

# BIO-OCEANS ASSOCIATION NEWSLETTER

Issue 46

April 2010

## From the President

As I write this column, I look out at a warm (15° C) summer sunny day. Wait a minute, it's only the beginning of spring! Let's hope that this is a continuing trend as it bodes well for the real summer.

This is the first issue of our newsletter 'under new management'. I think that you will agree that the reins of the newsletter have been very successfully transferred from Mike Latremouille, editor of our newsletter for the last ten years, to our new editor, Andy Sherin, and his capable editorial crew.

There is another significant change in the works. After many years as our webmaster, Bosko Loncarevic is stepping down. Bosko was instrumental in setting up our Association website and maintaining it for as long as many of us can remember. Thank you, Bosko, for your significant contribution to the Association. Bosko is working with the new website team (Patrick Potter and Phil Spencer) to ensure a seamless transition of the website support.

Further on the theme of communications, Alan Longhurst, prompted by the 'Hudson 70' celebrations last November, sent a letter to the editor of the Newsletter on what he considers the sad state of oceanographic research in Canada. His letter and a subsequent clarification are included in this newsletter. Dr. Longhurst, former DG of BIO, has raised an issue that is both important and germane to what BIO is all about. I encourage you to read the exchange.

Mark 20 May 2010 on your calendar, the date our Association's Annual General

Meeting will take place in the BIO main auditorium. The festivities start with a social (9:15 – 9:45), followed by the business session until 10:30. An important item on the agenda is the election of a slate of directors. There will be a number of changes this year. We will elect a new President and new Vice-Presidents, and other members of the Executive Committee. After a short break, I will turn the meeting over to the Beluga Award Committee chair, Patrick Potter, who will then introduce this year's award winner, Dr. Sherry Niven. A reception will follow the ceremony. So come and join us on 20 May for what promises to be a great event.

Included with your newsletter is a membership survey. It is designed to help the Association to better serve its members. I encourage you to take the time to fill it out and send it in. It is also available in electronic form on the web site.

In addition to our regular columns (e.g., 'Noteworthy Reads' by David Nettleship), there are lots of great articles in this issue. See for instance the update on the HMCS *Sackville* project by Keith and Carol Manchester; a reflection on the accomplishments of the late Ken Mann by John Lazier; a field trip to Sable Island; and a travel log to Cinque Terre, Italy.

Now is the time to take off the boat tarp and break out the golf clubs!

Bob O'Boyle

**BIO-Oceans Association  
AGM  
and  
Beluga Award Presentation  
to Sherry Niven  
Thursday, 20 May 2010  
BIO Auditorium  
0915—1200 h**

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## 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](mailto:OANewslettereditor@gmail.com) or hardcopy to Andy Sherin, 9 Rose St., Dartmouth, NS B3A 2T4.

### But what about HUDSON 2010?

Thank you for the account of the 'HUDSON 70' celebrations in the Newsletter, although it was probably just as well that I was unable to be present, because I might very well have made a scene...

It is appropriate that our Association should have wished to celebrate the period in the history of BIO that was typified by this voyage, and which was – as the Minister of the day said – "*the sort of thing that Canada should be doing*". But, at the same time, it should have been pointed out that this period lasted only about 25 years and was killed by 'management by objectives', sector management and the deadening bureaucratisation of DFO science during the 1990s.

Despite our reliance today on numerical simulation to provide answers to difficult questions about the future, there is still at least as much need for fundamental oceanographic research now as there was in 1970, because there are just as many unknowns out there as we faced back then – although today they are a little different.

Unfortunately, this is apparently not one of the sorts of things Canada should now be doing – according to DFO in Ottawa. Whether the work is done during long voyages on big ships or by more indirect means, it has to be done...and Canada is now far from pulling its weight.

So, rather than just sentimentally applauding the past achievements of BIO, our Association should be equally active in pointing out the present (and I choose the word carefully) disreputable state of ocean science in Canada and the likely consequences of this neglect by the responsible federal department.

Such an attitude would not make us so welcome in the front lobby at BIO as we are now – but it is, I suggest, "the sort of thing the Association should be doing".

Alan Longhurst, A former Director-General at BIO (1980-1986)

### A response from the President

Dear Alan,

Thank you very much for your thought provoking letter entitled 'But what about HUDSON 2010?' Your perspective on the current state of oceans science in Canada is shared by many of my colleagues both inside and outside of the BIO-Oceans Association. No doubt, there are many possible causes for how we got here, but

from my discussions, there is certainly a concern that voyages to study deep ocean processes, much like what *Hudson* did in 1970, are a thing of the past.

Speaking for the OA Executive, we strongly feel that the Association should provide a perspective on the current state of ocean science at BIO and the long-term consequences of the present focus on short-term objectives. Indeed, the Association is in a unique position to do this because of the large pool of experience in its ranks, as well as the benefit of not being involved in the day-to-day management of science programs at the Institute.

You may, however, be in error on one count – being unwelcome at the doors of BIO for providing our perspective. Recently, I met with Dr. Mike Sinclair, Director of Science, and discussed your observations with him. He too has been concerned with the decline of the science programs at BIO for quite some time. Indeed, he has proposed a new governance structure for the Institute to partly address some of these concerns. He, as well as I, have wondered if it would be appropriate to change the name of the "campus", and restrict the present title BIO to the science and surveys aspects of the aggregate activities.

Dr. Sinclair and I agreed that it would be very productive to arrange a meeting of BIO science program managers and members of the Association to discuss both the current state of oceans science at BIO and options for the future. We didn't set any firm dates, but we are thinking sometime this summer. We would very much welcome your views on this process, either in person or through correspondence. I will certainly keep you in the loop on developments in this dialogue.

Thanks again, Alan, for raising this very important issue.

Yours sincerely,

Bob

Robert O'Boyle, *President, BIO-Oceans Association*

### Subsequent correspondence from Dr. Longhurst

Bob,

We had a conversation recently that didn't really wrap up. I wanted to make clear my analysis of what went wrong and why it was both inevitable and terminal, but there wasn't time...

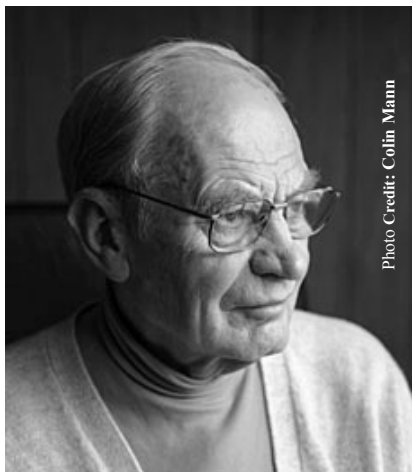
My concern is not only especially for BIO, but for 'oceanography' in Canada (which I distinguish from fishery management science) and the consequences of the decision to expand oceanography, after the closure of the Fisheries Research Board, within a government department. Of course, under the Canadian federal system of resource management it is inevitable that fishery management and associated science must be done in a federal department, with some work done in provincial departments. (*continued on page 3*)

## An Excellent Role Model

by John Lazier

with contributions by Barry Hargrave

Speaking at Dr. Ken Mann's funeral, Bob Miller, a friend and former student, listed comments about him that he had solicited from colleagues – "excellent role model for students and colleagues, wonderful communicator, prodigious capacity for work, good listener, equitable but not afraid to make decisions, most influential mentor, engaged and popular with grad students." His accomplishments brought



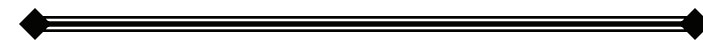
him impressive awards – D.Sc. from the University of London, honorary doctorate from the University of Cape Breton, Fellow of the Royal Society of Canada, and the first recipient of the Lifetime Achievement Award from the American Society of Limnology and Oceanography (ASLO).

When Dr. Mann was associated with the Zoology Department at Reading University (1954-1966), Ken published his first scientific work describing relationships between the lives of leeches and the seasonal fluctuations in some chemical constituents of water. The ecological questions he asked then led to personal contacts with aquatic ecologists and recent literature in aquatic ecosystems research that got him "hooked" on the ecosystem approach. In his response to the ASLO award in 1995, he said "the idea that nature consists of a range of systems on a variety of scales from the

smallest pool to the world ocean, all operating on the same basic principles, seemed to me to be one of the great unifying ideas of science". Soon after his first paper he obtained a grant for an ecosystem energy-flow study of part of the River Thames. The inter-disciplinary project was part of the International Biological Programme (IBP) to apply new methods to measure productivity and energy flow through all major trophic levels in a section of the Thames River. Mann (1969) demonstrates his signature ability to synthesize food web structure and function in different aquatic systems in this, his first ecosystem-level study.

Just as the Thames River project was being completed, Ken accepted an invitation from Lloyd Dickie, Director of the Marine Ecology Laboratory (MEL), to become Head of Biological Oceanography, MEL. The aim was to work toward an ability to make useful predictions about fish and shellfish stocks using a trophodynamic (energy flow) approach. At the time, fisheries management models did not include the effects of variability of timing or magnitude of plankton production or of competition or predation. The new idea was to emphasize that fish stocks were part of larger ecosystems that include the physics of solar heating, winds, waves, tides, currents, chemical cycling of plant nutrients, and the dynamics of all trophic levels in the biological communities. In the 1960s this approach, according to Ken, was considered by many a 'way-out' flaky kind of science.

(continued on page 4)



*"If I have seen farther than others, it is because I was standing on the shoulder of giants."*

Isaac Newton

**Alan Longhurst** (continued from page 2)

But oceanography, by which I mean biological, physical, chemical and geological investigations of processes within ocean basins - both applied to solving problems, but also in exploration of important unknown processes is almost never, in countries having serious programs, done in government departments. This activity must have room to breathe and to evolve in free competition for funds and people wherever they may be found. It is best done in a university where intellectual curiosity is encouraged: note, for instance, that it was not a federal manager who told Charles Keeling to start measuring CO<sub>2</sub> on Hawaii, but it was an idea cooked up at Scripps by Roger Revelle...let's do it, and see what we get!

It was therefore inevitable, in my view, that although for more than 25 years the ocean science teams at BIO were able to operate as what Michael Kirby called "a sort of federal university", and we were able to do that sort of science, the crunch inevitably came when the management of federal departments developed more for-

mality in the name of "effective program delivery". Under the present management structure, I believe that serious fundamental science cannot now be done.

Right now, there is anguish in the French CNRS labs, as formal program control is progressively centred in Paris and bureaucratized.

Since the clock cannot be turned back, and since oceanographic funding cannot be redirected except trivially to the universities, then it is clear that Canada has an ocean science capability that is trivial compared with national 'needs and responsibilities'.

So my intervention was in no way intended to suggest that people should be seeking means of setting things to rights - but simply that we should encourage spades to be called spades, not geotomes...

Best, Alan Longhurst



With his newly acquired skill of SCUBA diving, Ken participated directly in the IBP project in St. Margaret's Bay by measuring macrophyte (kelp) production. The taxonomic distribution and zonation of seaweeds along the Atlantic coast was known, but no direct measures of productivity had been made. Ken's two-year seasonal study used the movement of punched holes

In the years during and following the IBP project in St. Margaret's Bay, Ken organized and led similar multi-disciplinary

Mann K.H. 1982. Kelp, sea urchins and predators: A review of strong interactions in rocky subtidal systems of Eastern Canada, 1970–1980. *Neth. J. Sea Res.* 16: 414–423

Aldo Leopold



Photo Credit: BIO Photo Lab

## HMCS *Sackville* 30 years of oceanographic history on-line

by Keith Manchester

The contribution of the HMCS *Sackville* to oceanographic research will be included in a new website to be released by the Canadian Naval Memorial Trust (CNMT) in mid-April. This addition will highlight the oceanographic cruises carried out on

the vessel over 30 years by BIO. and was compiled by Keith Manchester with the help of Don Peer, Don Gordon, Dave McKeown, Neil Campbell, Doug Loring, John Lazier and Carl Cunningham with editing done by Mike Latremouille and Betty Sutherland.

The HMCS *Sackville* or as it is well known "The Last Corvette" is a popular attraction on the Halifax waterfront. It is operated and maintained by the Canadian Naval Memorial Trust. Their website [www.hmcssackville-cnmt.ns.ca](http://www.hmcssackville-cnmt.ns.ca) outlines

it's war-time history, but little is mentioned of its 30-year career as an oceanographic research vessel. About a year and a half ago the BIO-Oceans Association decided to collect information on its oceanographic career to be added to the existing website. This proposal was well received by the CNMT.

The additions to the website will include a description of the changes to the ship, a list of all the oceanographic cruises other than the Defense Research Establishment Atlantic's cruises and a general outline of the type of oceanographic cruises carried out on the ship. There is also a section where people's memories of the *Sackville* are presented.

It was difficult finding photographs of the ship during its oceanographic cruises. Anyone with pictures they would like to have included in the web-site should contact Keith Manchester.

In the future, space may be provided on the ship for a small display relating to the oceanographic work the ship carried out. This year being the 100<sup>th</sup> anniversary of the Canadian Navy, the HMCS *Sackville* will be prominent in the celebration. It is fitting that its career as one of Canada's early oceanographic vessels is there for all to see.

## Protected Areas

The International Union for Conservation of Nature defines a protected area as *an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means*. The United Nations Millennium Development Goal number 7, to ensure environmental sustainability, uses the "proportion of terrestrial and marine areas protected" as an indicator. In 2008, the UN reported that Canada protected 6.7 % of its total territorial area (terrestrial and marine), compared to 4.7% in 1990. For marine areas alone the percentages reported were 1.1% (2008) and 0.8% (1990).

In Canada there are three federal regimes for protected areas in the marine environment.

**Marine Protected Areas** are the responsibility of the Department of Fisheries and Oceans. There are seven fully established MPAs in Canada. The first, established in 2003, the **Endeavour Hydrothermal Vents** MPA is part of the Juan de Fuca Ridge system, 250 km southwest of Vancouver Island. **The Gully** was the first MPA established on the east coast in 2004. The most recent MPAs are the **Musquash Estuary** in the Bay of Fundy and the **Bowie Seamount**, 180 km west of the Queen Charlotte Islands. The Bowie Seamount MPA protects the rich assemblage of fishes, birds and other marine life. The seamount is biologically a very rich productive area. The Musquash Estuary is an outstanding example of a fully functioning estuary and salt

marsh complex. For more information on MPAs visit:

[www.dfo-mpo.gc.ca/oceans/marineareas-zonesmarines/mpa-zpm/index-eng.htm](http://www.dfo-mpo.gc.ca/oceans/marineareas-zonesmarines/mpa-zpm/index-eng.htm)

**National Marine Conservation Areas** (NMCA) are the responsibility of Parks Canada. Canada has three NMCAs., Fathom Five National Marine Park in Georgian Bay, Lake Superior National Marine Conservation Area, and the Saguenay-St. Lawrence Marine Park.

**National Marine Wildlife Areas** are the responsibility of Environment Canada. In the Maritimes, there are 11 National Wildlife Areas and 12 Migratory Bird Sanctuaries. The Scott Islands off British Columbia will be the first National Marine Wildlife Area officially established in Canada.



## Five Lands

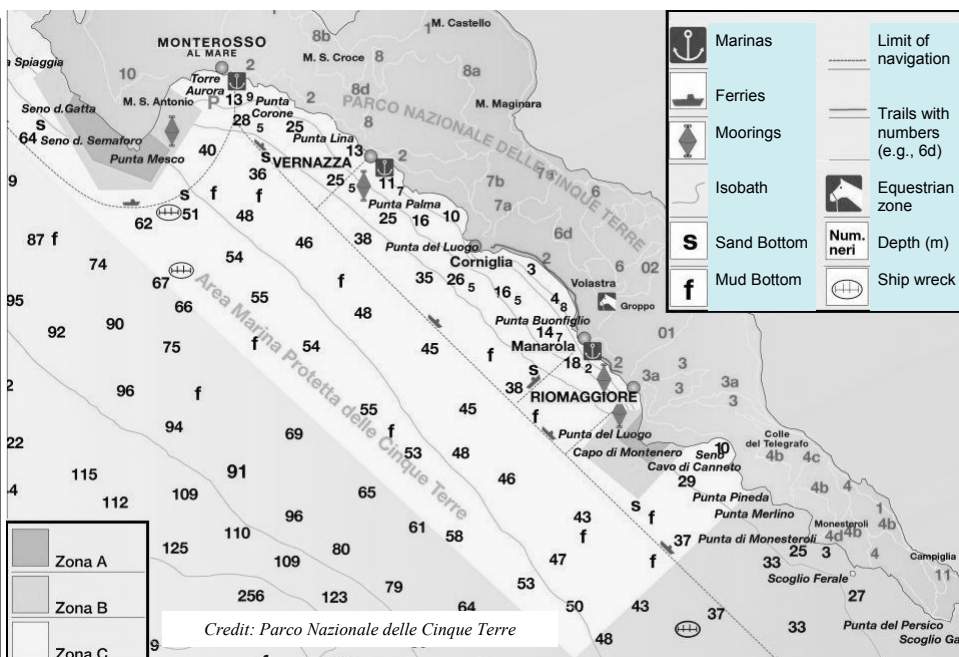
### Experiencing a protected area in Italy

by Andy Sherin

The ‘Cinque Terre’ (Five Lands) is a rugged portion of the Italian Riviera east of Genoa and west of La Spezia. There are five villages which comprise the “five lands”: Monterosso al Mare, Vernazza, Corniglia, Manarola, and Riomaggiore. As part of my post retirement vacation, Sheila and I spent a week in this area living in an apartment in Riomaggiore.

‘Cinque Terre’ is a UNESCO World Heritage Site and a national park. The UNESCO description of the Site states “The layout and disposition of the small towns and the shaping of the surrounding landscape (i.e., extensive hand-built terracing), overcoming the disadvantages of a steep, uneven terrain, encapsulate the continuous history of human settlement in this region over the past millennium.” The national park was established in 1999 to conserve the ecological balance, protect the landscape, and safeguard the anthropological values of the location. We noticed that the park also promoted economic activities based upon traditional food and craft production. Sheila and I were able to enjoy many of these including the olive oil, the wine, the limoncino and pasta made from chestnuts.

Predating the national park was a Marine Protected Area established by the Italian government in 1997. The unique submerged rock formations (highly de-



formed sedimentary rocks of the northern Apennines) are host to a diverse range of corals including rare white and black corals.

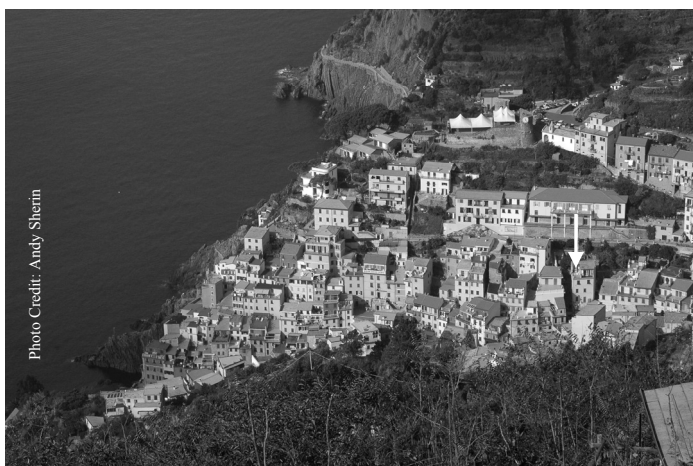
The map shows the region and the three zones of the Marine Protected Area. Zone A has the most restrictive regulations to help re-establish species that have become rare due to human disturbance including the sea-fan *Paramuricia clavata*. Both Zones A and B forbid mooring and fishing. Zone B includes an important meadow of seagrass *Poseidonia oceanica*.

Most of the fishing boats we saw were drawn up on land and the ticket agent for the tourist boat that links four of the vil-

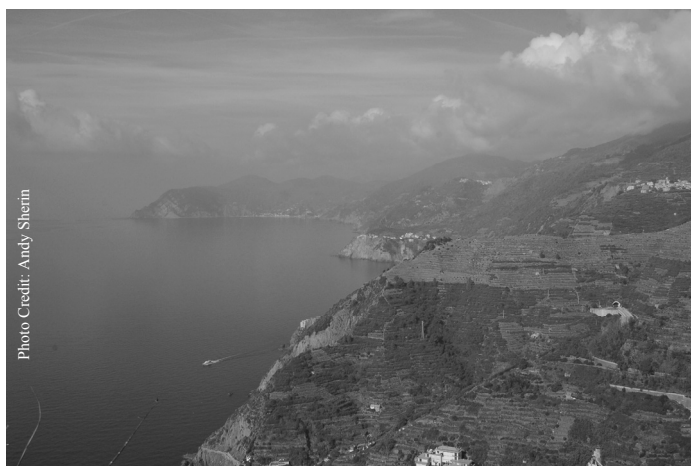
lages told us that most of today’s fishing is recreational.

A 2003 census of fish in the marine protected area found that there had been a change in size class composition of targeted species, but no detection of a clear reserve effect on fish fauna. In fact, Sheila and I had difficulty finding fish for sale. The only fishmonger we found was located in Vernazza and never seemed to be open.

The integration of economic, environmental, social and cultural community objectives within the context of the protected area proved an approach which is worthy of further investigation.



A view of Riomaggiore, the white arrow points to the author’s terrace.



A view of the Cinque Terra, looking northeast to Punta Mesco.



## NOTEWORTHY READS: BOOK REVIEWS IN BRIEF

*David N. Nettleship*

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](http://amazon.ca) or [chapters.indigo.ca](http://chapters.indigo.ca). Contributions of book reviews to 'Noteworthy Reads' are welcome – send via e-mail to David Nettleship: [dnnlundy@navnet.net](mailto:dnnlundy@navnet.net) (phone: 902-826-2360).

### SPECIAL PUBLICATION

#### THE BEAUTY OF LIFE AND EVOLUTION

**Dawkins, Richard. 2009. *The Greatest Show on Earth: The Evidence for Evolution*.** Free Press, New York, NY. 470 pp. Hardcover, \$39.99 (ISBN 978-1416594789). – In this outstanding follow-up to his best-selling "The God Delusion", world-renowned evolutionary biologist and author Richard Dawkins provides an exciting and stimulating review of evolution and the processes that have produced the amazing diversity of living things on earth, past and present. In clear and easy to read prose, Dawkins sets out to look at the science behind organic evolution, and in doing so brilliantly describes the virtuosity of nature and the massive evidence for its existence. Like Charles Darwin in his "On the Origin of Species" of 1859, Dawkins first gives a careful and detailed discussion of how we have changed species through selective breeding. Following multiple examples of selective breeding, Dawkins then takes us on a journey through the various branches of biological investigation including paleontology, biogeography, embryology and other fields showing in all cases how observations are best explained by evolution through natural selection, and how all the evidence supports Darwin's view of "descent with modification." The conclusion drawn by the author becomes self-evident: evolution is a fact, and as science historian Michael Ruse states: "No one can write about science as well as Dawkins, and again and again one is left breathless with admiration for the skills of the storyteller." The story of evolution and how it has shaped

the world, as presented in "The Greatest Show on Earth", is absorbing and dazzles the mind by its lucidity. In the end it becomes a celebration of life on earth and its explanation by evolution through natural selection, one of the best ideas humankind has ever produced. This is an important and timely book, one that should be read by every person wishing to understand the splendor of the world we live in and the grandeur of the mechanism that produced it.

### GENERAL REVIEWS

**Cayley, David (ed.). 2009. *Ideas on the Nature of Science*.** Goose Lane, Fredericton, NB. 379 pp. Softcover, \$24.95 (ISBN 978-0864925442). – In this fascinating book, CBC Radio's "Ideas" producer David Cayley brings together a collection of interviews he has made "to some of the world's most provocative thinkers about how the ideas of science have directed human thought and shaped human society" including: David Abram, Dean Bavington, Ulrich Beck, Richard Lewontin, Margaret Lock, James Lovelock, Mary Midgley, Nicholas Maxwell, Simon Schaffer, Brian Wynne, Allan Young, and others. Through the process, challenging conversations reveal the heart of science, what it is, and why it matters. Each of the 23 contributions presented are "stand alone" pieces on subjects of importance and can be read by themselves with much to gain by the reader: e.g., Dean Bavington's "Science Manages the Sea". But the collection when taken as a whole offers much more, illustrating the old axiom that the whole produces something much greater than its individual parts. In this case, it is the diversity of views presented that stimulate and inspire, especially on topics such as the limits of science, the political authority of science and about the institution of science. The rich array of subjects and levels of discussion undertaken, sometimes somewhat contradictory, makes for fascinating reading. "Ideas on the Nature of Science" is an intellectual treat for anyone interested in exhilarating adventures into the frontiers of the sciences!

**Flannery, Tim. 2009. *Now or Never: Why We Need to Act Now to Achieve a Sustainable Future*.** HarperCollins Publishers, Toronto, ON. 167 pp. Hardcover, \$22.99 (ISBN 978-1554686049). – Tim Flannery, world-renowned Australian paleontologist and best-selling author of "The Weather Makers" (2006), returns to the issue of climate change and makes a convincing plea for sanity and the will to find a solution to the carbon crisis, the greatest threat facing humankind today. In a clear and easily understood manner, Flannery states that a biological meltdown is about to occur owing to climate change and our addiction to fossil fuels with CO<sub>2</sub> levels heading through the roof. He writes that "Humanity is now between a tipping point and a point

of no return, and only the most strenuous efforts on our part are capable of returning us to safe ground.” The message is delivered as an insightful, information-packed essay of just over 100 pages that reviews the climate problem as the best science sees it and offers four potential solutions to climate change and the attainment of sustainability: a rapid switch to electric cars, reclaiming tropical rain forests, eating less meat and eating locally, and protecting grasslands from soil erosion. The solutions are far from elegant, but will produce positive results and help stabilize emissions. Following this wonderful narrative, there is a final section comprising responses to Flannery’s “call for action” by six well-respected individuals from a broad cross-section of society: author-journalist Bill McKibben, entrepreneur Richard Branson, military commentator and climate change author Gwynne Dwyer, animal-rights activist Peter Singer, and ocean conservationist Alanna Mitchell. Once concluded, Flannery gives a brief reply to all of them. Overall, “Now or Never” provides a thought-provoking and powerful argument for immediate global action with a “wake-up” end-note that rings loud and clear with Flannery’s customary interdisciplinary scientific precision: “... there is now a better than even risk that, despite our best efforts, in the coming two or three decades Earth’s climate system will pass the point of no return. This is most emphatically not a counsel of despair; it is simply a statement of my assessment of probability.”

**Hempleman-Adams, David, Emma Stuart and Sophie Gordon. 2009. *The Heart of the Great Alone: Scott, Shackleton, and Antarctic Photography*.** Bloomsbury US, New York, NY. 240 pp. Hardcover, \$59.00 (ISBN 978-1608190072). – This book is a must for die-hard fans of Antarctic polar exploration. It is a beautiful collection of photographs from Robert Falcon Scott’s and Ernest Shackleton’s epic early 20<sup>th</sup> century voyages of discovery taken by their official chroniclers, Herbert George Ponting and Frank Hurley, respectively. The images, lovingly selected by the authors, show the beauty and harshness of the environment, and the almost impossible conditions under which they were taken. That the photographers hauled bulky box cameras and glass plate negatives across polar landscapes, land and sea, against all odds of survival vividly demonstrate their dedication and determination to record the exploits of these expeditions. Some of the photos have never before appeared in book form, and together with an excellent text drawn from the journal writings of the photographers combined with new materials make this book a unique addition to the literature of early Antarctic exploration.

**Hunter, Douglas. 2009. *Half Moon: Henry Hudson and the Voyage that Redrew the Map of the New World*.** Bloomsbury US, New York, NY. 352 pp. Hardcover, \$35.00 (ISBN 978-1596916807). – As a follow-up to his acclaimed “God’s Mercies” (2008) about early explorers in eastern North America, their dreams of discovery and rivalry, Douglas Hunter decided to celebrate the 400<sup>th</sup> anniversary of Henry Hudson’s discovery of the Hudson River by producing the first comprehensive history of the 1609 voyage of discovery by Hudson in his ship *Half Moon* based on existing logbooks and diaries. Not only does Hunter reconstruct the discovery of Hudson River, but shows how Hudson’s explorations reshaped the history of the New World and laid the foundation upon which New York was established and grew to become a global capital. Hunter’s researches also provide a valuable insight into what drove and motivated 17<sup>th</sup> century explorers to discover at all cost including their lives. The intrigue of Hudson’s contract with the Dutch East India Company and his decision to defy orders is skillfully outlined in *Half Moon*, an analysis that produces a gripping story of intrigue, international politics and economics. Overall, an exciting new account of Henry Hudson the explorer extraordinaire!

**Lotz, Jim. 2009. *Canada’s Forgotten Arctic Hero: George Rice and the Lady Franklin Bay Expedition, 1881-1884*.** Breton Books, Wreck Cove (Cape Breton), NS. 184 pp. Softcover, \$19.95 (ISBN 978-1895415940). – Want a thriller to read on early exploration and science in the eastern Canadian arctic? Well if so, this is the book for you. It is based on the previously unpublished diaries of George Rice, the official photographer of the tragic American 1882 Lady Franklin Bay Expedition on Ellesmere Island, and the rich narrative will captivate and hold your attention from beginning to end. Rice, born in Cape Breton in 1855, was a professional photographer who joined the expedition with the hope of finding fame through service with it and the experience of high arctic exploration. This two-year research effort under command of army lieutenant Aldolphus Greely was part of the first International Geophysical Year of circumpolar exploration and the northernmost of fourteen stations. At the end of summer 1883, with all scientific goals attained, the relief ship that was to bring them home was crushed in pack ice and sank. Unknown to Greely, he then followed his orders to leave Lady Franklin Bay and head south 400 km to Cape Sabine where they would be picked up. After this arduous journey, they arrived only to find no rescuers and had to quickly prepare to overwinter with limited supplies. Only six of a team of 26 survived the ordeal, and George Rice was not one of them. His journal entries are gripping, and Jim Lotz has done a great service to both Rice and the history of this



ill-fated expedition by revealing another side of the story to that given in the official reports. Until now, George Rice, the only Canadian on the expedition, remained largely unknown as the dedicated professional and hero he was. He died out on the ice searching for food for his starving comrades and was the first Canadian photographer to document Canada's high arctic in photos. All 69 illustrations used by Greely in his popular 2-volume account of the expedition "Three Years of Arctic Service" (1886) were from photographs by George Rice. Get a copy of this book and pay tribute to a true Canadian arctic hero!

**Scales, Helen. 2009. Poseidon's Steed: The Story of Seahorses from Myth to Reality.** Gotham Books, New York, NY. 272 pp. Hardcover, \$25.00 (ISBN 978-159240474X). – Information on seahorses is hard to come by, almost as difficult as it is to view these incredible creatures in the wild in their natural shallow-water habitats of coral reefs, sea-grass beds, and kelp and mangrove forests. But the absence of knowledge has not limited speculation on these exotic and mystifying animals and instead, has generated an abundance of interpretations from a diverse set of observers ranging from scientists and artists to storytellers. This volume by British marine biologist Helen Scales goes a long way to correct this dearth of factual details by taking the reader on a fascinating and rewarding journey into the wonder of seahorses, covering all aspects of these little fishes, from "myth to reality". The science is well-covered, with a complete overview of its life-cycle and biology including its unique reproductive system in which the male gets pregnant and gives birth by having a specialized brood pouch into which the female deposits her eggs where they are fertilized and cared for by the male until birth. Each subject covered presents a careful mix of the science with the myth, making the treatment of this group of 37 known species a delight to read and think about. After this thorough review of past and present, fact and fiction, Scales gives a strong warning call about the precarious future seahorses face. The combined pressures from overfishing – they are used heavily in traditional medicines, as brood stock to seahorse farms, and for aquarium displays -- with damage and destruction of their habitats, incidental mortality from shrimp trawling, and spiraling pollution in coastal waters throughout their range places the seahorse group at risk of massive population declines and extinctions. Conservation and protection of coastal habitats is the answer!

**Sekulich, Daniel. 2009. Terror on the Seas: True Tales of Modern-day Pirates.** Thomas Dunne Books, St. Martin's Press, New York, NY. 308 pp. Hardcover, \$31.95 (ISBN 978-0312375824). – Here is an eye-opening look into the world of high-seas piracy, which is now a multi-national,

multibillion-dollar enterprise controlled by organized crime syndicates and regional warlords. Daniel Sekulich, an expert on the shipping industry and international piracy on the high seas, reviews some of the most hazardous ocean regions in the world and interviews the players involved, from the victims of the attacks and those attempting to police and prevent the at-sea attacks to the pirates themselves. Based on first-hand travels into current vulnerable water areas such as Somalia, Sekulich's well written and researched book brings all aspects of the problem of modern-day piracy into sharp focus, from the fear of attack and motivations of the pirates to the incredible impact the activity has on world trade and the travel industry. In summary, this explosive story on ocean security, or lack thereof, provides an important review of the nature of the problem and what needs to be done to curtail the threat by more effective international maritime laws.

**Suthren, Victor. 2009. The Island of Canada: How Three Oceans Shaped Our Nation.** Thomas Allen Publishers, Toronto, ON. 384 pp. Softcover, \$24.94 (ISBN 978-0887624063). – Canada is an island, bound by three oceans with the largest lake and river system in the world. That view is taken by Victor Suthren, an expert on maritime history, who masterfully weaves not only a story of Canada and the marine waters that hold us captive, but how those waters have shaped us as a people. Suthren traces the development of the Canadian psyche from the earliest days of Inuk and Aboriginal hunters, through the Norse, Basque, Portuguese, Spanish and French explorers and fishermen of Atlantic waters, on to those of the Pacific coast and the Arctic. This sweeping history also includes a review of the impacts made by the British and French royal fleets, as well as privateers, whalers, merchantmen, the fur trade and the Age of Sail. Taken together, this extraordinary work shows Canada to be a sea-going nation, with a connection to saltwater like no other country. Suthren has given us a treasure to enjoy as a unique national maritime history and a way of looking at ourselves.

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### **Sable Island to be Protected**

The Province of Nova Scotia and the Government of Canada have announced that Sable Island will be protected through designation under federal legislation either the **Canada National Parks Act** or the **Canada Wildlife Act**, or both. The designation would ensure the conservation of the island's special features and wildlife for the benefit of future generations. Sable Island supports some important wildlife populations and many species at risk including the entire population of the vulnerable subspecies Ipswich Savannah Sparrow.

## Sable Island: Dream Realized

by Patrick Potter

Sable Island is a 42 km long sandbar that rises out of the North Atlantic at the edge of the continental shelf 160 km southeast of Canso, Nova Scotia, its nearest landfall. Ever since I read “The Nymph and the Lamp”, Thomas Raddall’s story about early 1920s telegraph operators on Sable Island, I had wanted to visit the island. The opportunity to do so arose when I had to decommission the temporary seismic station that had been on the island since 2006 to seismically image the earth’s crust using earthquakes. So when Jim McMillan, a seal researcher with DFO, called to say that they might have a space for me on their annual trip out, I gave him my full attention.

Within days I found myself squeezed into a survival suit in a Coast Guard helicopter, surrounded by all of the gear and provisions for the large seal research team.

Following an uneventful flight out and, while I was helping to unload Jim’s gear in the brisk December wind, I caught my first glimpse of the famed Sable Island ponies.

Considering that the station had been operating for over three years in the harsh environment of Sable Island, the equipment was in surprisingly good shape. I didn’t even have to use much of the jumbo can of WD40 I had brought for extra stubborn



Photo Credit: Green Horse Society

bolts. I hardly had to curse at all! The seismometer confused me, though. I was not familiar with this model. I didn’t have the special tool to clamp it down and transporting the seismometer without clamping it would transform it into a very heavy and pricey maraca.

I knew my time on the island was limited so I went about disassembling the satellite dish, electronics and power supply, leaving only the seismometer and vault in place.

That evening was spent comfortably, out of the howling winds, at BIO House, a fine old two-storey structure from the early 20<sup>th</sup> century that is located towards the west end of the island. It was late the next morning before the instructions on how to clamp the seismometer came through from Ottawa via e-mail.

Apparently, had I left the station set up, they could have clamped it remotely via satellite. Whoops! It was too late for that. Oh well, this way was more fun: stripping wires and shorting them out on a battery and then listening for the servo motors inside the seismometer, clamping the masses. I felt just like MacGyver!

Then it was time to travel to the other end of the island to help Jim transport provisions and open up their other base of operations at the east end of the island. The trip involved picking my way down the beach on an ATV past hundreds of grey seals and their pups. After cooking dinner, it being my turn, and a brief but breathtaking view of the stars, I fell into the sleep of the exhausted.

The next day my return flight was due to arrive at the weather station by noon, leaving me an hour or so to hike around and take some pictures (and a couple of sand samples). Even the two and half hour flight home into a headwind, during which I turned an impressive shade of olive drab, couldn’t spoil my once-in-a-lifetime visit to Sable Island, a memory I will always treasure.



Photo Credit: Nell den Heyer



## *In Memoriam*

**Richard “Dick” George Bolney Brown**, died 26 March 2010, former research scientist, CWS Seabird Research Unit, BIO

**Paul Allen Cullen**, died 26 January 2010, former BIO ship’s crew and Dockyard employee

**Leamond Hunter**, died 3 February 2010, cartographer, Canadian Hydrographic Service, founding member of the BIO-OA

**Kenneth Henry Mann**, died 24 January 2010, former Director, Marine Ecology Laboratory, BIO

**Harry Grant Myers**, died 3 March 2010, former Chief Steward, CSS *Baffin*

**Evelyn Georgina Penny**, died 11 March 2010, first secretary of AGC (1971-75), founding member of the BIO-OA

**William Joseph “Bill” Whiteway**, died 19 February 2010, 30 years at BIO in the Metrology Division

### **BIO-Oceans Association Upcoming Events**

- 20 May**      **BIO-Oceans Association  
Annual General Meeting**  
BIO Auditorium
- 0915-0945: Conversation and Coffee  
0945-1030: Business Session  
1100-1200: Beluga Award Ceremony  
1200: Reception
- 4 June**      **World Oceans Day 2010 Celebration**  
Join in the fun at the wharves beside  
the Maritime Museum of the Atlantic in Halifax  
<http://www.dfo-mpo.gc.ca/events-evenements-eng.htm>
- 8 June**      **World Oceans Day 2010**  
<http://theoceanproject.org/wod/2010events.php>
- TBD June**    **OA’s Spring Social Event  
Joggins Field Trip**  
**Watch for the announcement or  
contact Gordon Fader**  
[gordon.fader@ns.sympatico.ca](mailto:gordon.fader@ns.sympatico.ca)  
455-6100
- 11 June**    **Deadline for articles for Issue 47 (July 2010)  
of the BIO-OA Newsletter**  
**Submit by e-mail to:**  
[oanewslettereditor@gmail.com](mailto:oanewslettereditor@gmail.com)

### **2010 Beluga Award Recipient**

**Sherry Niven**



### **Past Recipients**

Roger Belanger (2001)  
Peter Vass (2002)  
Art Cosgrove (2003)  
David McKeown (2004)  
Jackie Dale (2005)  
Joe Bray (2006)  
Murray Scotney (2007)  
Borden Chapman (2008)  
Bruce Anderson (2009)

### **The Beluga Award**

The Beluga Award recognizes employees who have exhibited unselfish dedication to the community spirit at the Bedford Institute of Oceanography (BIO).



## From the Editor's Keyboard: The New Editorial Board

It was an honour to be asked to take on the responsibilities of Editor for the Association's Newsletter, a role I accepted with some trepidation. Mike Latremouille, editor for the last ten years, has left very large shoes to fill!

I am a recent retiree from Natural Re-

sources Canada having spent all but three years of my 38-year career as a physical scientist at BIO, arriving as a student and leaving as a manager. I have recently been appointed an emeritus scientist with the objective of finishing some of the coastal GIS work I left behind when I temporarily moved to Ottawa in 2002.

The other members of the Editorial Board are **David Nettleship**, **Betty**

**Sutherland** and **Jennifer Hackett**. They all bring extensive experience, great skills, and good humour and enthusiasm to the tasks of publishing the newsletter. The Board will work closely with the new website team of **Patrick Potter** and **Phil Spencer** to provide a more integrated communication approach to serve the members. I look forward to working with them all.

*Andy Sherin*

## 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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