

VOICEPIPE

Issue 73

May 2017

The Newsletter of the BIO-Oceans Association

Kate Jarrett: 2017 Beluga Award Winner



Kate Jarrett is the Marine Collections Curator for the Geological Survey of Canada, Atlantic (GSCA) at BIO.

Throughout her career with GSCA, Kate has played a key role in the success of marine geoscience programs on

**2017 Beluga Award
Ceremony and BIO
Association AGM
24 May 2017**

Contents

Kate Jarrett: 2017 Beluga Award Winner	1
Previous Beluga Award Winners	2
BIO Expo 2017 Volunteers Needed	2
From the President	3
In Memoriam	3
What value old data? A brief history of marine geological collection management at BIO	4
CSS <i>Acadia</i> in distress	6
Letters to the Editor	6
Noteworthy Reads	8
Editor's Keyboard	11
About the Association	11
Earth Day sees <i>Marches for Science</i> in 610 cities around the world	12



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 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.

Managing the NRCan collections and supervising staff, students, and visitors are normal day-to-day activities for Kate, but what is staggering is how she manages to fit in so many tasks on top of her very demanding job. Kate has been a long-time supporter of the Government of Canada Workplace Charitable Campaign (GCWCC); she has coordinated GSCA employee contributions for many years and has singlehandedly coordinated the BIO GCWCC Book Sale for the last several years. Kate produces the NRCan staff newsletter, *Below the Waterline*, on a quarterly basis which she completes at home on personal time. Kate is presently Laboratory Representative on the GSCA Occupational Health and Safety (OHS) Committee and GSCA observer on the DFO Ellis and Fish Lab OHS Committee. Kate leads OHS inspections for many GSCA labs and offices and also coordinates usage and documentation of thermoluminescent dosimeters for all GSCA staff working with radiation sources. Kate volunteers on the GSCA Outreach Committee and is usually the first to submit an exhibit for NRCan outreach activities.

Kate almost singlehandedly kept the GSC core facility running well during times of restraint. Now she manages a team of people that have transformed this facility into a world class operation. Her efforts in doing this have routinely shown experience, diligence and great planning. Motivation could be her middle name.

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. She is modest, unassuming, hardworking, and cheerful. It is one thing to put out a huge effort in a short time period but Kate Jarrett has been outperforming for more than two decades.

Because of these and many more efforts, we are proud to recognize Kate as this year's recipient of the Beluga Award.

2017 Beluga Award Ceremony

11:00-12:00
24 May 2017

Ford Auditorium, BIO

(10:30 am for coffee and cookies prior to the ceremony)

For more information, please contact Penny Doherty
902-240-6409 pennydoherty@yahoo.com

Previous Beluga Award Winners

2016 Glen Morton
2015 Barry MacDonald
2014 Claudia Currie
2013 Robert Murphy
2012 Don Gordon
2011 Brian Beanlands
2010 Sherry Niven
2009 Bruce Anderson
2008 Borden Chapman
2007 Murray Scotney
2006 Joe Bray
2005 Jacqueline Dale
2004 Dave McKeown
2003 Art Cosgrove
2002 Peter Vass
2001 Roger Belanger

View more information on previous Beluga Award
Winners at

http://www.bedfordbasin.ca/beluga_winners.php

BIO Expo 2017

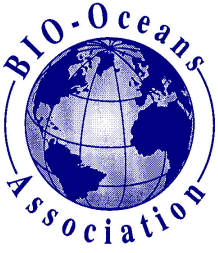
20-24 September 2017

Volunteers Needed

Get your "fancy" tee shirts with a Canada 150 logo on it and the satisfaction of explaining the work of this institution to the general public.

Contact Gabrielle

Gabrielle.Tompkins-MacDonald@dfo-mpo.gc.ca



FROM THE PRESIDENT

First, I want to congratulate Kate Jarrett as this year's recipient of the Beluga Award. Given annually, the Beluga recognizes "exceptional contributions...that exemplify unselfish effort that en-

courages cooperation and fosters the team-work approach of BIO." The winner is selected by a committee of BIO employees, led by Penny Doherty, from nominations put forward by BIO staff. It is a significant award – in my opinion, the most significant of the institute – because it recognizes both the work achievements of the individual and also their extra activities that contribute to the life of BIO. An equally important criterion is the manner in which these things are done – by fostering cooperation and teamwork. As you can see in the article on Kate's achievements, she certainly exemplifies these ideals. I urge everyone to come out on 24 May 2017 to celebrate Kate's award.

In addition to being the date for the Beluga Award ceremony, 24 May is also the date for the annual meeting of the BIO Oceans Association. We start at 9 am in the Ford Auditorium with coffee and snacks followed by the formal business meeting from 9:30 to 10:30 am. We have a break for the social time before the Beluga ceremony with the formal presentation beginning at 11 am, again in the Ford Auditorium. Please make an effort to come out to the annual meeting and vote for your new executive.

Work continues on our exhibit for BIO EXPO 2017 under the direction of Dave McKeown and Charles Schaffer. They are doing the final edits on the posters and getting everything ready for the EXPO in September. We will need people to work at our booth and we will have "cheat sheets" available so our volunteers can clearly explain the exhibits to the visitors. We require a number of volunteers both for our exhibit and other roles at the EXPO given this is a five-day event September 20-24. Volunteers get "fancy" tee shirts with a Canada 150 logo on it and the satisfaction of explaining the work of this institution to the general public. If you are interested or have any questions, contact Gabrielle at Gabrielle.Tompkins-MacDonald@dfo-mpo.gc.ca or any member of the executive.

At our last Executive meeting, Anita Price of the Nova Scotia Museum Association spoke about the deteriorating condition of the CSS *Acadia*. This ship is a National Historic Site but is sorely lacking the necessary repair

and maintenance. After much discussion about roles and possible solutions, the Executive tasked Andy Sherin to set up a working group to determine what part the OA can play in any campaign to save this ship. Many partners will need to be involved for this project to succeed as the ship has been allowed to decline over the last number of years. We are just at the first stages of what will no doubt be a long campaign to revitalize this important piece of our scientific heritage. Andy has already started as you can see by his article in this issue of the *VoicePipe*. I encourage people to reflect on what part they could play in the work that will be needed to bring attention and funds to restore this ship.

With the annual meeting, I come to the end of my two-year term as President of the OA. It has been an honour to serve the OA and a real pleasure to work with the Executive. The discussion at our meetings is always lively, and I am always surprised by the new ideas or ways of tackling a problem that come forward. Over the last two years, we have worked to ensure the continued success and relevance of the OA into the future. There is still much to do in renewing the group, luckily we will have an Executive that is willing to continue this work. This is a great organization with a committed membership that is full of ideas for projects that will grab people's attention – all we need are the members to come forward with their ideas. While I leave as President, I will remain on the Executive as Past-President and hope to maintain an active role in the Oceans Association into the future. Many thanks to all those people who have helped me over the past two years.

Mike Murphy, President

**BIO Oceans Association
Annual General Meeting
0930-1030
24 May 2017
Ford Auditorium, BIO**

In Memoriam

Carol Elizabeth Manchester, died 6 February 2017, Administrative Officer, Atlantic Geoscience Centre.

Thomas Robert Foote, died 4 March 2017, physical oceanographic technologist, BIO

What value old data? A brief history of marine geological collection management at BIO

by Andy Sherin

Upon hearing that Kate Jarrett had been chosen to receive the 2017 Beluga Award, I knew the picture I wanted to appear on the front page of this issue of the *Voicepipe*. I cornered Kate in her office, she was surprised at the committee's selection of her for the Beluga Award. I asked her if I could take some photographs of her in the sample repository for the newsletter. On the third floor of the Murray Building is a large warehouse space that holds marine geological samples that have been collected by the scientists of GSC Atlantic since the opening of BIO. It also has a large refrigerated unit that holds the most recent samples especially piston cores used for research in paleoclimatology, sedimentology, recent (<10,000 years) geological history and other topics explored by scientists at GSC Atlantic. The storage facility also accommodates cruise logbooks and analog and digital geophysical media.

Kate described how recent infrastructure investments had made it possible to return the sample repository to modern standards with new racking and an expanded refrigeration unit.

What Kate supervises today is the end point of a journey in sample curation that started in earnest in 1974 with the hiring of the first collection manager by the Atlantic Geoscience Centre. That first collection manager was your editor. At the time of my hiring there were deep sea piston cores stored on the floor of the utility chases in what is now the Van Steenburg building. The chases are now all gone and replaced with cubicle farms but in 1974 the cores were subject to drying, cross contamination and trampling of the feet of technicians and maintenance staff. The main sample repository was a steel building in the "bone yard" and this continued with very primitive laboratory facilities for splitting and subsampling until the building of the Murray Building. My employer thought it prudent that I should learn how the experts in sample curation did it, so I had the pleasure of visiting three of the best facilities in North America. The Ocean Drilling Program, which was



Kate in the GSC Atlantic Sample Repository's refrigerated unit standing in front of racks of D-tubes containing halves of sediment piston cores.

collecting kilometres of soft sediment in its global drilling program, had two repositories at that time, one on the east coast at Columbia University's Lamont-Doherty Earth Observatory in Palisades, New York and at the Scripps Institution of Oceanography in La Jolla, California. Also at Lamont-Doherty was the collection of deep sea cores collected since 1953 by Lamont's ships *RV Vema* and *RV Conrad* from all over the world. The ships had a protocol to stop twice a day at the same times each day and collect a piston core. This program resulted in an unparalleled global collection of deep sea sediments unrivaled until the launch of the Deep Sea Drill-

ing Project in 1968. I also visited the core storage facility at the Woods Hole Oceanographic Institution. These visits introduced us to the “D” tube which can be seen behind Kate in the racks in the photograph above. These tubes hold a split half of a piston core and maintain the core in a stable and moist state suitable for preservation and facilitating easy subsampling. They have been in use at GSC Atlantic since 1974. This was a departure from the storage protocol for the Lamont deep sea cores which had been stored on open racks in galvanized trays in a desiccated state that often resulted in dried sediment falling from cores in higher racks to cores in lower racks and contaminating the lower cores with microfossils and sediment alien to the depth and location of the lower core.

For all the years as collections manager I had no permanent assistant, so this work was contracted to Steve D’Appolonia, who performed the move from the “bone yard” to the new facility in the Murray Building, and Bill Carter, who selected and prepared the rocks from dredge samples in the collection to create the beautiful floor on the third floor foyer of the Murray Building, a representation of the calcareous microfossil *Elphidium exclavatum* which is an important species in the study of paleoclimates. This lack of technical support to the collections manager is still an issue today as Kate told me during my tour of the storage facility and photo session although the significant capital investment in infrastructure in the repository has made her job easier.

At a point in my career, I was seduced into concentrating on database and computer application development, and geographic information systems and later into research program performance measurement. My role as collections manager was taken over by Iris Hardy. Iris led the development of mobile core processing and storage facilities that could be moved on and off the ship in refrigerated containers delivering the cores to the door of the repository with minimal handling. She also developed links to international networks for collection management. It would be a shameful oversight if I didn’t also recognize Susan Merchant for her work managing the cruise logbooks and analog and digital geophysical records. Both Iris and Susan are now retired and members of the BIO-OA.

So you might ask, why are we keeping all this mud? Iris and I explored this question in two papers “*What Value Old Data?*” and “*What Value Old Data Revisted?*” The first paper presented at the international GeoData conference held in Ottawa and the second at Coastal Zone Canada Conference in 1987. In the paper we pointed out

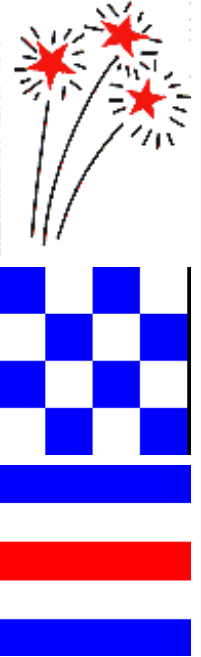


Kate in the GSC Atlantic Geological Sample Repository.

that the value of samples collected many years earlier could increase when samples from a geographic area became a new area of scientific interest. The preservation of archival material from samples allowed for extending the types of analysis conducted on a sample possibly analyses not available at the time of collection and to address a new avenue of scientific research. The maintenance of the samples facilitates the use of the samples by future scientists who are often graduate students without access to ship time to acquire their own samples. Archiving of sample material from remote geographic locations not often visited by research vessels has particularly high value.

It was a joy to tour the repository with Kate and sense her enthusiasm for the renewed facility. Her commitment and passion for her work was evident, a significant factor in why her co-workers nominated her for the Beluga Award.

CSS *Acadia* in distress



The CSS *Acadia* is in urgent need of TLC. Her hull is fouled and her deck planks are leaking water below decks causing a mold problem. For about the last ten years, this National Historic Site has had little or no maintenance. Old hands at BIO will remember her tied up at the BIO jetty as a museum ship. Even older hands may remember her scientific and hydrographic expeditions to the Arctic starting in 1913 and her role during both World Wars. She was an active research vessel until 1969. Her ownership was transferred to the province in 1982. The CSS *Acadia* is now tied up at the wharf by the Maritime Museum of the Atlantic (MMA) on the Halifax waterfront but she is an asset, not an artifact, of the provincial Department of Transportation and Infrastructure Renewal (DTIR). The regular maintenance program established by the MMA and contributed to by

the local marine service industry was interrupted with the transfer of responsibility for the ship to the DTIR about 10 years ago. Tours of below decks have been restricted for some years. Readers may remember the special tour given to BIO-OA members by MMA staff that was reported in *Voicepipe* #61. Public access to the outside decks may be threatened by safety concerns. The BIO-OA has decided to form a working group to increase awareness about the deplorable state of this national marine treasure and to explore options of addressing this situation. We hope to build a network of interested marine and ship-o-philos to advocate for the restoration of the "Grand Old Lady" to her former glory. If you have an interest in helping with this working group, contact Andy Sherin at asherin@ncf.ca or oanewslettereditor@gmail.com or call 902 466 7965.

Letters to the Editor

Letters have been edited for space

17 February 2017

Dear Dr. William Li, President, A.G. Huntsman Foundation and Members of the Oceans Association,

As a member of the BIO Oceans Association I have just received the A. G. Huntsman Award For Excellence In The Marine Sciences' "Call for Nominations" for a 2017 possible award and somewhat idly I looked at the website list of the past 40 recipients found at the URL <http://www.huntsmanaward.org/Laureates.htm>

There are 40 awardees over the 34 years when the

award has been given out (1980-2016 inclusive). Where are the Award's female awardees?

Well there were none for the first 23 years (25 award-ees). The first female awardee came in 2003 (Lynne Talley of the USA) and the second came in 2005 (Sallie (Penny) W. Chisholm of the USA}. Since these two women there have been 12 more men interrupted in 2012 by the award to Katrina J. Edwards again of the USA.

Thus the Huntsman Award has gone to women just three times in the award's 34 award-years — just less than 10%. Is that a fair and likely distribution I asked myself?

One can parse the Award's stats endlessly.... You can make what you want of the anomalies but for me the lack of women awardee' stands out.

Does this mean that there are no women that get nominated that are outstanding possible choices? Or that the Selection Committees are systematically turning down qualified women nominees? Or does it mean that there is a dearth of female nominations? I would like to think that it is the latter? I suspect that we as ocean scientists just have not been doing our job and in particular the previous successful nominees have not been generating good female nominations? If the Selection Committee does not have any females nominated then I would like the Huntsman Award Board to compile and make public the gender analysis, year by year, of the Award's nominees to allow us all to see if we have fallen down in nominating deserving women.

It is well known that if you wish to be successful in a nomination for an Order of Canada get the nomination signed by and supported by an existing member(s) of the Order of Canada. I am not at all sure that the Huntsman Award is so political but it sure would help the apparent gender bias if some of the previous awardees were to assist in nominating deserving female nominees.

Regards

Alan Ruffman, Member, BIO Oceans Association

19 February 2017

Dear Mr. Ruffman:

Thank you for your observations. I am sure that you will not be surprised to know that the matters you bring up have been discussed by the Board of Directors of the Huntsman Foundation at one time or another. To place the situation in context, I have compiled the relevant statistics from what might be considered the peer group of the Huntsman Award. The attached table (not included due to space) shows that the Huntsman Award indeed stands out as an anomaly (3 women out of 40 awardees, only surpassed by the G.E. Hutchison Award), but in the positive direction: that is to say it is above average in this group with respect to female representation.

By copy of this message to the Huntsman Board of Directors and Selection Committee, 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

20 February 2017

Dear Dr Li;

Your medal awards compilation is very interesting and should be widely circulated. It should give none of us any confidence whatsoever that the nine awarding organizations that have been giving out their international awards to prominent scientists in similar, often marine-related, scientific fields, for some 58 to 12 years (since 1959 to 2005) have come anywhere close to recognising the role of women in their fields of marine-related science. The nine awarding societies have given out 342 prestigious medals and have only managed to find 14.5 women awardees vs 327.5 males. The placement of the Huntsman Award on such a list of the eleven medal awards is virtually meaningless. Its like comparing "inadequate", to "unacceptable", to "bad" to "worse". They all surely can, and most certainly should, do a hell-uva lot better.

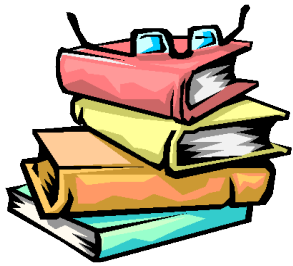
The fact remains that 14.5 women out of 342 awards is but 4.2%. I think that the A. G. Huntsman Foundation must resolve to do better along with the Royal Society of Canada (RSC). And perhaps we along with the RSC can influence the Canadian organizations such as the Royal Canadian Geographical Society, CMOS, and DFO to do better — and just possibly we can lead by example the likes of the Award Committees of the Stommel, Munk, Agassiz, and Sverdrup Medals? Perhaps? Worth trying?

I do think so.

Regards

Alan

[Editor's note: There is additional correspondence between Mr. Ruffman and Dr. Li with Dr. Maryse Lassonde, President of the Royal Society of Canada explaining the role of the RSC in the Huntsman Award. She states in her response to Mr. Ruffman, "Gender parity is an extremely important topic that I try to promote as much as I can." Dr. Li wrote to Dr. Lassonde stating "I would like to assure you that the Foundation supports greater representation of under-represented groups as it pursues the objectives of the (sic) Corporation."]



NOTEWORTHY READS: BOOK REVIEWS IN BRIEF

David N. Nettleship
Book Review Editor

'QUICK READS FOR SPRING/SUMMER BREAK'

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:

WONDERS OF THE WORLD'S OCEANS

Dipper, Frances. 2016. *The Marine World: A Natural History of Ocean Life*. Wild Nature Press, Plymouth, England, UK. 544 pp. Hardcover, \$59.00 (ISBN 978-0957394629).- Here is a marvellous overview of the global ocean and the living organisms that inhabit it, from the miniscule to the immense. Dr. Frances Dipper, accomplished marine biologist and author of many science books including '*Extraordinary Fish*' and '*Guide to the Oceans*', takes a giant step with this volume by synthesizing a vast array of information on the physical and living ocean, and brings it together in a form that is both comprehensive and yet easily accessible to the reader. The first section describes the major physical and chemical properties of the marine environment followed by outlines of principal habitats and ecosystems ranging from open water (pelagic), seabed (benthic), seashore (intertidal) and river estuaries to deep sea, coral reefs and many others. But it is the third section on marine life that encompasses the bulk of the book and vividly displays the amazing wealth and diversity of living things in the oceans of the world. It includes sections on almost all extant ocean groups including bacteria, fungi, protozoa, and plants, as well as all the major families of marine invertebrates and vertebrates including fishes, reptiles, seabirds, and mammals. Information is given on identification, classification, structure, distribution, biology and ecology, conservation and current status of each group. While the clear and well-written text provides the detailed information necessary for an in-depth understanding of each taxa category, the more than 1,500 illustrations and colour photos bring the solid text to life. *The Marine World* gives an insight into the existence and way of life of

almost everything living in the ocean. This is a reference volume that will be of immeasurable value and use by anyone interested in marine life, from the interested bystander and inquisitive amateur naturalist to the professional scientist and educator.

General Reviews

Ackerman, Jennifer. 2016. *The Genius of Birds*. Penguin Press, New York, NY. 340 pp. Hardcover, \$37.00 (ISBN 978-1594205217).- Want spring to arrive and hear favourite bird songs from the tops of nearby shrubs and trees? If you do, this book will provide an insight to your observations that ensures you'll never view a songbird, or any other bird, in quite the same way again! In *The Genius of Birds*, acclaimed science writer and interpreter Ackerman, in captivating prose, travels the world exposing the reader to the incredible variety of species and habitats that exist and the fascinating results that have been produced from recent research on avian behaviour and cognition. Her treatment of the scientific concepts involved unmasks the facts in a clear and accessible way, showing the complexity of the bird world and the remarkable high degree of intelligence they display. This is a delightful and informative read that will entertain and enlighten the reader, a book of knowledge on the feathered geniuses that surround us.

Biello, David. 2016. *The Unnatural World: The Race to Remake Civilization in Earth's Newest Age*. Scribner Publishing, New York, NY. 288 pp. Hardcover, \$35.00 (ISBN 978-1476743905).- This book by *Scientific American* editor David Biello is a significant work that examines the impacts that humankind has had, and continues to have, on the planet, and what can be done to offset these effects with the aim to produce a sustainable place for humanity and other living things. The overriding message is crystal clear: the human population is exerting a global influence on the future welfare of the Earth as we know it without accepting global responsibility for the ensuing changes – a recipe for disaster. In addition to a short ecological history of the past, present, and future, Biello shows what some concerned individuals are doing worldwide and what governments can and must do globally to ensure planetary protection and human survival. An enlightening read and a guide for action.

Fox, Caroline. 2016. *At Sea with the Marine Birds of the Raincoast*. Rocky Mountain Books, Victoria, BC. 272 pp. Softcover, \$24.75 (ISBN 978-1771601620).- Dr. Caroline Fox, research fellow at Dalhousie and Victoria universities, provides an outstanding introduction to the seabirds of the northwest coast of British Columbia and the conservation challenges they currently face. In association with the Raincoast Conservation Foundation, she under-

took a survey of marine birds along the coast including the Great Bear Rainforest and Haida Gwaii (Queen Charlotte Islands archipelago). The splendour of the coastal islands and their rich diversity of breeding seabirds are vividly portrayed in both words and images (drawings and photos), as are the complex inter-relationships between the birds and people. Major conservation problems continue to be the impact of introduced predators (rats and raccoons) at colonies of breeding seabirds and protection from chronic oil pollution of coastal waters. *At Sea with the Marine Birds* goes a long way in helping to identify the beauty and biodiversity of the region along with existing conservation problems and the immediate need for protection of marine birds and their ecosystems.

Hanski, Ilkka A. 2017. Messages from Islands: A Global Biodiversity Tour. University of Chicago Press, Chicago, IL. 253 pp. Softcover, \$44.00 (ISBN 978-0226406442). - In *Messages from Islands* the late Finnish biologist Ilkka Hanski takes us on a tour of six natural, water-bound oceanic island laboratories on which he has performed biodiversity field studies to reveal and learn key principles of population ecology. The islands range from a small one in the Baltic Sea to the large tropical islands of Borneo and Madagascar, and the world's largest Island, Greenland. His objective, as described in the Preface, is to provide an overview of what biodiversity is, how evolution generates biodiversity, and how this biodiversity is maintained over time. Each chapter begins on a different island, identifying its major characteristics and pursuing a variety of ecological questions including its biodiversity, extinction thresholds and extinction debts. The end point of the exercise is to show how we humans, directly and indirectly, help shape biodiversity and why biodiversity is important and must be protected. Find a copy of this engaging book, join Professor Hanski on his travels, and share his insights and wisdom.

Hayward, Peter J. 2016. Shallow Seas. New Naturalist Series Volume 131, HarperCollins, London, England, UK. 416 pp. Hardcover, \$60.50 (ISBN 978-0007307296).- This latest volume in the New Naturalist Series, *Shallow Seas*, shows why such regions are the most biologically rich and productive areas in the global ocean. Although this overview by Peter Hayward focuses on the shallow seas of northwest Europe, this review of the sea floor environment and its benthic fauna and communities along with descriptions of these often complex interacting communities will be of interest to all students of continental margins in the North Atlantic region. In *Shallow Seas*, Hayward addresses many aspects of the natural history of the benthic environment, a natural extension of his previous books on marine biology including the New Naturalist Volume 94 *Seashore* and the *Handbook of the Marine Fauna of North-West Eu-*

rope. Without question, this work is a worthy addition to any reference collection on oceans and seas.

Lloyd, Christopher. 2016. The Story of the World in 100 Species. Bloomsbury Press, New York, NY. 416 pp. Softcover, \$40.00 (ISBN 978-1408876381).- Here is an encyclopedic history of the emergence of life on Earth from the dawn of evolution to the present time as seen through one hundred living things that have changed the world. Lloyd, author of a previous planetary history entitled *What on Earth Happened?* (2009), divides the extraordinary story into two parts: 'before humans', from 4 billion to 12,000 years ago, and 'after humans' spanning the period from 12,000 to the present day. The first reveals the impact of species that evolved in the wild including viruses, algae, trees, insects, fish through to the appearance of *Homo sapiens*, with the second discussing the impact of species that flourished in the presence of modern humankind. Short histories of species or groups are given with enthusiasm and wonder, with special emphasis given to viruses as initiators of mutations that prompted many innovations in a wide variety of species. Predators such as sharks are also highlighted for mastering sexual reproduction some 400 million years ago, and more recently, the significance of the first emergence of modern humans in Africa about 160,000 years ago is highlighted. The ranking of the 'most important' species or groups from the selected 100 species in relation to the planet's history is intriguing. The lowly earthworm receives a top position owing to its crucial role in creating fertile soil, whereas *Homo sapiens* occupies only the sixth position. Overall, a compelling read of a fascinating subject that both entertains and provides considerable insight into the history of our world.

Logan, Peter B. 2016. Audubon: America's Greatest Naturalist and His Voyage of Discovery to Labrador. Ashbryn Press, San Francisco, CA. 732 pp. Hardcover, \$52.00 (ISBN 978-0997228212).- With this outstanding and scholarly work on John James Audubon (1785-1851), Peter Logan has uncovered and filled in a great gap in information concerning the demanding challenges facing Audubon as he attempted to complete his gigantic 12-year project *The Birds of America*. The story has been told in numerous biographies, but details on Audubon's expedition to coastal Labrador in 1833 have always been scarce and incomplete. The present magnificent account, produced after lengthy and demanding research by Logan, reveals Audubon's courage and determination to complete the collection of the crucial Labrador materials necessary to finish his 'Great Work'. Details of the incredible stress Audubon endured through the three-month survey are described, along with the attributes of his character critical to his eventual success. All of this and more is presented together in a most readable manner with over 300 pages of

supporting appendices and notes that will be a treasure trove of information for any Audubon scholar or academic interested in the people and wildlife in remote places in early 19th century northeastern North America. Overall, this book is a masterpiece that adds significant new information to our knowledge of Audubon, the man, the first painter of American birds in their natural attitudes and habitats, and to the study of natural history in America.

Orr, David. 2016. *Dangerous Years: Climate Change, the Long Emergency, and the Way Forward*. Yale University Press, New Haven, CT. 320 pp. Hardcover, \$37.50 (ISBN 978-0300222814).- David Orr identifies and lists the plethora of ills that threaten the world owing to climate destabilization and other impacts from human activities. Attention is given towards the acknowledgement that the Earth is a changed planet with problems related to sustainability that human technology cannot solve. Following examples of recent and ongoing reductions of biodiversity, increases in ocean acidification, hotter and more chaotic weather regimes, Orr offers an approach that can be taken to offset some of the self-induced destruction so far inflicted upon natural systems. Review the priorities presented and assess their usefulness in the attainment of the balance necessary for sustainability. Whatever the conclusion, the process will at least expand the all important discussion on the principles and priorities required to effect the direction of future environmental change.

Pauly, Daniel and Dirk Zeller (eds.). 2016. *Global Atlas of Marine Fisheries: A Critical Appraisal of Catches and Ecosystem Impacts*. Island Press, Washington, DC. 520 pp. Softcover, \$94.00 (ISBN 978-1610917698).- The dire state of the global ocean and marine fisheries worldwide have been known for several decades, perhaps best exemplified in Canadian waters by the collapse of the Northern Cod population in Newfoundland and Labrador and subsequent closure of the fishery in 1992 from which it has not yet recovered. This and other disasters in world fisheries have always been blamed on the absence of solid data on fishery catches. And so, to help alleviate this problem, an intensive long-term study – ‘Global Atlas of Marine Fisheries’ – was initiated and coordinated by scientists at the University of British Columbia, and after 10 years of effort the findings are presented by compilers/editors Pauly and Zeller in this extraordinary comprehensive and important book. The results are divided into two parts, ‘Global Accounts’ comprising 14 topical chapters and ‘Countries and Territories Accounts’, the latter single-page summary reports on 273 nations. Overall, *Global Atlas of Marine Fisheries* confirms the marked declines in catches that have occurred globally since the early 1980s and the alarming status of the world’s fisheries today. The highlight of this report, by the foremost fisheries experts in the world, are the remedial recommendations given to correct

and improve fisheries management worldwide. A timely and indispensable resource of accurate facts and approaches that should be read and studied by everyone concerned with the status of global, national, and/or regional fisheries, particularly fishery managers and researchers.

Streever, Bill. 2016. *And Soon I Heard A Roaring Wind: A Natural History of Moving Air*. Little Brown, Boston, MA. 320 pp. Hardcover, \$31.50 (ISBN 978-0316410601).- Love to hear wind in the sails of sailboats or flapping flags? Well, Bill Streever’s book *Roaring Wind* will delight by taking the reader through an enjoyable and witty exploration of wind. As a biologist and avid sailor and surfer, Streever interweaves science, history, and personal adventure into a special learning experience. Interspaced in the story of sailing an old cruising sailboat from Texas to Guatemala, are information-packed ‘tutorials’ on a vast range of wind-related topics including the history of weather forecasting, profiles of accomplished meteorologists, old and modern meteorological instruments (from barometer to weather balloons to satellites), history of harnessing wind as an energy source, and numerous accounts of the impact of moving air. All of this and more comes in an easy-to-read form that both entertains and informs, a combination that makes it a book extremely difficult to put down. A splendid introduction to one important part of the natural world.

Wilson, Edward O. 2016. *Half-Earth: Our Planet’s Fight for Life*. Liveright, W.W. Norton, New York, NY. 259 pp. Hardcover, \$33.95 (ISBN 978-1631490828).- When one of the world’s preeminent evolutionary biologists and naturalists speaks, it is time for everyone to take note, listen, consider and react to the message delivered. In this his latest book, Professor Wilson combines his immense scientific knowledge and deep human intelligence to tell us once again about the massive damage we have inflicted upon living species and ecosystems within the planet’s natural world. While his disappointment, anger and despair leap off the pages, all justified by the gravity of the environmental problem and the non-response by politicians and decision-makers worldwide, he revisits the concept of biodiversity and its importance to the future welfare of the planet and ends by offering a strategy of what is needed to save the natural world. Read, learn and think about the disaster to global life that is underway and what we can do to preserve what is left.



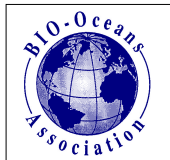
Editor's Keyboard: The Beluga Award winner is at the top of my list, not only is Kate a very worthy recipient, it is gratifying to me that the role of collection management in support of research at BIO is recognized through her dedication.

In the light of the *Marches for Science* on Earth Day, it is fortunate that we in Canada now have a government willing to invest in evidence. I have a personal interest in the situation south of the border where my daughter works in a field directly related to evidence based deci-

sion-making.

Those who have a passion for marine science history in Canada can only be deeply saddened at how the state of CSS *Acadia* has been allowed to deteriorate to such a low. Join me in the BIO-OA working group to help save the "Grand Old Lady."

Finally, a big thank you to Mike and Jean at UPS Store 184, who are retiring, for the great service they have given the OA printing the *Voicepipe*. 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.

OFFICERS AND DIRECTORS

PRESIDENT
VICE-PRESIDENT / PRESIDENT-ELECT
VICE-PRESIDENT
PAST PRESIDENT
SECRETARY
TREASURER
DIRECTORS AT LARGE:

Mike Murphy	902-826-7210	michaelmurphy@eastlink.ca
Vacant		
Vacant		
Mike Hughes	902-860-0784	hughes@accesswave.ca
Betty Sutherland	902-454-6557	jesuther@dal.ca
Lori Collins	902-466-3791	lcollins@accesscable.net
Pierre Clement		
Gordon Fader	902-455-6100	gordon.fader@ns.sympatico.ca
Iris Hardy	902-861-4797	bob.iris@ns.sympatico.ca
Nelly Koziel	902-435-0890	nkoziel@nrcan.gc.ca
Timothy Lambert	902-845-2189	tim.lambert@dfo-mpo.gc.ca
Richard MacDougall	902-832-3624	jrmacdogall@hotmail.com
Susan Merchant	902-405-2917	susanmerchant@eastlink.ca
David Nettleship	902-826-2360	dnnlundy@navnet.net

NEWSLETTER EDITOR
ASSOCIATE EDITORS
PR AND MEMBERSHIP
WEBMASTER

COMMUNICATIONS: NEWSLETTER, PR, AND WEB SITE

Andy Sherin	902-466-7965	oanewslettereditor@gmail.com
David Nettleship	see above	see above
Clive Mason	902-469-2085	masonc@accesswave.ca
Philip Spencer	902-861-3651	pspencer@eastlink.ca

COMMITTEES / WORKING GROUPS: CHAIRS

BELUGA AWARD	Penny Doherty	902-240-6409	pennydoherty@yahoo.com
EQUIPMENT ARCHIVES	David McKeown	902-477-5887	davidmckeown@hfx.eastlink.ca
GRAPHIC DESIGN	Art Cosgrove	902-443-7945	
LIAISON HUNTSMAN	Don Gordon	902-469-2798	donald.gordon@dfo-mpo.gc.ca
NSIS LIAISON	Peter Wells	902-237-0600	oceans2@ns.sympatico.ca
OUTREACH	Charles Schafer	902-861-3145	charlestschaffer@hotmail.com
SACKVILLE HISTORY LIAISON	Keith Manchester	902-861-3509	k.manchester@ns.sympatico.ca
EVENT COORDINATOR	Mike Hughes	902-860-0784	hughes@bellaliant.net

PAST PRESIDENTS

Robert Reiniger (1998-2000), Dale Buckley (2000-02), David Nettleship (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)

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.

Unless otherwise credited all photographs were taken by Andy Sherin

22 April 2017, Earth Day sees *Marches for Science* in 610 cities around the world



Photograph sent to the *Voicepipe* from the *March for Science* held on Earth Day 22 April 2017 in Seattle Washington, USA. Your editor's youngest daughter, April Clyburne-Sherin, MSc., is shown in the red coat in the photograph holding the sign with the Carl Sagan quote. Photo credit: Jacob Moeller, your editor's son-in-law. Top left: An "elemental" slogan at a *March for Science*.

The *March for Science* mission states: "The *March for Science* champions robustly funded and publicly communicated science as a pillar of human freedom and prosperity. We unite as a diverse, nonpartisan group to call for science that upholds the common good and for political leaders and policy makers to enact evidence based policies in the public interest."

The March for Science has called for a week of action following the march with different themes for each day. The theme for Sunday 22 April was Science Engages, then Monday through Saturday, the themes are Science Discovers, Empowers, Creates, Communicates, Ad-



Cities holding a *March for Science*

vocates, and Connects. Have a look at the S.T.E.A.M. rap videos by youth on science themes at <https://www.steam16.com/>. A sample of "official" posters for the March of Science can be found at <https://www.marchforscience.com/posters/>.

In Halifax, the *March for Science* gathered at the Grand Parade. Speakers at the rally included Richard Zurawski, former meteorologist and now a city councillor, Chief Paul Prosper, Assembly of Nova Scotia Mi'kmaq Chiefs, Karen Beazley, Professor, Dalhousie University, Rob Thacker, and Linda Campbell, Professors, Saint Mary's University, and Thomas Trappenburg, Professor, Dalhousie University and leader of the Nova Scotia Green Party, Shawn Cleary, Professor, Mount Saint Vincent University and city councillor, Gary Burill, Leader of the Nova Scotia NDP, Mark Butler, Ecology Action Centre, and BIO's own Nancy Shackell.

Some slogans on *March for Science* Signs from several marches.

Vote for evidence based public policy
Science is helping me walk again.
Make America Think Again
(Poster on a dog) Grrr to alternative facts.
FACTivist (in the hand's of a young boy)

I'm not a **mad** scientist, I am absolutely **furious**.
There is no Planet B.

Science makes America great.

"We live in a society exquisitely dependent on science in which hardly anyone knows anything about science and technology." Carl Sagan