

# BIO-OCEANS ASSOCIATION NEWSLETTER

Issue 32, October 2006



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## FROM THE PRESIDENT

**G**reetings! I do hope all of you had a good summer with lots of time to relax and enjoy the good weather.

Mind you, the weather was less than ideal for the Association's annual summer barbeque on 15 August: overcast with long periods of drizzle and rain. However, that did not dampen the spirits of the people who came (some of whom are pictured here). Thanks to Bob and Heather Cook's beautiful (and enormous) house in Portuguese Cove at the mouth of Halifax Harbour, we were all able to fit inside with lots of room to spare. Good food, good drink, wonderful company! It was definitely worth the drive in from our cottage in southern New Brunswick – even if I did experience drizzle, heavy downpours and thick fog on my way back that evening. My only hope is that more of you will be able to take part in next year's barbeque – you missed a fun time if you weren't there. A big "thank you" to Bob and Heather for their hospitality – and their invitation to have next year's event at their place again. With any luck the weather will be better and we will be able to be outside and use their new deck overlooking the ocean.

Elsewhere in this issue you will be able to read the results of the Social Activity Poll which were discussed at the September Executive meeting. Thanks to those of you who responded (and no complaints from those of you who didn't (:>) [happy face]). We have two events already planned for this fall: a tour of the Shubenacadie Canal locks with Keith and Carol Manchester in late October, and an evening event on Thursday, 23 November at BIO when local author Janet Kitz will give a talk on the Halifax Explosion (see p. 11 for details).



And finally, don't forget to submit your vote for the name of the new Level II Laboratory Building on the BIO campus (see Clive Mason's e-mail of 13 September). We are assured by the directors that they genuinely want input from the BIO-OA membership. So here is your chance to influence the choice of a name for BIO's newest building.

— Betty Sutherland

## RESULTS OF THE BIO - OCEANS ASSOCIATION SOCIAL ACTIVITY POLL

*Summarized by Gordon Fader*

We finally have the results of the social activity poll that began last spring. A total of 34 replies was received of which 14 were through the online survey. We think that it represents the majority interests of the membership and will use it as a guide to plan activities for the next few years.

Special thanks go to Dave McKee-own who prepared the electronic version for those of us who like to use our computers for such things. A three-person team of Clive Mason, Shiri Srivastava, and George Anderson took on the task of compiling the information and making sense of the few polls that were awkward to interpret.

So what did the membership say? Rather than distribute the three pages of conclusions, the following summary is provided.

- ✓The types of potential activities were divided into six categories: Tours, Dining, Theatre, Talks, Recreation, and Other. The greatest support was for tours, dining, and talks, with recreation and others a distant second.

- ✓Under tours, the preference was for day tours and most members were not very interested in commercial/museum types of tours.

- ✓Under dining, the BBQ and Pot Luck variety were equally popular, and wine and cheese events came second. Restaurants were the least popular.

- ✓Talks rated highly, with preference for seminars and films at BIO, with an occa-

sional trip to a facility external to BIO.

- ✓Theatre events had low support with plays being the first choice.

- ✓Recreational events received a low rating with field trips and walks the most popular.

- ✓Most preferred events held in the afternoon and early evening in mid-week dates. The weekends had low support.

- ✓Strong support existed for combined events and regarding the cost there was a 50/50 split for events between \$10 and \$20. Few wanted to go over that amount.

- ✓BIO was supported as an event location, but most were also open to other local locations.

- ✓The majority of members desired events at least quarterly with some support for bi-monthly events. Few supported monthly events.

- ✓Topics for speakers indicated a preference for general topics with travel and science tied for second place.

- ✓Strong support came forward for food to be associated with events and most members also agreed that wine and beer are appropriate.

- ✓Children and grandchildren are acceptable at most events, and few wished all events to be children free.

- ✓Less than half supported longer trips of any more than a few days duration and only a few were interested in events outside the HRM.

- ✓There is a significant interest in regularly scheduled events such as bowling, with about 50 % of the respondents indicating interest. About a third of the respondents are interested in team events.

- ✓Regarding the planning of events, suggestions were made for timely and widespread publication of events and to have small planning groups to make arrangements. In this

regard about half offered to help with events.

- ✓Specific suggestions were for a tour of Georges Island, boat tours in general, NS Power tour, Lake Charlotte Heritage Village tour, and the Bluenose.

**Postscript** — At our OA executive meeting on 12 September 2006 we had a good discussion on these results and how to proceed for the future. We now have a lot of excellent ideas and the marching orders are quite clear for future events.

Regarding regularly scheduled events, it was suggested that given the high degree of interest, we are seeking volunteers who have a hobby or activity that they enjoy and who could take the lead in putting out a notice for a golf, bowling, bridge or other trial group event. This may be a good way of kick-starting such activities. Next thing you know we could have a competitive bowling team! So please think of your favourite activity, and if you would like to get a team up and running, let us know and we will post the notice.

Overall it was agreed that the poll was a very good thing to have conducted and the results were generally reassuring in that most of the previous activities were what people wanted to do. However, we will analyze the results further and attempt to arrange for and schedule events that our membership clearly wants.

If you have any comments or further suggestions and especially if you would like to volunteer to propose and run an event please let us know.

And of course, thanks to all of those members who took the time to fill out the poll and to include comments and suggestions.

## DIGITAL CONVERSION OF BIO "ANNUAL" REPORTS

*Bosko Loncarevic*

In its first 40 years [1962-2002], BIO published several series of reports on Research, Survey and Technology Development activities. As summarized in the table on page 4, the 26 "Annual Reports" are the main series, about half of which were published as Biennial Reviews". This series of BIO publications must be a library cataloger's nightmare because five different titles were used over the period:

1962 – 1966 [First, Second, ... etc.] Annual Report

1967 – 1978 Biennial Review

[1979 – 1980] No Publication

1981 – 1986 BIO Review '81 ['82, '83 ... etc]

1987 – 1995 Science Review [1987, 1988 & '89, ... etc]

1996 & '97 Science Review [published as CD only]

[1998 – 1999] No publication

2000 Bedford Institute of Oceanography 2000

2001 – 2002 Bedford Institute of Oceanography 2001 [2002] in Review.

Even the publishers name changed for two reports (1967/68 and 1969/70) when the name was just Bedford Institute (without "of Oceanography").

The changes in content over the years are so striking that one would be hard pressed to call these 26 volumes a continuing serial publication.

The first two reports carry a formal disclaimer that clarified their function: "This is a technical report to our headquarters which has received only limited circulation. On citing this report in a bibliography, the title should be followed by the words UNPUBLISHED MANUSCRIPT" which is in accordance with accepted bibliographic custom."

By volume 3 this disclaimer was dropped, the format spruced up, and the content considerably expanded to carry signed reports attributed to individual investigators.

An innovation was introduced for the 1969/70 Biennial Review. The content was split in two parts, a Part A (44 p.) entitled "Ocean Science Reviews 1969-1970" and a Part B (the remaining 110 p.) describing

... Continued on page 4

## HONOURING THE MEMORY OF VIVIEN SRIVASTAVA

Shiri Srivastava

(Photos by Roger Bélanger)

Members may be interested to learn that the memory of my dear wife Vivien and her achievements and accomplishments in science and society have been commemorated in several ways since her death on 8 November 2004.

In September 2004, she received unexpected and wonderful news. Mount Saint Vincent University informed her that she had been chosen to receive an Honorary Doctorate of Humane Letters in recognition of her contributions to science and to the welfare of society over the years. She replied that she would be most honoured to accept, but unfortunately she died before she could do so. The University decided to



award it to her posthumously and in May 2005 my daughter, Diane, accepted the degree on her mother's behalf. A gathering of family, friends, and colleagues was held shortly after the spring convocation to celebrate this achievement and remember Vivien.

Vivien was the first woman to receive a doctoral degree from the Department of Zoology at the University of British

Columbia, the very same department where our Diane is now an Associate Professor. As a female graduate student at UBC and as a woman scientist, Vivien surmounted significant obstacles to achieve her goals and did so with enthusiasm and cheerfulness. Later in her life, she expressed interest in helping women to cope with the challenges of a science career. After her death, Diane and I felt that one way to honour her wish would be to set up some kind of scholarship in her name at UBC in the Department of Zoology to help deserving female graduate students to pursue a scientific career. This we are doing and Diane is in the process of formalizing arrangements with UBC.

In July 2006, there was a public unveiling of a memorial to Vivien at Lake Charles, Dartmouth. The Shubenacadie Canal Commission has built and dedicated a lakeside trail and picnic site called "Vivien's Way" in recognition of her many contributions over more than 10 years as a Canal Commissioner to the preservation and development of the Shubenacadie Canal and surrounding trails. Vivien's ideas contributed significantly to the concept and design of the trail system, including the Lake Charles Trail along which her memorial is located. She was a great explorer of the forests surrounding our home on Lake Charles since we first moved there in 1979. "Vivien's Way" is not only the name of the trail, but



symbolizes her approach to trail-building: she was a great proponent of using low-impact construction methods to maintain as much of the natural habitat as possible along the trails in order to maintain their natural tranquility. "Vivien's Way" is a fitting tribute to her vision. A plaque has been erected at the end of the trail that reads as follows:

*The Shubenacadie Canal corridor is a rich, natural, historic, and recreational treasure that threads across the Province of Nova Scotia. Opened in 1860, the waterway encompassed seven lakes, nine locks, two inclined planes, and 55 kilometres of river stretching from Halifax Harbour to Cobequid Bay.*

*As a member of the Commission from 1994 to 2004, Vivien M. Srivastava (1931-2004) was dedicated to the preservation and restoration of the Canal system. An avid walker, naturalist and paddler she helped design the Lake Charles and Portobello portion of the Trans Canada Trail along the canal route. The Commission is grateful for her commitment to revitalizing this precious resource.*



...from page 2

project activities. The Ocean Science Reviews were also published as a stand-alone publication for distribution to schools and the general public (hence the change of format to 'book-size').

There was a major change in content after the publishing gap of 1979/80 when the "Biennial Review" ceased and was replaced by the annual "BIO Review" in 1981. From this point on, the main subject of the reports was comprehensive coverage of only selected aspects or themes of BIO's ongoing ocean science and hydrographic survey work. As stated in the introduction to the 1981 volume by Alan Longhurst: "BIO Review will be published annually, but it will not be a typical annual report. It will review just one aspect of our multifaceted Institute and it will serve as an up-to-date guide for those who need to do business with us ...".

The 1981 Review concentrated on "... problems associated with frontier development of oil and gas reserves offshore and through the Arctic.", the 1982 issue on "How should we define the proper balance between applying our stock-in-trade of knowledge to today's problems, and continuing to research problems not yet resolved - between applied and basic science, in fact?"; 1983 on "Surveys and services";

1984 on "Climate Change and Variability"; 1985 on "Regional Oceanography: The Grand Banks of Newfoundland"; and 1986 "On helping to make a revolution", a broader look at BIO's activities as the Institute celebrated its 25<sup>th</sup> Anniversary (in 1987).

Another shift of emphasis occurred with the 1987 publication. It was realized that the general purpose science articles did not reflect accurately all the activities and contributions of BIO research staff. Therefore, the Project section first introduced in BIO Review '81, was enlarged to include over 300 investigations underway at BIO. The list of 'projects' exploded with the following publication (biennial) when over 500 were listed. A 37-page list of publications was also included. (On closer examination one wonders if this list was perhaps inflated as, for example, publications in the other official language were listed as separate publications; as were abstracts, posters, and technical reports).

The report for 1996/97 (CD-ROM version only) represented yet another shift in emphasis since it contained ONLY Science Reviews and no lists of Voyages, Projects or Publications. The last three reports (2000 – 2002) attempted to bring some sense of balance between Reviews, Activities and Publications. The list of Publications was further rationalized by separating publications in

"Recognized Scientific Journals" from other contributions such as "Departmental Reports", "Special Publications", "Book Chapters", "Conference Proceedings" etc.

The above discussion has only touched upon the wealth of information that can be extracted from the "New Digital Compilation of BIO Reports". The ease of accessibility and full text search capability offer us a new tool for the study of the evolution and growth of oceans related research at BIO and, by extension, in Canada. Some of these studies will be incomplete due to inconsistency in coverage and content in different years. For example, staff lists are inconsistent; in some volumes there are complete staff lists, while in others only heads of divisions are listed (or nobody). The case is similarly with BIO's ships and the research voyages. There are no lists of Canadian research ships or their activities after 1994/95. It is thus not possible to evaluate the level of ocean going activities in the past decade compared to the earlier periods.

A study of the material in this compilation may have significance beyond just a history of one scientific institution. Public and political support for Science in the second half of the 20th century has undergone profound changes of direction. Our compilation documents those changes.

Report Title	Pages	Comments
First Annual Report 1962	55	Blue cover; Letter sized; Mimeographed
Second Annual Report 1963	60	As above
Third Annual Report 1964	110	White cover; Letter size
Fourth Annual Report 1965	92	As above
Fifth Annual Report 1966	104	As above
Biennial Review 1967-1968	154	Name change to Bedford Institute
Biennial Review 1969/70	299	Small format (6x9"): Cover design: "Small waves"; (Name: BI)
Biennial Review 1971/72	385	Small format (6x9"): Cover design: "Big Waves"; (Name back to BIO)
Biennial Review 1973/74	324	Small format (6x9"): Cover design: "Big 'O'"
Biennial Review 1975/76	236	Small format (6x9"): Cover design: "All Blue"
Biennial Review 1977/78	258	Small format (6x9"): Cover design: "Hudson"
BIO Review '81	96	Letter size; Cover: Painting of BIO scientists at sea
BIO Review '82*	96	Letter size; Cover: Painting of different plankton
BIO Review '83	96	Letter size; Cover: BIO DOLPHIN submersible
BIO Review '84	72	Letter size; Cover: "The Glacier of Sermitsialik, Greenland"
BIO Review '85	100	Letter size; Cover: A satellite infrared image
BIO Review '86	100	25th anniversary issue; Cover: Photo of BIO and Halifax Harbour
Science Review 1987	120	Cover: Photos of three laboratories
Science Review 1988 & '89	145	Cover: Photos of three laboratories
Science Review 1990 & '91	192	Cover: Photos of three laboratories
Science Review 1992 & '93	158	Cover: Photos of three laboratories
Science Review 1994 & '95	160	Cover: Photos of four laboratories
Science Review 1996 & '97	169	Cover: Photo of fish trawler; Only CD version published
Bedford Institute of Oceanography 2000	92	Cover: seagull in flight; Content focus on BIO
Bedford Institute of Oceanography 2001 in Review	88	Cover: Seafloor habitat
Bedford Institute of Oceanography 2002 in Review	112	Cover: Hudson in ice; 40th Anniversary Edition

\* BIO Review '82 received a 1983 Distinguished Technical Communication Award in a national Technical Reports competition from the Society for Technical Communication.

## BENTHIC HABITAT STUDIES: AN ENGINEER'S PERSPECTIVE – PART IV

David McKeown

In the preceding three issues, I have described the development and adaptation of several devices that were used in our benthic habitat studies, but have left until now the description of the one many of our team would consider the most important -- the Campod. In the autumn of 1993, under the leadership of Terry Rowell, CSS *Parizeau* returned to the Grand Banks trawl impact study area to collect samples from the disturbed and undisturbed areas that were first studied earlier that year. On the way, the vessel stopped for three days at the COPANS oil exploration site on the Scotian Shelf where Kee Muschenheim and Tim Lambert conducted a PERD funded investigation of the impact of drilling wastes on the benthic communities in the vicinity of oil exploration platforms. In addition to specialized sampling devices they developed for this type of work, they also used the video grab to view and sample the sea floor. While it proved very effective in revealing the distribution of flocculated drill waste on the sea floor, it could only be used during daylight hours because a full deck crew was required to handle it. This triggered a series of discussions amongst Kee, Tim, Don Gordon, Terry Rowell, and Peter Vass that led to a conceptualization of Campod. This new device would be light enough to be handled on BIO ships 24 hours per day. It was to have the same video camera and lights as the video grab and use the same cable and winch. It would also have a still camera and companion flash. This would create a minimum disturbance when landed on the sea floor and be fitted with benthic boundary layer sampling devices such as the Slurper.

Commencing the following winter, a team composed of Kee Muschenheim, Tim Lambert, Peter Vass, Mark Chin-Yee, George Steeves, Garin Awalt, and the staff of the Depot Workshops began the creation of Campod. To the best of my recollection, it first underwent sea trials during the annual equipment trial cruise in 1995 and then proved a great success during subsequent drill waste impact surveys at the COPANS site and at Hibernia. While it was available for the last year of our Grand Banks trawl impact experiment, our major sampling and survey tools remained the Video Grab, Epibenthic Sled, BRUTIV and sidescan.

Occasionally on cruises, one per-

son will stand out in our memories for some reason. During the early trawl impact trips we had such a person. He was one of the kindest and friendliest individuals you could ever want to meet. However, he had the misfortune to become one of those memorable characters. He became known as Inspector Clouseau after the hapless Peter Sellers movie character. For some reason he became the nemesis of Blenkie, the bosun, a man not to be trifled with. Early in the cruise, in the middle of the night in the midst of some rather heavy weather, Inspector Clouseau made an urgent dash to the washroom but didn't quite make it in time to communicate on the Great White Telephone. Unfortunately, Blenkie chose that moment to enter the washroom whereupon he slipped, fell, and slid across the room. A few days later, Inspector Clouseau was hosing sand off the video grab when he accidentally turned the hose on Blenkie, soaking him from head to foot. On another occasion, I was standing on the bridge watching the deck crew chip, prime, and paint the fo'c'sle deck and then retire to the mess for a well-earned coffee break. A few minutes later Inspector Clouseau appeared, climbed the ladder to the freshly painted fo'c'sle deck and proceeded across it. After about three or four steps, he paused, examined the soles of his shoes, then continued up to the bow leaving a neat trail of footprints.

I have to admit that he was not the only one to commit this particular sin of



*Campod being deployed near the Hibernia GBS.*

walking on a freshly painted deck. On that same trip, I had reason to visit the Engine Room to speak to one of the engineers. Finding no one in the Control Room, I wandered about until I located him in the workshop area where I completed my errand and returned to the lab. A few minutes later, an irate oiler appeared and demanded to see the soles of our shoes. Much to my embarrassment, mine were covered with the same colour paint as the freshly painted deck in the Control Room.

The success of our Grand Banks experiment was very much dependent upon the performance of the Video Grab. Unfortunately, during our third and final visit to the Grand Banks site in 1995, its underwater hydraulic pump failed and could not be repaired at sea. Peter Vass contacted Mark Chin-Yee at BIO and arranged for a new pump to be purchased and flown to St. John's where we met Mark a few days later. He and Peter then dismantled the entire hydraulic system, cleaned it, and reassembled it over a 48-hour period. My clearest recollection of that activity was walking into the lab on CSS *Parizeau* and seeing literally hundreds of hydraulic parts carefully laid out on Kimwipes on every available horizontal surface. Having fixed the Video Grab, a very tired Mark departed for Halifax and an equally tired Peter Vass slept all the way back to our trawl impact site. This proved to be project leader Terry Rowell's last visit to the site as he retired later that year.

During this same trip in 1995, Kee Muschenheim and Tim Lambert did some drill waste impact studies at the Hibernia Gravity Based Structure (GBS). This was the first time I had ever seen it. While it would be an impressive structure anywhere, it is especially so when it appears out of the fog in the middle of the ocean. When entering Halifax harbour at night, I have always found the Dartmouth Imperial Oil refinery an intriguing sight with its twinkling lights and gas flare, but it pales in comparison to the GBS with its bright orange and white lights and giant gas flare set against a dark sky and ocean.

Of all the devices we were using during these years, BRUTIV was perhaps the most frustrating. It proved extremely difficult to get it into the water without either breaking the electrical conductor inside the tow cable or the weak link that secured the cable to the vehicle. Once launched successfully, our problems were not over. Sensors would fail, water would leak into the hydraulic system, electronic circuits would fail, etc. However, each time I was about to give up, Dave Harvey would get it working



and we would produce amazing video imagery of the sea floor that made up for the many failed attempts. For example, in 1994 we failed to produce any worthwhile video during the trawl impact cruise to the Grand Banks, whereas in the following year we did several tows along the disturbed and undisturbed plus one at the Hibernia Gravity Based Structure (GBS) location. On one occasion that year, we put BRUTIV in the

water, waited until the CSS *Templeman* had passed us dragging its bottom trawl then tucked ourselves in immediately behind the trawl to observe what was happening on the sea floor. To me the most interesting event during that tow was the sight of many crabs scuttling into the freshly trawled area to feast on the various damaged organisms.

Watching the BRUTIV video for any length of time at sea proved to be a

quick trip to seasickness for many because the ship motion sensed by the observer's body was out of synch with the BRUTIV motion sensed visually. It turned out that Tim Milligan and I were the least affected by this odd effect so we were the two who were lucky enough to see a seal swim by underneath BRUTIV late one night blithely ignoring the vehicle and its lights.

## FROM THE ARCHIVES ... 35 YEARS AGO

*Compiled by Bosko Loncarevic*

[These Highlights are excerpted from *BI World Newsletter*, published at the Institute between 1967 and 1973. Complete versions are posted on our web site.]

{January, 1971, Vol. 5, No. 1} - Dr. (Ced) Mann's Seminar on "Physical Oceanography on HUDSON 70 Voyage" - "A demonstration of the mutual respect and admiration between fisheries scientists in Britain and in Canada is the best way to summarize the visit of the Lowestoft Research Vessel *CIROLANA* to the Bedford Institute." - CSS DAWSON In West Indies on a metrology cruise - Meeting at BIO of the "East Coast Working Group" (a regional daughter group of the Canadian Committee on Oceanography) - Long report on Gordon Research Conference on chemistry by A. Walton - Dr. Roger Pocklington joined Chemical Oceanography on 18 January. - C.D. Maunsell provided a mathematical solution to "How Long is the banana?" (posed in Dec. 1970 issue) - More on "Principles of existence in the Civil Service" (e.g. demonstrate clearly your incompetence to do work of your subordinates) - A 44 ft wave snapped two of the four anchor cables on the Stable platform.

{February, 1971, Vol. 5, No. 2} - Seminar

by Dr. Henry Charnock, Director, NIO-UK. - ICNAF Report - Dartmouth Free Press Reports on RAD Building - B. Lumsden proposed a new layout for typewriter keyboards - Mike Bewers reported on Royal Society Symposium on "Mercury in Man's Environment" - Another mathematical puzzle - Another poem about "Red Tape" - All seven ships were at BIO or in refit.

{March, 1971, Vol. 5, No. 3} - Report on Tenth Annual Hydrographic Conference - All seven ships were at BIO or in refit - More tips on travel around the Province - Long Report by Peter Beamish on "A cruise on an Antarctic whaler" - Accidents can be prevented - Another poem in response to previous month - Solution to Math Puzzle by C.D. Maunsell - David Heffler joined Marine Geophysics.

{April, 1971, Vol. 5, No. 4} - Dalhousie University Computer Centre announced that they will be installing a Control Data 6400 Computer during June (with remote access from BIO) - All ships out at sea. Weekly reports from Hudson, Baffin, and Dawson - Report by L.M. Dickie on MEL's "Fish-counting cruise" - Air-Sea interaction measurements in the Arctic - Steve Grant joined the Navigation Group - "Notes on a Family Vacation in Lisbon" by Mrs. John Brooke - Norman Sabowitz joined the Library - Don Peer's description of boating in the Bahamas - Work assignments for 29 summer students.

{May, 1971, Vol. 5, No. 5} - Weekly messages from Hudson, Baffin, Dawson, and Kapuskasing - Baby girls born to Parsons, Lawrences, Lockes, and Dessureault; baby boy to Bingham - "Ten days in London on a tight budget" by Mrs. John Brooke - Captain D. W. Butler, Master, CSS Hudson received an Honourary Doctor of Laws degree from Brock University - "Nature of Fire" (Notes by the safety Committee) - More tips on travel around the Province.

{June-July, 1971, Vol. 5, No. 6 & 7} - Tenders for a 420-foot extension to the Resource Management Conservation Branch, Core Building, have closed and a contract has been awarded to the low bidder Boyd & Garland at \$99,300. - Summer tours of the Institute started in July and a total of 761 tourists visited during the first month - Dr David Garner left for New Zealand; Ross Richards left for Ottawa - Joining the Institute were Jim Cuthbert, Mrs. M. Trapnell, Mrs. Cheryl Yates, Mrs. Paulette Kampermann and C.R. Butler - Report on Annual meeting of the Canadian Public relations Society by C.E. Murray - Weekly messages from Hudson, Baffin, Dawson, Kapuskasing, and Maxwell - Batfish Test on CNAV BLUETHROAT - ICNAF Report - CDC 6400 computer installed at Dalhousie U.

And that was that at the end of July 1971.

## TIME FOR A QUIZ?

1) Some months have 30 days, and some months have 31 days. How many months have 28 days?

2) If a doctor gives you 3 pills and tells you to take one pill every half hour, how long would it be before all the pills had been taken?

3) I went to bed at eight o'clock in the evening and wound up my clock and set the alarm to sound at nine o'clock in the morning. How many hours sleep would I get be-

fore being awoken by the alarm?

4) Divide 30 by half and add ten. What do you get?

5) A farmer had 17 sheep. All but 9 died. How many live sheep were left?

6) If you had only one match and entered a COLD and DARK room, where there was an oil heater, an oil lamp, and a candle, which would you light first?

7) A man builds a house with four sides of rectangular construction, each side having a southern exposure. A big bear comes along.

What colour is the bear?

8) Take 2 apples from 3 apples. What do you have?

9) How many animals of each species did Moses take with him on the Ark?

10) If you drove a bus with 43 people on board from Halifax and stopped at Fredericton to pick up 7 more people and drop off 5 passengers and at Rimouski to drop off 8 passengers and pick up 4 more before eventually arriving in Montreal 20 hours later, what is the name of the driver?

(See page 12 for the answers.)



## Noteworthy Reads: BOOK REVIEWS IN BRIEF

David N. Nettleship,  
Book Review Editor

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 HRM libraries. Book prices are regular retail in Canadian funds, but discounts of 20-30% are normally available on line at: e.g., amazon.ca or chapters.indigo.ca. Contributions of book reviews to 'Noteworthy Reads' are welcome – send via e-mail to David Nettleship: dnnlundy@navnet.net (phone: 902-826-2360).

### SPECIAL PUBLICATION: SEA TURTLES AND THE STORY THEY TELL

**Safina, Carl. 2006. *Voyage of the Turtle: In Pursuit of the Earth's Last Dinosaur*.** Henry Holt, New York, NY. 383 pp. Hardcover, \$37.50 (ISBN 0805078916). – Safina, a well-known marine conservationist, scientist and author – '*Song for the Blue Ocean*' (1998), '*Eye of the Albatross*' (2002) – focuses attention on the plight of sea turtles generally and leatherbacks in particular. The leatherback, the largest sea turtle weighing 1,000 pounds and more, is so ancient a species that its ancestors saw the rise and fall of the dinosaurs, and truly can be considered "the closest thing we have to a living dinosaur." This beautifully crafted and illustrated book explores the biology and ecology of leatherbacks through their worldwide ocean range. Details abound about the reproductive cycle of this intriguing reptile, from its attachment to land for nest preparation by digging, egg laying and hatching, to the females return to the sea and subsequent pelagic migrations. Safina follows the turtles and introduces the reader to the scientists that study them in the Atlantic and Pacific oceans. Current research shows that the numbers of turtles are declining sharply in the Pacific and doing only marginally better in Atlantic waters, reductions due largely to human activities. The underlying message is a simple one: if killing on the nesting grounds, drowning in fishing nets and longlines, depletion of the food supply by overfishing and global warming are not soon controlled the leatherback and other marine turtles face an uncertain future.

### GENERAL REVIEWS

**Day, Trevor. 2006. *Whale Watcher: A Global Guide to Watching Whales, Dolphins and Porpoises in the Wild*.** Firefly Books, Buffalo, NY. 160 pp. \$19.95, softcover (ISBN 155407200X). – This new guide to whales, dolphins and por-

poises is a useful addition to the plethora of guides directed towards cetacean enthusiasts. Not only is this work beautifully illustrated with stunning action colour photographs throughout, it also provides full details of the more than 85 species of cetaceans currently recognized including tips on species identification, where and how to watch them, and principal physical and behavioural characteristics. Families and species are described in descending order of size, from the giant blue whale to the smallest dolphins and porpoises. But what separates Day's guide from most others is the focus directed towards the natural history and habitat of each species. In addition, feature spreads on more than 40 of the most frequently watched and studied species are presented, highlighting the findings of the latest researches on topics such as communication and social structure. Essential information is also given on present status and threatened species, and conservation efforts. '*Whale Watcher*' will satisfy the needs of a wide readership, from the most avid whale-watching enthusiast to the professional biologist.

**Dear, I.C.B. and Peter Kemp, eds. 2005. *The Oxford Companion to Ships and the Sea*, 2<sup>nd</sup> ed.** Oxford University Press, Oxford, England, UK. 672 pp. \$70.00, hardcover (ISBN 0198606168). – If you're keen to upgrade your knowledge of the maritime tradition and the sea, go no farther than this impressive encyclopedia-style compendium. This second edition provides significant new material that updates the highly successful 1976 original edition. More than 2,600 entries are given on wide-ranging aspects of the sea, listed alphabetically with text and extensive illustrations. The articles include shipbuilding and the historical people involved, facts and folklore of ships of the sea, and numerous aspects of oceanography and marine pollution. A very useful and entertaining reference source for anyone interested in ships and the sea. [Note: softcover edition available October 2006: \$25.95.]

**Gore, Al. 2006. *An Inconvenient Truth: The Planetary Emergence of Global Warming and What We Can Do About It*.** Rodale Press, Emmaus, PA. 328 pp. \$28.95, softcover (ISBN 1594865671). – Here is a book with a message by former US vice-president Al Gore on saving the planet. The narrative is clearly written and carefully planned to take readers through the definition, causal relationships and effects of global warming. Using the findings of an abundance of scientific research and data, Gore provides a reality check on what is happening to the planet from the production of greenhouse gases by human activity. This succinct summary of events should go a long way to convince political leaders that we are facing a climate crisis, and that it is imperative to act. This is a book to read and re-read, and then push our governments into action to deal with the "inconvenient truth" of climate change.

**Getson, Heather-Anne. 2006. *The Bluenose: The Ocean Knows Her Name*.** Nimbus Publishing, Halifax, NS. 128 pp. \$21.95, softcover (ISBN 1551095386). – Here is the story of

the original sailing schooner 'Bluenose' by historian Heather-Anne Getson of the Fisheries Museum of the Atlantic in Lunenburg, NS, the vessel's birth place and home port. With a gripping combination of history and narrative, the life of the people surrounding the vessel and the events that have made her a legend come alive. Details are provided from the launching of the *Bluenose* in 1921 to her sinking offshore in Haiti in 1946. These include never-before published accounts of crew members and 60 b&w photographs by renowned photographer W.R. McAskill. This small work will stand as the most accurate summary of the life of this elegant, beautiful and fast Lunenburg fishing schooner that captured the attention and hearts of countless people around the world.

**Grady, Wayne. 2006. Bringing Back the Dodo: Lessons in Natural and Unnatural History.** McClelland & Stewart, Toronto, ON. 240 pp. Hardcover, \$29.95 (ISBN 0771035047). – In an attempt to better understand the relationship between people and nature, Wayne Grady, an accomplished amateur naturalist and science writer, undertakes a detailed examination of the behaviour of humans and their penchant for destroying wild habitat, killing predators, and nature in general. In a series of thought-provoking essays, he asks fundamental questions and provides answers that are effective in leading all of us towards a better understanding of ourselves. The role of technology in our lives is also addressed, as are explanations of genetically modified plants, animal cloning, global warming and the nature of changes to be expected in the future. Overall, the book raises important questions, identifies what is actually happening in nature, and what humankind should be thinking about.

**Longhurst, Alan R. 2006. Ecological Geography of the Sea,** 2<sup>nd</sup> edition. Academic Press, London, England, UK. 552 pp. \$53.00, softcover (ISBN 0124555217). – Praise for the first edition of this masterful and stimulating book (Academic Press: 1998) was resounding throughout the oceanographic community. It was viewed as a seminal work showing us how the pelagic ecology of ocean regions could be understood using only a few fundamental concepts. It brought together an immense amount of information on oceanographic processes in different areas, and pointed the way towards the most useful research in the future. The second edition of the book, to be released by the publisher on 25 September 2006, will doubtless further enlarge the knowledge base of what is known by incorporating new findings generated since 1998. The excellence of the first edition guarantees that this latest revision will 'polish' the synthesis still more! Clearly, a volume that will continue to be in demand for years to come by both serious students of oceanography and everyone interested in the marine environment.

**Mills, Chris. 2006. Lighthouse Legacies: Stories of Nova Scotia's Lightkeeping Families.** Nimbus Publishing, Halifax, NS. 240 pp. \$27.00, softcover (ISBN 1551095610). – Chris Mills, a self-professed longtime lover of lighthouses and

the people that operated them, has produced an important book that documents the oral histories of the experiences of the people who lived the lighthouse life from the 1930s to the 1980s. Mills, a former lighthouse keeper and co-founder of the Nova Scotia Lighthouse Preservation Society in 1993, has been a longtime advocate of the need to document and preserve the aging lighthouses to retain parts of our maritime history. The present work grew out of his lifelong passion for lighthouses, with the realization that the memories and stories of the lightkeepers were also endangered and likely to be lost, perhaps even more quickly than the lights themselves. So, in 1986, he began to collect oral histories from former keepers of the lights and their family members, and to date has amassed an immense storehouse of information. The book contains fascinating stories that capture the essence of life on remote sites often divorced from the support base available to most other families. *Lighthouse Legacies* has saved an important part of Maritime heritage, and underlines the debt we all owe to those that operated and maintained these essential aids to navigation prior to technological advancements and automation. Let's hope that this volume is but the first of many that author Mills produces.

**Nouqueret, Pierre. 2006. Perfect Waves: The Endless Allure of the Ocean.** Harry N. Abrams, New York, NY. 157 pp. Hardcover, \$38.95 (ISBN 0810957434). – Here is a beautifully produced coffee-table book for any lover of the sea. It is a large-format volume with essays and 145 colour illustrations that celebrate the beauty of waves and the sea that produces them. The essays explain the science of the oceans, the natural movements of water, and the sources and patterns of waves. Characteristics and types of waves are discussed, as are variations in how waves break and why they occur. Wave terminology and its origins are given along with details of our innate fear of waves and the ocean. But it is the outstanding photos that make this a special work, an integrated collection that displays waves in all their breathtakingly beautiful blue-green splendour – a joy to view and nurture within.

**Smith, Gregory Newell. 2005. The Solitude of the Open Sea.** Seaworthy Publications, Port Washington, WI. 259 pp. Softcover, \$22.95 (ISBN 1892399229). – 'The Solitude of the Open Sea' is far more than a sailing log. From his 30-month circumnavigation aboard his sailboat *Atlantean*, a Fast Passage 39, the author/sailor composed a worldly travelogue comprising 17 thoughtful essays. In addition to examining the challenges of sailing around the world, the essays reveal the importance and rewards of broadening our horizons, freeing ourselves from cultural self-centredness, and achieving self-realization through perseverance, hardship and solitude. Smith also presents a culturally sensitive account of the countries and people he encounters. This book brings a new perspective to the sailing life and the cruiser's role in the world.

**Stow, Dorrik. 2005. Oceans: An Illustrated Reference.** University of Chicago Press, Chicago, IL. 256 pp. \$70.50,



hardcover (ISBN 0226776646). – Here is a source book that covers it all! Dorrik Stow, a senior oceanographer at the Southampton Oceanography Centre, has prepared a comprehensive portrait of the world's oceans addressing everything from the formation of the planet and its geology to biology and undersea exploration. First published by Oxford University Press in 2004 as *'The Encyclopedia of the Oceans'*, this reprinting by UCP is welcome owing to the scarcity of the first edition. The work is authoritative, with comprehensive text and hundreds of informative colour photographs, dia-

grams, charts and maps. It is divided into two main sections. The first part, entitled "Ocean Systems", examines the physical nature of the oceans including plate tectonics, seafloor patterns and topography, currents, wave and tidal movements, energy, seawater chemistry, and climate. The second part, "Ocean Life", covers the remarkable diversity of marine life, its evolution and adaptation, community complexities and ecological requirements, and the need for protection of many fragile marine environments. Overall, a magnificent and visually stimulating information source about 'the blue planet'.

## MEL TO HOLD REUNION

A reunion of the Marine Ecology Laboratory (MEL) is being planned for Friday, 17 November. MEL, disbanded in 1987, was at the time of its inauguration a branch of the old Fisheries Research Board of Canada and one of the early members of the BIO community.

An afternoon session to be held in the BIO auditorium will feature reminiscences of past activities and science programs, with a key talk given by Lloyd Dickie, the original director of the lab. Later, a banquet will be held at the Westin Nova Scotia in Halifax. In addition, Saturday activities are being planned; weather permitting, these will probably be outdoor.

Friends of MEL are invited to attend the afternoon session, and, if space permits, to attend the evening dinner. For more details, anyone interested can contact Tim Lambert (lambertt@mar.dfo-mpo.gc.ca) or Don Gordon (gordond@mar.dfo-mpo.gc.ca), either by phone through the BIO switchboard.

## NEXT "BIO OPEN HOUSE" ANNOUNCED

BIO will organize an Open House on the theme of "Science for the Modern Era" to be held from 17-21 October 2007. This major public relations initiative will showcase the Institute's soon-to-be-named Level II science lab building and the cutting edge science that will be carried out there.

A meeting of the organizing committee for the event will be held on 25 September 2006, after which proposals for exhibits will be solicited. The organizing committee would like this Open House to be a total BIO experience and encourages all staff to participate. The invitation to participate in all aspects of the Open House has also been extended to all members of the BIO - Oceans Association. Those interested in volunteering and/or obtaining additional information can contact: Claudia Currie (426-7442), Denise McCullough (426-4274) or Joni Henderson (426-3559).

As the Organizing Committee noted, the 2002 Open House was amazing and they are encouraging one and all to make the 2007 Open House even better!

## FROM THE "GROANER" FILES

1) Florence Flask was dressing for the opera when she turned to her husband and screamed, "Erlenmeyer! My joules! Someone has stolen my joules!"

"Now, now, my dear," replied her husband, "keep your balance and reflux a moment. Perhaps they're mislead."

"No, I know they're stolen," cried Florence. "I remember putting them in my burette ... We must call a copper."

Erlenmeyer did so, and the flatfoot who turned up, one Sherlock Ohms, said the outrage looked like the work of an arch-criminal by the name of Lawrence Ium.

"We must be careful -- he's a free radical, ultraviolet, and dangerous. His girlfriend is a chlorine at the Palladium. Maybe I can catch him there." With that, he jumped on his carbon cycle in an activated state and sped off along the reaction pathway.

2) Jacob, 92, and Rebecca, 89, are very excited about their decision to get married. They go for a stroll to discuss the wedding, and on the way stop in at a drugstore.

Jacob asks the pharmacist behind the counter: "Are you the owner?" The pharmacist answers, "Yes."  
Jacob: "Do you sell heart medication?" Pharmacist: "Indeed."  
Jacob: "How about anti-inflammatory drugs?" Pharmacist: "All kinds."  
Jacob: "Medicine for rheumatism and scoliosis?" Pharmacist: "Definitely."  
Jacob: "How about Viagra?" Pharmacist: "And more."  
Jacob: "Medicine for memory problems, arthritis, jaundice?" Pharmacist: "Yes, a large variety. The works."  
Jacob: "What about vitamins, sleeping pills, iron deficiency pills, antidotes for Parkinson's disease?" Pharmacist: "Absolutely."  
Jacob: "Do you sell wheelchairs and walkers?" Pharmacist: "All speeds and sizes."  
Jacob: "Perfect. We want this store to be our bridal registry!"

## 2006 Membership List

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Richard Addison, 250-537-1558  
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Joan Guilderson, 254-3405  
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Albert Hartling, 477-0102  
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Karen Scott, 905-337-2364  
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William Silvert, 351-212-900 385  
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Stuart Smith, 434-2489  
Florence Spencer, 832-1148  
Shiri Srivastava, 434-6437  
Michael Stepanczak, 462-5819  
William Stephen, 863-1580  
James Stewart, 826-2025  
Patrick Stewart, 780-481-0056  
Betty Sutherland, 454-6557  
Betty Tillman, 860-1978  
Willem van der Linden, 3130 691 05 60  
John Vandermeulen, 860-0219  
Edward Verge, 434-4987  
Richard Vine, 434-1573  
Earle Wagner, 477-5589  
Donald Waldron, 203-254-1891  
Rosalee Wambolt, 462-2875  
Ying Wang, (China) 86(25)620-7810  
Richard Wardrope, 434-4174  
David Wells, 506-454-2650  
Peter Wells, 477-3674  
William Whiteway, 861-1021  
Heinz Wiele, 852-2922  
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Scott Young, 861-3322  
Maurice Zinck, 462-0333

**BIO - Oceans Association “Fall Celebration and Seminar”**

George Needler Boardroom  
Bedford Institute of Oceanography

**Thursday, 23 November 2006**

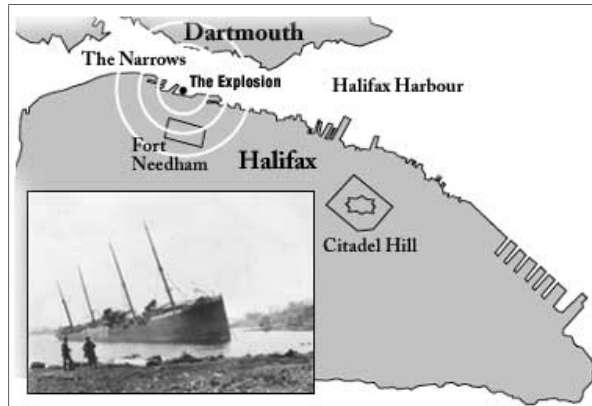
(Doors open 7:00 pm, talk starts 7:30 pm — refreshments will be served)

## THE HALIFAX EXPLOSION OF 1917

*Speaker: Janet F. Kitz*

**J**anet Kitz has written two books published by Nimbus Publishing on this infamous event in our city's history: *Shattered City: The Halifax Explosion and the Road to Recovery* and *Survivors, Children of the Halifax Explosion*. She has contributed to research on the Halifax Explosion for over 20 years and has been a long-time contributor to the Atlantic Canada Studies Program and the Gorsebrook Research Institute at Saint Mary's University.

Janet will present an illustrated talk to the BIO - Oceans Association based on her research on the Halifax Explosion of 1917. She has had a passion about the Halifax Explosion for many years and has a unique insight into this tragic event based on her research of the personal artifacts of many of those who died.



This presentation is timed for delivery a few weeks before the annual anniversary of the explosion on 6 December, and Janet will provide a moving glimpse into the lives of many who perished and the recovery efforts of the community.

Both members and non-members are welcome. Come and join us on Thursday, 23 November 2006 for this enlightening talk on the Halifax Explosion. You will learn how the tragedy shaped the lives of its survivors and how it continues to have resonance in our daily lives.

For additional information call: Gordon Fader at 455-6100 ([gordon.fader@ns.sympatico.ca](mailto:gordon.fader@ns.sympatico.ca)). There is a voluntary donation of \$1.00 per person to help offset the costs of the refreshments: juices, tea and coffee along with a selection of cookies.

Answers to the quiz on page 6:

- 1) All of them.
- 2) 1 hour. If you take a pill at 1 o'clock, another at 1.30, and the last at 2 o'clock, they will all have been taken in 1 hour.
- 3) 1 hour. It is a wind-up alarm clock which cannot discriminate between a.m. and p.m.
- 4) 70. Dividing by 1/2 equates to multiplying by 2.
- 5) 9 live sheep.
- 6) The match.
- 7) White. If all walls face south, the house must be on the North Pole.
- 8) Two apples. (I have 3 apples, and you take two of them.)
- 9) None. It was Noah, not Moses.
- 10) You are the driver.

## *Shubenacadie Canal Trip Being Planned*

Keith Manchester is planning a field trip and luncheon to sites along the Shubenacadie Canal to be held on **Wednesday, 25 October 2006**. Details are being worked out but will likely include a visit to the Fairbanks Centre and various locks and points of interest along the canal route as well a stop at the Inn on the Lake for lunch.

Watch your e-mail for further information. If interested, let Keith know [902] 861-3509 or [k.manchester@ns.sympatico.ca](mailto:k.manchester@ns.sympatico.ca) ].

## **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 Environ-

ment, Fisheries and Oceans, and Natural Resources (or their predecessors) located in the Halifax Regional Municipality. Membership is \$5.00 per year, \$25.00 per half decade, or \$100.00 for a lifetime membership.

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Timothy Lambert	426-3872
Carol Manchester	861-3509

<a href="mailto:betty.sutherland@dal.ca">betty.sutherland@dal.ca</a>
<a href="mailto:charlesschafer@hotmail.com">charlesschafer@hotmail.com</a>
n/a
<a href="mailto:d.peer@ns.sympatico.ca">d.peer@ns.sympatico.ca</a>
<a href="mailto:bobheather@eastlink.ca">bobheather@eastlink.ca</a>
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<a href="mailto:rreiniger@hfx.eastlink.ca">rreiniger@hfx.eastlink.ca</a>
<a href="mailto:shirisrivastava@hfx.eastlink.ca">shirisrivastava@hfx.eastlink.ca</a>
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<a href="mailto:k.manchester@ns.sympatico.ca">k.manchester@ns.sympatico.ca</a>

### **Communications: Newsletter, PR, and Web Site**

NEWSLETTER EDITOR  
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WEBMASTER

Michael Latrémouille	434-4036
David Nettleship	826-2360
Clive Mason	426-4163
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<a href="mailto:latremouille@accesswave.ca">latremouille@accesswave.ca</a>
<a href="mailto:dnnlundy@navnet.net">dnnlundy@navnet.net</a>
<a href="mailto:masoncs@mar.dfo-mpo.gc.ca">masoncs@mar.dfo-mpo.gc.ca</a>
<a href="mailto:infocd@cd-books.com">infocd@cd-books.com</a>

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Dale Buckley	434-5734
Gordon Fader	455-6100
David McKeown	477-5887
Bosko Loncarevic	835-9606
Michael Latrémouille	434-4036
Art Cosgrove	443-7945

<a href="mailto:dbuckley@ns.sympatico.ca">dbuckley@ns.sympatico.ca</a>
<a href="mailto:gordon.fader@ns.sympatico.ca">gordon.fader@ns.sympatico.ca</a>
<a href="mailto:davidmckeown@hfx.eastlink.ca">davidmckeown@hfx.eastlink.ca</a>
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