pp. Hardcover, \$40.50 (ISBN 978-1595348050).- Marine conservationist and science reporter Jonathan White delivers a unique and engaging introduction to oceanic tides and the extraordinary complex characteristics of the movement of the planet's oceans. In doing so, he successfully merges the science of tides with personal first-hand travel stories from around the world that entertain and teach about the wonders and power of ocean tides. Details and explanations of the physics of tidal dynamics are presented in a clear and easily understood manner with the use of line drawings, graphs, and colour photographs. But it is the intricate balance between the science and the sense of wonder that the storytelling provides that captivates the reader and makes the book special. This is a volume for any lover of the sea and admirer of the power of tides.

Editor's Keyboard: "Kate Jarrett is Brobdingnagian among her peers" is a great line from Kate Moran for Kate's nomination for the Beluga Award. The award presentation was a moving tribute to a worthy recipient and evidence that community at BIO is alive and well. The presence of BIO (only DFO regrettably) at the Maritime Museum of the Atlantic for Oceans Week is more evidence. Open House is upon us, and BIO has always come alive for these popular public events. I will remind you again that volunteers are needed from

the OA membership. Casting more widely, the outcome of the first UN Ocean Conference is encouraging including the statement from the DFO Associate Deputy Minister that "DFO is back". I would encourage you all to read the conference's Call for Action and look for a contribution you can make to answer the call. I spent part of a week in Montreal at the ACCESS conference and was impressed by the quality and commitment of the young people making presentations. I think the future of marine science is in good hands. *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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DIRECTORS AT LARGE:

Claudia Currie 902-435-4297
Andy Sherin 902-466-7965
Borden Chapman 902-865-8155
Mike Murphy 902-826-7210
Pierre Clement
Lori Collins 902-466-3791
Gordon Fader 902-455-6100
Iris Hardy 902-861-4797
Timothy Lambert 902-845-2189
Mike Sinclair 902-835-5823
Tom Sephton 902-832-3955
David McKeown 902-477-5887

claudia.currie@canada.ca
asherin@ncf.ca
cbchapman@bellaliant.net
michaelmurphy@eastlink.ca
pssnhclement@gmail.com
lcollins@accesscable.net
gordon.fader@ns.sympatico.ca
bob.iris@ns.sympatico.ca
tim.lambert@dfo-mpo.gc.ca
sinclairm@mar.dfo-mpo.gc.ca
tom.sephton@dfo-mpo.gc.ca
davidmckeown@hfx.eastlink.ca

COMMUNICATIONS: NEWSLETTER, PR, AND WEB SITE

NEWSLETTER EDITOR
ASSOCIATE EDITORS

Andy Sherin 902-466-7965
David Nettleleship 902-826-2360
Andrea Moore
Jennifer Hackett 902-832-1158
Clive Mason 902-469-2085
Jasmine Hayden 902-221-5613

oanewslettereditor@gmail.com
dnnlundy@navnet.net
andrea.moore@dfo-mpo-gc.ca
bio.oceans@gmail.com
masonc@accesswave.ca
jasmine.hayden@dfo-mpo.gc.ca

PR AND MEMBERSHIP

WEBMASTER

COMMITTEES / WORKING GROUPS: CHAIRS

BELUGA AWARD
EQUIPMENT ARCHIVES

Melanie MacLean 902-440-5727
David McKeown 902-477-5887
Philip Spencer 902-861-3651
Art Cosgrove 902-443-7945
Don Gordon 902-469-2798
Peter Wells 902-237-0600
Charles Schafer 902-861-3145
Keith Manchester 902-861-3509
Mike Hughes 902-860-0784

Melanie.MacLean@dfo-mpo.gc.ca
davidmckeown@hfx.eastlink.ca
psspencer@eastlink.ca
donald.gordon@dfo-mpo.gc.ca
oceans2@ns.sympatico.ca
charlestschaffer@hotmail.com
k.manchester@ns.sympatico.ca
hughes@bellaliant.net

GRAPHIC DESIGN
LIAISON HUNTSMAN
NSIS LIAISON
OUTREACH
SACKVILLE HISTORY LIAISON
EVENT COORDINATOR

PAST PRESIDENTS

Robert Reiniger (1998-2000), Dale Buckley (2000-02), David Nettleleship (2002-04), Donald Peer (2004-06), Betty Sutherland (2006-08 and 2010-11),
Bob O'Boyle (2008-10), Paul Keizer (2011-13), Mike Hughes (2013-15), Michael Murphy (2015-17)

Note: Some contact information on this page has changed from previous issues of the *Voicepipe*

Association Mailing address: Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, NS B2Y 4A2.

VoicePipe mailing address: c/o Andy Sherin, 9 Rose Street, Dartmouth, NS B3A 2T4.

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BIO at Oceans Day at the Maritime Museum of the Atlantic



Once again, Oceans Week was kicked off on 2 June 2017 at the Maritime Museum of the Atlantic on the Halifax Waterfront. The museum was free for that day and for the rest of the week-end for Open Doors Halifax. In the large gallery and outside on the wharf, organizations with an interest in the oceans had set up exhibits. Three exhibits were provided by DFO from BIO. The 'deadfish' display is always popular with back drop displays of The Gully and Musquash Marine Protected Areas. A demonstration of the borrowing prowess of the angel wing mollusc (*Cyrtopleura costata*) was also on display.



Whale sounds filled the gallery from the acoustics display with a representative from the acoustic equipment supplier Jasco Applied Sciences.

Among the costumed exhibitors were the Maritime Aboriginal Aquatic Resources Secretariat in their turtle suits, the World Wildlife Fund's panda, and a Halifax Mermaid, of course dressed as a mermaid. Noticeably absent this year was the DFO lobster.

Other exhibitors included the Northwest Fisheries Organization, Oceana, Friends of McNabs Island Society, the Aquaculture Association of Nova Scotia, Waterfront Development Corporation, the Nova Scotia Surfers Association, and COIN-Atlantic demonstrating a strong community of organizations committed to the ocean.

Photos: Clockwise from top left: from the left, Dereck Fenton, Elsie Will, and Emma Marotte, Oceans and Coastal Management Division, DFO, BIO and the 'dead fish' display; Elais Elhaimer (left) and Sarah Deller, Species at Risk Management Division, DFO, BIO showing the burrows created by the angel wing mollusc (*Cyrtopleura costata*); and Pam Emery, Ocean and Ecosystem Science Division, DFO, BIO (left) and Katie Kowarski, Jasco Applied Sciences exhibiting whale noises.

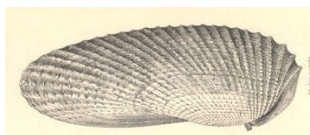


Photo above: angel wing mollusc (*Cyrtopleura costata*)