

BIO-OCEANS ASSOCIATION NEWSLETTER

Issue 47

July 2010

Sherry Niven: 2010 Beluga Award Recipient



Sherry Niven received the 2010 Beluga Award at a ceremony as part of the BIO-OA Annual General Meeting on 20 May 2010. Patrick Potter, Chairman of the Beluga Award Committee, presented the award in the form of a beluga whale cast in pewter and mounted on a black granite base both crafted by local artisans. The award was first presented to Roger Belanger in 2001 through the initiative of Dale Buckley, OA's 2nd president. It is fitting this year that the 10th recipient started her career and fell in love with oceanography as a student of Dale's working in the Nares Abyssal Plain.

Sherry's citation was delivered by Bettyann Power, the nominator and one of Sherry's co-workers in the Regional Director of Science Office. Sherry, after spending ten years as a research scientist, took a turn in her career path towards management and administration.

Of this change, Bettyann remarked in her citation address: "From the get-go, I was impressed with her professionalism, sensitivity, and warmth." She went on to say that she took issue with the description of Sherry in the Award Ceremony program as working quietly. Sherry, Bettyann stated emphatically, is "fervent in her views and her sense of

**BIO-OA
Annual Barbecue
Thursday, 26 August 2010
2 to 6 pm
Fairbanks Centre
54 Locks Road
Dartmouth
Potluck and BYOB**

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Photo Credit: BIO

Bettyann Power delivers Sherry's citation at the Beluga Award Ceremony.

justice, and when she needs to, she doesn't hesitate to say, 'That's not good enough!' Then she succinctly describes why it's not good enough, and more importantly, rolls up her sleeves to collaboratively work to make things better."

Bettyann went on to quote from several messages she received after nominating Sherry for the award:

"Since the Beluga Award is a means of recognition for persons fiercely loyal to BIO and its staff, I cannot think of a more deserving person. Her tenacity in pursuing issues is an indicator of her commitment to the community at BIO."

"Sherry's commitment ensures that BIO is a workplace that puts a high priority on people."

"She always gives unselfishly of her time and energy. The time and effort is above and beyond what is expected. She is a major reason why BIO is such a good place to work, and why people want to work here."

One person described Sherry as: grounded, respectful, people oriented, caring, cheerful, personable, ultimate task-master; oops, that should be multi-tasker, focused, responds to all projects and resourceful.

OTHER NEWS



Left to right: Mike Eaton, Steve Grant, Nick Stuijbergen, and Dr. Dave Wells.

BIO Navigation Group

Members held a brief get-together on the 19 May 2010 to celebrate the 40th anniversary of the establishment of the group. Mike Eaton received the Order of Canada in 2004 for his contributions to the fields of hydrography, marine cartography, and navigation during his long career at BIO. Dave, Nick and Steve, although 'officially' retired, continue to work part time in these fields.



Brian Petrie receives the medal from Dr. Savi Narayanan, Director General Ocean Climate and CHS, DFO

2010 Timothy R. Parsons Medal

Brian Petrie received the 2010 Timothy R. Parsons Medal on 2 June 2010.

This award for Excellence in Ocean Sciences is awarded annually by DFO to recognize a Canadian scientist for outstanding lifetime contributions to multi-disciplinary facets of ocean sciences or for a recent exceptional achievement, while working within a Canadian institution.

New Coast Guard Building

The proposed new Canadian Coast Guard (CCG) Office Building will create accommodation for the relocation of CCG staff. The site for the new building is at the north end of the BIO campus, overlooking the Bedford Basin. This facility will be the Maritime Headquarters for the Canadian Coast Guard and form an impressive building.

The CCG facility will comprise two levels: a lower level in close proximity to the Bedford Basin with access to water that will house the Emergency and Environmental Response Units, and a ground level with the main entry at the termination of Discovery Drive. Besides a large multi-purpose lobby space, the ground level will house shared staff amenities with access to an exterior green space. Four floors above ground will house Canadian Coast Guard staff.

Letters to the Editor

The Editorial Team encourages communication between OA members on issues relevant to the Association through the 'Letters to the Editor' column. Views expressed are those of the authors alone. To submit a letter to the editor, send an e-mail to OANewslettereditor@gmail.com or hardcopy to Andy Sherin, 9 Rose St., Dartmouth, NS B3A 2T4.

About the destruction of knowledge

When I read the letters of Alan Longhurst and Bob O'Boyle in the April 2010 Newsletter I was struck by how much could have been said if there only much more space and time. There was no mention of one of the worst stages in the dismantling of science, namely the dissolution of the Marine Ecology Laboratory in 1986, or the gradual conversion of one of the world's leading oceanographic journals, the Journal of the Fisheries Research Board of Canada, into a house organ. This downgrading of science seems to be happening everywhere (Alan mentions France), but that is no reason for Canada to follow the herd. When I visit BIO now it is like going to a hospital, with a shining new building and the stench of decay.

I was reminded of the past greatness of Canada when I had the wonderful opportunity to celebrate Hudson '70 in January, not with my former colleagues but in Chile, where I gave talks about the expedition both in Concepción and in Puerto Montt. Although I only met one of the actual Chilean cruise participants, Ramón Ahumada, I met many scientists who spoke in glowing terms of how important the Hudson visit and its survey of the Chilean fjord system had been for their work. Several of them had based their PhD theses on the Hudson data. Can you imagine that today?

Ironically I opened the mail containing the Newsletter while watching the classic film Fahrenheit 451 about the destruction of knowledge. The film was made in 1966, about the time that BIO opened. It is a pity that DFO has chosen to emulate the story rather

than learn from it.

William Silvert
O Baile do Peral, C.P. 802-A Peral
8150-052 S. Brás de Alportel, Portugal

Let's get back to basics and get some real science done

Dear Sir, I was fascinated to read the exchange between Alan Longhurst and Robert O'Boyle regarding the dearth of fundamental oceanographic research being undertaken by BIO. As a newly migrated resident of Nova Scotia, I made my way to BIO so as to discover what wonderful things BIO was doing in the Maritimes and to find out where the basic oceanographic tools were being deployed. I was amazed to find how few recording tide gauges were deployed around the Maritimes, or how little basic oceanography seemed to be going on. In the face of pressures imposed by sea level rise, extreme weather events and climate change, and by the powerful and sometimes ill-informed lobbying groups who tend to capture the media attention, surely it behooves the pre-eminent oceanographic institution in the Maritimes to be the source of the most fundamental information.

So, come on BIO, how about installing a network of long term recording tide gauges both on and offshore, and some current meter stations in critical locations? Let's get back to basics and get some real science done and some data records for long term trends that can be used as evidence of the changes taking place around the coast.

I appreciate that Canada in general and the Maritimes in particular have not experienced the sorts of economic and climatic crises that caused UK and European oceanography and tidal predictions to get their act sorted out way back when, but that should not stop the work of data collection here. Numerical models are [sometimes] wonderful but they need to be validated and they need good data input. Remember 'garbage in - garbage out?'

Chris Walker
550 East Berlin Rd, East Berlin, Queens County, NS

International Oceans Day on the Waterfront in Halifax



From the left: (from the left) young visitor, Patrick Potter and Claudia Currie; anonymous sea life; Paul Macnab, Hilary Moors, Shawn Roach and Trevor Kenchington.



Photo Credit: National Geographic

Blue Fin Tuna

“Fish are food, not species”

by Andy Sherin

On 8 June 2010, International Oceans Day, Dr. Susan Lieberman, Director, International Policy at the Pew Environment Group delivered the “6th Annual Elisabeth Mann Borgese Ocean Lecture” at Dalhousie University, Halifax, NS. Dr. Mann Borgese considered the world’s oceans as a “common heritage of humanity”, and Dr. Lieberman’s lecture was true to this view as she shared her experiences at the Doha Conference for the Convention on the International Trade in Endangered Species (CITES) held in Qatar in March of this year. CITES is one of the United Nations Conventions to protect this heritage, although as Dr. Lieberman demonstrated, protecting marine species using CITES is not easy. She explained this in part by the attitude of some nations that “fish are food, not species”.

The lecture examined how issues related to Blue Fin Tuna and sharks were influenced by politics at the conference. Despite good

science data demonstrating that the species were threatened, the majority of nations voted not to place these species on the lists of species protected by CITES.

The CITES has been ratified by 175 countries including Canada and the USA. Appendix I of the CITES prohibits the international trade in 900 species. Appendix II regulates international trade in

33,000 species including many species of orchids and cacti. The proposals before the convention were to place Blue Fin Tuna under Appendix I and place several shark species including the Porbeagle Shark under Appendix II. The Blue Fin Tuna designation would have seriously impacted the lucrative tuna fish industry in the eastern Atlantic and Mediterranean. This trade ships almost all of its catch to Japan for sushi. The shark designation would have required the regulation of the international trade in shark fins, the main ingredient in shark fin soup, a delicacy in China. Seventy-three million sharks are killed annually for their fins and are biologically vulnerable due to low reproductive rates. One of the sponsors of the shark proposal was the small Pacific Ocean island nation of Palau whose tourist economy is based in part on diving to observe sharks.

Dr. Lieberman described the maneuvering of several nations to ensure the defeat of these proposals. According to Dr. Lieberman, it was the first time that a proposal with scientific rigor had been rejected and the first time Canada had voted against a listing with strong scientific information (the Blue Fin Tuna proposal). The principal opponents to the proposals suggested that Regional Fisheries Management Or-

ganizations (RFMO) should be addressing the decrease in species numbers, not the CITES convention. Dr. Lieberman said that this position overlooked the fact that the International Commission for the Conservation of Atlantic Tunas had failed to deal with the precipitous decline in Blue Fin Tuna. ICCAT had raised the quota to 13,000 metric tons despite scientific recommendations that the quota should be set at 8,500 metric tons. No RFMO regulates shark fishing. The advantage of listing sharks in Appendix II is that species specific data collection is mandated and countries must certify that the trade in shark is sustainable and legal.

Dr. Lieberman stated her experience in Doha indicated that the old paradigm that decisions on the listing of species, marine species at least, are based upon science is no longer true. Dr. Lieberman suggested learning from the successes for terrestrial species by putting sharks on the level of elephants and tigers. There is also a need to build capacity in smaller countries so there is less chance of their being manipulated by larger nations. The gathering and disseminating of economic data on the non-food value of sharks would also help influence decisions. Consumers also need to know what species they are buying and eating, and where they come from.

If good science alone is no longer sufficient for the conservation of marine species, who should put together the additional information: e.g., the non-food economic value of sharks, build the capacity and educate the consumer so that decisions are made that support the conservation of threatened and endangered species?

More International Oceans Day on the Waterfront in Halifax The Mysteries of the Gully Marine Protected Area



From the President



The gavel is passed from Bob O'Boyle to Betty Sutherland at the 2010 AGM. Photo courtesy of Ted Phillips.

It doesn't seem like two years since I last wrote a "From the President" column. But it is. Have the rest of you retirees also noticed that time seems to go faster than it did when we were actually working?

So why am I president again when you thought you were rid of me? Don Gordon, who was scheduled to take over as president this year, suffered a terrible personal loss in the tragic death of his daughter Sarah early this year. As a result, he felt that he could not take on the presidency at this time, but instead agreed to become our 2nd vice-president, replacing Charles Schafer. Charles earlier indicated that he wished to step down from this position. Don will also continue to be our liaison with the BIO 50th anniversary committee. The executive agreed that it would be unfair for anyone to become president without having served at least one year on the executive and so, I agreed to take on the presidency again – I knew the ropes, so to speak – for a one-year period.

My first task is a pleasant one, to thank Bob O'Boyle for all his work and contributions during his two years as president. Among these is a closer, albeit not subservient, relationship with BIO management, as you will see below. I also want to thank Charles Schafer, for all his work over the years, first with the equipment

archives and then with outreach programs. He will continue on the executive as our outreach liaison with BIO.

As of our AGM, we have two new members of the executive: Paul Keizer and Tom Shepton. Paul, recently retired from DFO, is our new 1st vice-president. He will become president at the end of my one-year term. Tom, who still occupies a senior administrative position with DFO, agreed to become a Director at Large. His first act was to find us some long-sought-after storage space for the Association's files and social event supplies – one of the lockable "balconies" in the Auditorium. Thanks, Tom.

This brings me to several more 'thank you' pronouncements. First, a big thank you to the anonymous donor of our Beluga Award (pewter sculpture and stand) since its inception in 2001. What a generous contribution this has been! But all good things must come to an end, and our donor let the executive know that when the current stock of sculptures ran out, that would be the end of this contribution.

This announcement led to much discussion as to how to fund the award in the future. Bob O'Boyle mentioned this concern in his report on BIO-OA activities at a Director's 'Tuesday Club' meeting. The result: the very generous purchase of four additional Beluga Award sculptures and stands by the Geological Survey of Canada Atlantic (formerly AGC). Our grateful thanks to its new Director, Steve Locke.

As you know, Charles Schafer and David McKeown have successfully collected many pieces of oceanographic equipment that had been developed and/or used at BIO since 1962. The Association wants to display items in this collection as part of its outreach program. Again, the question of how to find funds for the display cases arose. To the rescue came Mike Sinclair, who agreed to have BIO provide the funds. The first displays are scheduled for this fall. Again, a big thank

you to Mike.

The lead article in this issue tells you about the 2010 Beluga Award ceremony on 20 May at which we honoured a richly deserving Sherry Niven.

Our other recent social event saw 32 members and friends gather at Joggins on 10 June for a fascinating guided tour of the fossil cliffs and the new and most impressive interpretive centre at this UNESCO World Heritage Site. If you haven't been there yet, do make an effort to go soon. It is well worth the visit.

The date for this year's summer barbecue has been set for Thursday, 26 August, at the Fairbanks Centre in Dartmouth (for details, see page 1 and watch for e-mail messages).

The transformation of the Association's website is underway, including a change in domain name which will become: "www.bio-oa.ca". Watch for this and many other changes coming this fall.

Finally, we have received 70 completed surveys to date (enclosed with Issue 46 of the newsletter). We're delighted with this response, but would still like to receive more. If you haven't already done so, please fill it in and return it to us. Many thanks.

What about the coming year? As always, we will offer a number of social events for members and their guests. The Association will also continue to be involved with the preparations for BIO's 50th anniversary celebrations in 2012, including the planning of one or more colloquia on the history (and future) of marine science research and developments at BIO and elsewhere. We will also be cooperating with the Nova Scotian Institute of Science as they prepare to celebrate their 150th anniversary. Watch for more information in future issues of the Newsletter. And don't be surprised if we get in touch with you to become directly involved in these events.

Betty Sutherland



OA group on the beach at Joggins.

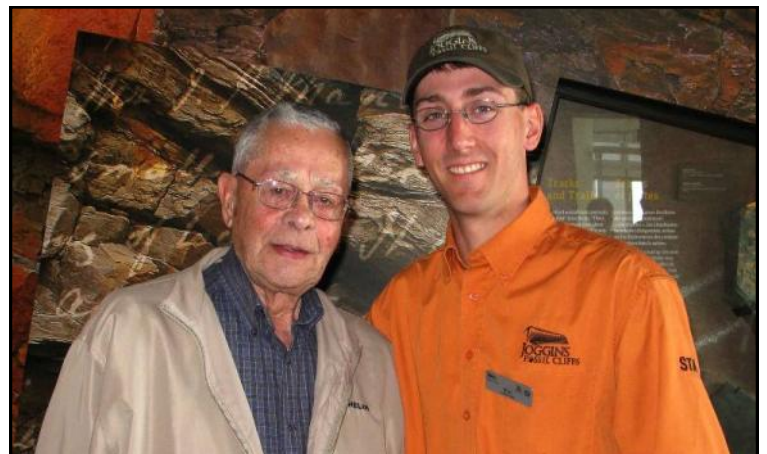
32 BIO-OA members and friends spent Thursday 10 June 2010 experiencing the **Joggins Fossil Cliffs**. The UNESCO description of the World Heritage Site: “The rocks of this site are considered to be iconic for this period of the history of Earth and are the world’s thickest and most comprehensive record of the Pennsylvanian strata (dating back 318 to 303 million years) with the most complete known fossil record of terrestrial life from that time.” The site lived up to its billing by The Globe and Mail as “one of

Canada’s great destinations”. Add good weather, a delicious home-made lunch in a clean and spacious setting, and excellent work by our tour guide, Matt Stimson, and we all went away happy and satisfied.

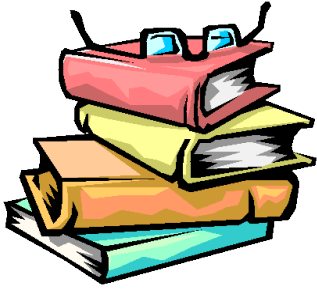
For those who want to learn more about Canada’s 15th World Heritage Site and why this record of life in the “Coal Age” of 300 million years ago is so significant, a good place to start is www.jogginsfossilcliffs.net.



Tour guide Matt Stimson points out some of the many fossils found in the rocks all around the beach and cliffs



Matt Stimson with Don Reid, a lifelong resident and collector of fossils at the Joggins site. Mr. Reid has donated his extensive fossil collection to the Joggins Fossil Centre.



NOTEWORTHY READS: BOOK REVIEWS IN BRIEF

David N. Nettleship
Book Review Editor

SPECIAL PUBLICATION:

THE BLUE PLANET AND OCEANOGRAPHY

Mills, Eric L. 2009. *The Fluid Envelope of our Planet: How the Study of Ocean Currents Became a Science*. University of Toronto Press, Toronto, ON. 434 pp. Hardcover, \$75.00 (ISBN 978-0802096975). – The oceans of the world have fascinated mankind since the emergence of *Homo sapiens* both as an alien environment to be feared and as a challenge and adventure into the unknown. In this illuminating history of the development of oceanography from its roots in basic marine geography focused on coastlines and surface currents to an exacting multi-disciplinary science, Eric Mills, professor emeritus and science historian in the Department of Oceanography, Dalhousie University, provides a comprehensive and much-needed review of this complex and exciting transition. The book, to use the author's words, "is about plain truth – the plain scientific truths about the oceans constructed by those who changed the ocean sciences from matters of observation and common-sense report to a branch of mathematical geophysics." It provides a short, but thorough, overview of knowledge of the sea and ocean circulation prior to the 19th century, and then concentrates on the developments that took place in the study of ocean circulation through the 1800s with particular emphasis given to the period between the 1890s and the middle of the 20th century, a relatively short time frame, but one that includes the dramatic changes in approach taken to study the oceans and transform ocean science. The review also reveals the early birth of the concept of continuity in ocean circulation – the existence of a continuous system of circulation worldwide -- an idea germinated in the late 1600s that grew and evolved into the branch of the ocean sciences we now call 'physical

oceanography', a truly integrated scientific discipline involving all physical scientists of the oceans. Eric Mills, through careful research and skilled writing, has produced not only an outstanding history of the development of physical oceanography as a science, but a work that will guide oceanographers into the future. *The Fluid Envelope of Our Planet* is an essential sourcebook for all marine scientists and anyone interested in the unlimited science of the sea!

GENERAL REVIEWS

Broecker, Wally. 2010. *The Great Ocean Conveyor: Discovering the Trigger for Abrupt Climate Change*. Princeton University Press, Princeton, NJ. 172 pp. Hardcover, \$29.19 (ISBN 978-0691143545). – Wally Broecker, a leading authority on abrupt climate change and Newberry Professor of Earth and Environmental Sciences at Columbia University, takes us on an educational-history trip of how the link between ocean circulation and climate changes was made and what it means today in allowing us to better understand the world's past, present, and future climate change events. From his introduction of the term 'global warming' and proposed global ocean-circulating system – termed the 'Great Ocean Conveyor' – in the 1980s, he reveals the long science struggle that ensued to show how abrupt changes or 'shutdowns' in ocean currents that circulate water, heat, and nutrients around the globe may be responsible for past ice ages. Although the story remains incomplete, Broecker introduces us to the latest technological advances that will allow predictions of the future to be made and the earth scientists behind the research. An exciting firsthand account of the science employed to permit a better understanding of how global climate and the world actually work.

Burrows, Roger. 2010. *Birding in New Brunswick*. Goose Lane Editions, Fredericton, N.B. 370 pp. Softcover, \$27.95 (ISBN 978-0864926180). – Here is a timely and well-illustrated field guide to the birds of New Brunswick, a work by Roger Burrows that complements his previous three-volume "*Birding in Atlantic Canada*" (1988-1992) and "*Birds of Atlantic Canada*" (2002). This guide meets its primary objective with ease and will be a boon to every birder interested in the avifauna of New Brunswick. It is

divided into 17 geographic regions with maps, and focuses on the major birding hotspots of each giving details of where to go, how to get there, and what species will likely be seen according to habitat and season of the year. Information such as this is indispensable to the amateur and serious birder alike, and makes this guide unique among those available for the province. It is also a useful companion to both W.A. Squires' classic "*The Birds of New Brunswick*" (1952, 1976) and A.J. Erkin's "*Atlas of Breeding Birds of the Maritime Provinces*" (1992). The wealth of new information given by Burrows, combined with the many beautiful colour and black-and-white photographs by M.J. Cormier, makes this book invaluable for birders and anyone interested in New Brunswick's rich avifauna and its varied habitats.

Cochkanoff, Greg and Bob Chaulk. 2009. *SS Atlantic: the White Star Line's first disaster at sea*. Goose Lane Editions, Fredericton, NB. 174 pp. Softcover, \$24.95 (ISBN 978-0864925282). – This comprehensive account of the deadliest shipwreck of the 19th century by the late Greg Cochkanoff and Bob Chaulk was a double winner at the 2010 Atlantic Book Awards, picking up the Democracy 250 Atlantic Book Award for Historical Writing and the Dartmouth Book Award for Non-fiction. It is the result of more than 25 years of meticulous research by Cochkanoff to produce the definitive account of the history of the *SS Atlantic*, from the shipyards in England where it was designed and built for White Star Line to its tragic ending when it ran aground in Lower Prospect, Nova Scotia, on 1 April 1873, with the loss of 562 of the 952 people onboard. Hundreds of dives were made over the years by Cochkanoff to examine the wreck, some with his scuba diving partner and friend Bob Chaulk, also a marine historian and writer, who completed the book following Greg Cochkanoff's unexpected death in 2008. Detailed descriptions are given of the steamship and its previous 18 successful Atlantic crossings, along with a full account of the crew and passengers on the final voyage. A wealth of information is presented including archival pictures, maps, engravings, and photographs, with appendices giving the results of the Halifax inquiry into the cause of the tragedy and a complete list of the passengers and crew. Altogether, this volume stands as a stunning historical record of the

SS Atlantic and as a monument to the amazing skills of its principal author and researcher, Greg Cochkanoff. It is a "must-have" for anyone interested in maritime history and sea travel.

Coleman, David C. 2010. *Big Ecology: The Emergence of Ecosystem Science*. University of California Press, Berkeley, CA. 248 pp. Hardcover, \$41.70 (ISBN 978-0520264755). – This is a book that everyone interested in long-term and collaborative interdisciplinary ecological research should read. David Coleman, distinguished research professor at the Odum School of Ecology, University of Georgia, presents a stimulating history of the development of large ecosystem research programs since the late 1950s to the present time. The narrative begins with the International Geophysical Year (IGY) of 1957, through the International Biological Program (IBP) of the late 1960s and early 1970s, on to the Long-Term Ecological Research (LTER) programs of the 1980s. In doing so, Coleman reveals the benefits of the 'big ecology' approach to ecosystem science and a better understanding and evaluation of complex biological communities and their environments. Overall, this book is a reminder of the approach that needs to be adopted in the study of Canadian ocean waters if answers to important questions of changing climates and sea levels, human impacts, and other topics are to be determined.

Grant, K. Thalia and Gregory B. Estes. 2009. *Darwin in Galápagos: Footsteps to a New World*. Princeton University Press, Princeton, NJ. 362 pp. Hardcover, \$34.50 (ISBN 978-0691142104). – This book is a must for students of Charles Darwin and the significance of his five-week visit to the Galápagos Islands during the round-the-world voyage on HMS Beagle, 1831-1836. Grant and Estes, longtime researchers and residents of the Galápagos, identify and trace the sites visited by Darwin in 1835, in a step-by-step manner never before accomplished owing to their intimate knowledge of the islands. By doing so, they bring those early explorations to life and show how they influenced Darwin's thinking at the time and the subsequent development of his theory of evolution. Through meticulous examination of Darwin's original notebooks and logs from the Beagle expedition, the

authors also give the reader a rare insight into a pivotal moment in the study of biology and natural history. In addition, this reconstruction of Darwin's exploration of the islands provides an outstanding tour of the archipelago and its unique assemblage of plants and animals, highlighted by 126 colour and 74 black-and-white illustrations. Overall, this volume is both a fitting and important contribution to the 2009 Darwin bicentenary celebration, and a valuable sourcebook of information for the Darwin scholar and any visitor to the Galápagos Islands.

Guitard, Nicholas. 2010. Waterfalls of New Brunswick: A Guide. Goose Lane Editions, Fredericton, NB. 291 pp. Softcover, \$19.95 (ISBN 978-0864926159). – Perfect timing for the appearance of this attractive and informative guide on the waterfalls of New Brunswick! With summer upon us, Nicholas Guitard, longtime outdoor enthusiast and photographer, gives us the information necessary to 'hit the trail' and see some of nature's wonders. Following more than two years of research and exploration, this guide highlights 100 waterfalls of those examined giving precise details of site description, location (including GPS coordinates and driving instructions), accessibility, routes to follow with hiking time and trail difficulty rating, and property ownership. The guide is structured by five geographic regions following the scenic routes identified by the New Brunswick Department of Tourism and Parks. It begins with an informative chapter on the wonders of the province's waterfalls, their geology, and provides tips on when to visit, what to bring, hiking, photography and safety. Visual highlights of each waterfall site are given in a black-and-white photo, with a selection of 48 of the most spectacular sites also shown in stunning colour. Whatever the desire – from a relaxing roadside view of a beautiful waterfall to a challenging outdoors hike – this wonderful guide will take you there!

Pepperell, Julian. 2010. Fishes of the Open Ocean: A Natural History and Illustrated Guide. University of Chicago Press, Chicago, ILL. 266 pp. Hardcover, \$40.50 (ISBN 978-0226655390). – The beauty of this volume commands attention of anyone interested in marine life and the sea, not only ichthyologists and fish aficionados as the title suggests. It is a work of art that dazzles and informs simultaneously, something rarely

attained in science-orientated works. Julian Pepperell, marine biologist and world authority on pelagic fishes, divides the subject matter into two sections: 'Environmental Biology and Fisheries' and 'Guide to the Fishes'. Part One describes the open ocean environment, the ecological function and role fish play within the marine system, their general biology and significance as food for human populations worldwide, and the impacts of commercial and sport fisheries. Part Two is the more typical guide format to the fish, providing details on individual species and groups including general features and adaptations, global range and distribution, and ecosystem function. Lavishly illustrated with colour paintings by renowned artist Guy Harvey, underwater photographs, and maps, this is a book to savour, learn from, and enjoy!

Sarano, Francois and Stephane Duran. 2010. Oceans. National Geographic, Washington, DC. 320 pp. Hardcover, \$40.00 (ISBN 978-1426206269). – This beautifully illustrated and informative volume about the blue planet is the official companion to the Disney feature film entitled "Oceans". It covers the marine waters from the tropics to polar regions, from northern Canada, Greenland and Norway south to New Zealand and Australia, showing the amazing diversity of ocean life that exists from microscopic organisms to the giants such as Blue Whales, Whale Sharks, Giant Squid, Walrus and Polar Bears. The original documentary was produced by veteran natural history cinematographer and film-maker Jacques Perrin and his team of divers, photographers, and marine biologists. The book, well organized and clearly written by authors Sarano and Duran, is divided into three major parts: residents of the oceans, the future of the oceans and their inhabitants, and details of making the movie including a short introduction at the start. Overall, this is a gorgeous guide to the wonders of life in the world's oceans and a plea for marine conservation and a living sea.

"For a community to be whole and healthy, it must be based on people's love and concern for each other." *Millard Fuller, American Humanitarian, Habitat for Humanity Founder*

"Whatever community organization... you will get satisfaction out of doing something to give back to the community that you never get in any other way." *Ruth Bader Ginsberg, American Supreme Court Justice*

Recommended
Summer Reads of 2009 books not reviewed in “Noteworthy Reads”:
Sit back, relax, and enjoy

Braiser, Martin. 2009. Darwin’s Lost World: The Early History of Life on Earth. Oxford University Press, Oxford, UK. 304 pp. Hardcover, \$39.95 (ISBN 978-0199548972). – A tale of searches for strange Precambrian fossils, lost life forms, and tales about a geologist’s adventures in exotic places.

Cochran, Gregory and Henry Harpending. 2009. The 10,000 Year Explosion: How Civilization Accelerated Human Evolution. Basic Books, New York, NY. 288 pp. Hardcover, \$31.50 (ISBN 978-046500214). – An introduction to the new discipline of ‘biohistory’ with a thought-provoking account of the past, present and future of mankind.

Collins, Francis S. 2010. The Language of Life: DNA and the Revolution in Personalized Medicine. HarperCollins, New York, NY. 332 pp. Hardcover, \$ 31.99 (ISBN 978-0061733178). – A book that will forever change how you think about your body, your health, and the future of medicine.

Davis, Wade. 2009. The Wayfinders: Why Ancient Wisdom Matters in the Modern World. House of Anansi Press, Toronto, ON. 263 pp. Softcover, \$19.95 (ISBN 978-0887848421). – The book form of CBC’s 2009 Massey Lectures by Wade Davis that underlines the fact that ancient peoples lived on Earth for millennia without destroying it, whereas Europeans, in less than 500 years, have brought the New World to the edge of extinction. Is there hope?

Dawson, Joan. 2009. Nova Scotia’s Lost Highways: The Early Roads That Shaped the Province. Nimbus Publishing, Halifax, NS. 134 pp. Softcover, \$18.95 (ISBN 978-1551097329). – A traveller’s history tour of the early “Great Roads” of Nova Scotia, particularly those leading from the capital at Halifax to major settlements in Windsor and Truro.

Ellis, Richard. 2009. On Thin Ice: The Changing World of the Polar Bear. Alfred A. Knopf, New York, NY. 400 pp. Hardcover, \$35.00 (ISBN 978-0307270597). – A memorable and important work on the history and present status of *Ursus maritimus*, a victim of human-induced climate change.

Erskine, Nigel and Iain McCalman (eds.). 2009. In the Wake of the Beagle: Science in the Southern Oceans from the Age of Darwin. University of New South Wales Press, Sydney, Australia. 192 pp. Softcover, \$37.95 (ISBN 978-1921410949). – Shows the importance of the Southern Ocean to Darwin’s theories and those of his contemporaries including Hooker, Huxley and Wallace.

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Rubin, Jeff. 2009. Why Your World is About to Become a Whole Lot Smaller. Random House Canada, Toronto, ON. Hardcover, \$29.95 (ISBN 978-0307357519). – Concerned about energy sources and dwindling supplies of oil? If so, this book by one of Canada’s top economists for the energy sector is a must-read!

Ruse, Michael. 2009. Defining Darwin. Prometheus Books, Amherst, NY. 171 pp. Hardcover, \$33.98 (ISBN 978-1591027256). – Ruse, a master science storyteller, tackles fundamental issues in philosophy and the history of evolutionary biology with great originality and depth. A brief and exciting read!

St. Clair, Chris. 2009. Canada’s Weather: The Climate that Shapes a Nation. Firefly Books, Buffalo, NY. 232 pp. Hardcover, \$29.95 (ISBN 978-1554073382). – An exploration of the science and history of Canada’s weather from coast to coast to coast.

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Is history repeating itself? Betty gives the gavel to Bob at the 2009 AGM of the BIO Oceans Association.



Rainbows! A sure sign of summer! CCGS Hudson in St. John’s Harbour, Newfoundland and Labrador.

IN MEMORIAM:

RICHARD GEORGE BOLNEY BROWN, 1935-2010

David N. Nettleship

Lundy Lodge, 25 Tidewater Lane, Allen Heights
Head of St. Margaret's Bay, Nova Scotia B3Z 2G7, Canada



Richard "Dick" George Bolney Brown

Richard ("Dick") G. B. Brown, longtime research scientist with the Canadian Wildlife Service (CWS) at the Bedford Institute of Oceanography (BIO), died on 26 March 2010 in Kings Regional Rehabilitation Centre, Waterville, Nova Scotia, at the age of 74 following a lengthy battle with dementia. Dick was best known for his pioneering long-term study of the pelagic ecology of seabirds in the Northwest Atlantic, which included the first computerization of seabird at-sea data to analyze patterns of species' distributions over a large marine geographic area: eastern Canadian Arctic, western Greenland, and the Atlantic north of 40°N and west of 40°W. He was a towering figure in marine ornithology worldwide for also showing the relationship between distributions of birds at sea through the annual cycle with the oceanographic characteristics of their marine habitat. In addition to his intellectual prowess on seabird ecology and behaviour, Dick is also remembered as a well-read, witty and entertaining raconteur, at his best in informal social gatherings discussing topics from his beloved seabirds to the Greek classics and other subjects from the humanities, always enhanced by a glass of spirits or wine in hand. He was one of the warmest, friendliest, and most interesting of the seabird investigators of his era, always willing to give of his time and knowledge to fellow workers and students.

Dick was born in Wolverhampton, the West Midlands, England, 15 September 1935, the son of George and Nora (nee Taylor) Brown. After secondary schooling at the Benedictine Downside School, Bath, Somerset, he went to New Col-

lege, University of Oxford, and graduated in Zoology in 1957. Dick remained at Oxford as a graduate student of noted ethologist/ornithologist and Nobel Laureate Niko Tinbergen and completed his D. Phil. (Ph.D.) researches in 1962 on the comparative reproductive behaviour in fruit flies (*Drosophila obscura* group). He then switched from entomology to ornithology, his primary interest, a transition made easy by an offer from Tinbergen to undertake post-doctoral studies (1962-65) on species' isolation mechanisms between the large *Larus* gulls on Walney Island, Lancashire, England, and later to go to Alaska to produce ethograms of Sabine's Gull *Xema sabini*. All of this resulted in an outpouring of publications largely on social factors influencing breeding behaviour in fruit flies and colonially-breeding seabirds, and also on migration in insects in the Pyrenees and the behaviour of the Western Sandpiper *Ereunetes mauri* and Willow Warbler *Phylloscopus trochilus* in continuous daylight. The Oxford environment and interactions with outstanding doctoral and post-doctoral students to interact with in both David Lack's and Niko Tinbergen's laboratories – i.e., N.P. Ashmole, W.R.P. Bourne, M. Cullen, M.P. Harris, H. Kruuk, J.B. Nelson, Ian Patterson and others – formed the foundation for his life's work on marine birds.

In 1965, Dick moved to Dalhousie University, Halifax, Canada, as a research associate to teach animal behaviour in the Department of Psychology. Although this experiment to bring ethology and psychology closer together failed to flourish, Dick exploited the presence of pigeons *Columbia livia* on campus and examined social interference in courtship and seed selection. He also established working relationships with oceanographers at both Dalhousie University and the nearby BIO, connections that permitted him to participate on joint oceanographic cruises in government research vessels to observe birds at sea and develop connections that would serve him well in the future. Dick thought his stay in Canada would only be for a couple of years as a psychology lecturer, but as he stated later: "The country grabbed me, and before I knew it I was an oceanographer counting birds at sea and also discovered the Atlantic Ocean in all its moods, and I liked it very much indeed."

Dick joined the CWS in 1967, stationed first in Aurora, Ontario, to study crop damage by American Robins *Turdus migratorius* to cherry and grape orchards (1967-71), and later at BIO where he remained until his retirement in 1994. Although officially hired to study the bird damage problem in the Niagara, Hugh Boyd, the newly-appointed CWS chief of migratory birds, recognized Dick's keen interest in marine birds and encouraged him to continue his cruises on BIO ships as a secondary activity with the aim of ultimately initiating a long-term study of the pelagic ecology of Canadian Atlantic seabirds. This Dick did with great gusto and

was soon publishing papers on seabirds and developing the use of computers to examine distributions of birds at sea in collaboration with Université de Moncton scientists Paul Germain, Eric Tull, and Tim Davis. The at-sea program entitled PIROP (Programme Intégré de Recherches sur les Oiseaux Pélagiques) was initiated in 1969 by Dick and Paul Germain. By 1972 the program was operated completely by the CWS. The end of Dick's land-based studies was drawing to a close with the call of the sea about to take hold fulltime.

In early 1971, approval for the establishment of Canada's first formal CWS seabird program was secured by Hugh Boyd, and Dick relocated quickly from Aurora to BIO, Dartmouth, early that summer. In addition to completing the write-up and publication of his robin work in 1974 (*Bird Damage to Fruit Crops in the Niagara Peninsula*, 1974), Dick pushed 'full throttle' to take advantage of the relatively large BIO oceanographic fleet with its many cruises throughout the northwest Atlantic. Once at BIO, he spent a great deal of time at sea, training and directing a small group of observers to systematically collect quantitative data to chart the distribution of seabirds at sea. From 1971 to 1973, Dick also supervised the fine-tuning of the CWS-PIROP program for computerized seabird atlases utilizing the BIO computer centre and programming talents of Eric Tull. It was a lively and exciting time!

Dick's early training in animal behaviour served him well. He was exceptionally well organized, a meticulous record-keeper with an innate sense of completeness. In addition to recording data on species, numbers, and position of birds at sea, he began to integrate bird distribution data with oceanographic characteristics of the waters where the birds were found in an effort to answer not only the question of where do the birds occur, but also of why they are there. The use of oceanographic research vessels that simultaneously collected physical, chemical, and biological data where the birds were being recorded made for unique opportunities to better understand the patterns of seabird distribution and abundance. Data were collected from Canadian oceanographic ships all the way from Baffin Bay south to Cape Horn and beyond, wherever cruise plans dictated. Dick thrived in this work, and his effort, creativity, and transformation into an oceanographer bore fruit in his many scientific publications on birds in a marine environment, including the *Atlas of Eastern Canadian Seabirds* (1975), the first summary analysis of the at-sea data (1969-73), which was followed by an updated pelagic distribution supplement, *Revised Atlas of Eastern Canadian Seabirds: I. Shipboard surveys* (1986), and the *Gazetteer of Marine Birds in Atlantic Canada: an atlas of seabird vulnerability to oil pollution* (1994). Within the world of oceanography, his special interest was in physical processes and chemical cycles that influ-

enced primary and secondary productivity -- for example, upwellings and converging currents that concentrate seabird prey and physical features such as sea-ice that can both enhance or limit seabird foraging. Much of what he learned was summarized in two review chapters in the *The Atlantic Alcidae* (1985), along with marine food web and energy analyses (1984, 1993). Dick also, to use his words, "preached the seabird gospel" to all takers with the focus on seabirds as marine animals, an effort to educate both the lay public and professional oceanographers who often overlooked seabirds as an integral part of marine ecosystems. He ultimately succeeded in getting the oceanographic fraternity to acknowledge that indeed "the sea has wings"!

Dick had many talents beyond marine ornithology and oceanography. He was a gifted writer, editor, and translator. He served on the editorial boards of the *Canadian Journal of Zoology* and *Ontario Bird Banding*, and for many years wrote a bi-monthly column on natural history for the popular magazine *Nature Canada*. He also served the marine ornithological world well by translating many Danish and Norwegian scientific papers, monographs, and books on seabirds into English. Dick's great love of literature and maritime history resulted in his own book *Voyage of the Iceberg: The Story of the Iceberg that Sank the Titanic* (1983), a unique fictional overview of the tragedy that blended shipbuilding, natural history, and oceanography. It brought him the 1983 Outdoor Writing Award (Books) of the Canadian Sportsmen's Shows—Outdoor Writers of Canada, and the 1984 Science Journalism Award of the Canadian Science Writers' Association, as well as great acclaim from reviewers worldwide. Dick also contributed to the local bird-watcher and naturalist scene in Nova Scotia, especially the Nova Scotia Bird Society, and derived considerable pleasure from mentoring colleagues, students, and serious amateurs on seabird topics and oceanography. In 2000, he received the Lifetime Achievement Award from the Pacific Seabird Group, which recognized his outstanding contributions to marine ornithology.

Dick is survived by his brother, Fr. Sandy Brown, of Staffordshire, England, and many close friends that considered him family. Dick will be missed by everyone who was fortunate enough to have known him as a research scientist with the CWS Seabird Research Unit at BIO. His enthusiasm for life and his researches on seabirds, coupled with a most diverse knowledge of both the natural sciences and humanities, made him special. Dick represented science at its best as an intelligent and original thinker who never stopped giving to the CWS and ornithology communities, both as a wonderful person and outstanding scientist. His death is a tragic loss to all of us, as was his 15-year illness, which took him from us prematurely.

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Selected Tributes to Dr. Richard “Dick” G. B. Brown, 1935-2010

(contributed by David N. Nettleship)

“What a great guy he was - I always liked talking to him whenever I visited you. I feel privileged to have known him.” – Dr. T.R. Birkhead, Professor (Zoology) & FRS, Univ. of Sheffield, UK.

“He was the real pioneer of computerized seabird atlases, and was one of the most intelligent and charming of the Oxford (University) ornithologists of the 1950s” – Dr. W. Bourne, Univ. of Aberdeen, UK.

“Dick made wonderful contributions both as a scientist and human – he was quite the interesting man!” – M.S.W. Bradstreet, Vice President, Nature Conservancy of Canada, Toronto, ON.

“I first met Dick at Dalhousie in the mid-1960s when he was doing his bird studies and ... saw him in Ottawa in the early '70s and in Halifax in the '80s after he published one of the most interesting and thoughtful books written about *Titanic*.” – D. Fleming, former Director, Maritime Museum, Halifax, NS.

“I first met Richard when he was an undergraduate at Oxford. We did three field trips together including 3 months in Alaska studying Sabine's Gull behaviour. I saw him quite often when he came to Ontario to work for CWS, but very little after he moved back to Nova Scotia ... Dick and those field experiences certainly influenced my subsequent directions in avian research.” – Dr. D. Hussell, Ministry of Natural Resources, Toronto, ON and former Director of Long Point Bird Observatory, ON.

“Dick was such a character and so knowledgeable and fun to be with!” – Anne Gunn, former CWS & NWT caribou biologist, Salt Spring Island, BC.

“Dick made a major contribution to marine ornithology and it is such a shame that so few of the later generation of seabird people had the chance to meet him.” – Dr. M.P. Harris, Research Scientist Emeritus, National Environmental Research Council, UK.

“Dick was one of the most well-read people I have ever met, with also a large store of folk songs. He was a lovely, soft-hearted bloke, and a great friend.” – Dr. H. Kruuk, Honorary Professor of Zoology, Univ. of Aberdeen, and former Senior Principal Scientific Officer, UK.

“Dick was truly a pioneering, unique and wonderful character. His compelling ocean research, benchmark publications and novel scientific perspectives directions have provided a wealth for all of us and many others. For me, “Voyage of the Iceberg” is classic, and Dick Brown - a legend.” – Dr. W.A. Montevecchi, Research Professor, Memorial University of Newfoundland, St. John's, NL.

“Dick was a unique personality and always interesting to talk to, and a ‘great member’ of CWS.” – Dr. R.I.G. Morrison, Senior Scientist, CWS, National Wildlife Research Centre, Ottawa, ON.

“I sailed with Dick on CSS *Baffin* from Halifax to Senegal for six weeks in 1976. On our first day Dick hustled us all up onto the bridge to witness the crossing from cold Labrador Current waters into the warm waters of the Gulf Stream. He then introduced us to the plethora of seabirds right at the knife edge of the dark cold water up against the bright turquoise warm water beyond to the east. It was a memorable transition.” – A. Ruffman, President, Geomarine Associates, Halifax, NS.

“I had the honour of knowing and working with Dick at CWS Eastern Region Headquarters in Ottawa before he returned to Halifax and I returned west ... I followed the impressive work he did on the distribution of pelagic seabirds. However, to me, Dick's contribution was greater than that. He was one of the scientists who helped create the international reputation for high quality wildlife research that CWS enjoyed for so many years ...

one didn't have to be a ‘birdie type’ to enjoy wonderful scientific conversations with Dick. The loss of his stimulating intellect in a lab where people of different disciplines shared coffee and active discussions about all kinds of scientific matters of the day should remind us all of the hill we have to collectively climb to regain the high level of lively and interdisciplinary scientific discourse that scientists like Dick helped to foster. I consider myself very fortunate to have shared some of that with him.” – Dr. I.A. Stirling, Research Scientist Emeritus, CWS, Edmonton, AB.

“I remember Dick Brown well as a wonderful character and an enthusiastic and knowledgeable scientist on the Chilean fjords survey of Hudson-70. He was the star of the show and everyone turned to him for scientific advice on wildlife. I remember when we were waiting for a turn of the tide to get through a narrow dangerous channel in order to enter a fjord called Seno Ultima Esperanza (Last Hope Inlet). The Chilean pilot advised that it would be safe to proceed when we could see ducks swimming through. The captain saw a group of swimming birds and ordered slow ahead. Boots came clattering down the ladder and there was Dick who shouted “Hold on! They're not ducks, they're bloody Black-necked Swans!” Another wonderful thing that Dick did was his book “*The Voyage of the Iceberg*”. He used the concept of following the fictionalised trail of the iceberg that sank the “*Titanic*” to convey a wealth of information about icebergs in a fascinating and easily assimilated way. At the moment, I'm struggling to finish a boring textbook on icebergs, and I'm sure that when it is finished it will not get across one tenth as much about icebergs as Dick's great work.” – Dr. P. Wadhams, Professor Emeritus (Oceanography), Cambridge University, UK.

Editor's Keyboard: In her citation for the 2010 Beluga Award recipient Sherry Niven, Bettyann Power talks about Sherry's commitment to the BIO community. Does this community really exist? In my view it does and in these pages there are several examples from the enthusiastic group on the waterfront on International Oceans Day to the OA trip to Jogjins. The untimely death of Don Gordon's daughter Sarah is mentioned in the presi-

dent's message. A moving memorial was held for her in the BIO Auditorium on 29 May 2009 and the auditorium was full to overflowing. A clear mark of community is the support it provides to its members in times of trouble. As the continuing series of letters to the editor suggest, BIO may be a community under stress. It is time for the community to pull together to meet the challenges the future holds for BIO. *Andy*

ABOUT THE ASSOCIATION

The Bedford Institute of Oceanography Oceans Association 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 per half decade, or \$150.00 for a lifetime membership.

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