



BIO-OCEANS ASSOCIATION NEWSLETTER

Issue 39, July 2008

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PICNIC PLANS IN PREPARATION

Mark those calendars! On **Thursday, 4 September 2008**, Shiri Srivastava will host the BIO - OA annual summer picnic at his lovely home at 349 Waverley Road on Lake Charles. In case of rain, the picnic will be on Monday, 8 September. Please contact Gordon Fader (455-6100) if you can lend Shiri a hand in preparing for the event.

FROM THE PRESIDENT

Summer has finally arrived and with that all the things that come with it – vacations, BBQs, sailing, golf, and of course hiking, which the Association did on the 23rd June excursion to McNabs Island. Bob Cook provides a report of the trip in this issue so I won't steal his thunder, only to say that it was a great start to the summer. Thanks to Bob Cook, Gordon Fader, Georgina Phillips, Carol Manchester, Clive Mason, and Dave McKeown for making it happen. And of course summer is also about picnics. Plans for the Association's 2008 picnic are in preparation and we can use volunteers for the event—see note below. The Executive is also having discussions on future excursions which you will be hearing more about over the summer and in next newsletter.

Regarding significant dates, the International Council for the Exploration of the Sea (ICES) is holding its annual science conference here in Halifax during 22 – 26 September at the World Trade and Convention Centre. In the ocean science community, this is a pretty big event and will attract a large number (2000 – 3000) of scientists from all over the world. A number of BIOers are quite involved in the conference. Check out the ICES website at <http://www.ices.dk/iceswork/asc/2008/index.asp>.

The Executive has been busy on a number of ongoing projects - Keith Manchester and Don Peer on HMCS *Sackville*, Dale Buckley on BIO Commemorative Stamp, Charlie Schafer on Oceans Outreach, to name a few. Reports on some of these projects are included herein.

Finally, there have been a number of changes to the Executive. Don Gordon is taking over my position as Vice-President, while Iris Hardy is taking over as Secretary from Bob Cook. He and the outgoing Past President, Don Peer, have agreed to stay on the Committee to assist on various projects. And of course the outgoing President, Betty Sutherland, will be remaining on the Committee. Rene Lavoie is taking over from Dale Buckley as chair of the Beluga Award Committee. Finally, Mike Hughes, who was one of the Association's original members, has rejoined the Committee as our Director-at-Large. Welcome aboard, Mike!

Have a great summer everyone and see you at the September picnic!

— Bob O'Boyle

1973'S SEA KING HELICOPTER CRASH AND RECOVERY: A LOOK BACK AT BIO'S INVOLVEMENT

David McKeown

The group responsible for the preservation of HMCS *Sackville* is currently creating a web site documenting the vessel's history. In support of that effort, Ted Smith, the Marine Superintendent at BIO before his retirement, is collecting information on *Sackville*'s role as an oceanographic research vessel. This triggered a memory of my first trip on that ship 35 years ago.

On 26 April 1973, a Canadian Navy Sea King helicopter went down about 20 nautical miles south of Chebucto Head in 180 m of water. The four crew members escaped uninjured. In those days, we did not have pinpoint navigation as we do today, so its position was only known to within 2 - 3 nautical miles based on range and bearing information sent to a Tacan radio beacon ashore.

The next day, in response to a request from the Navy, Clive Mason and Keith Manchester asked me to coordinate a search for the helicopter. The CFAV *Sackville* (as it was known then) was assigned to the task and I put together a team of BIO staff including Paul Jollymore, Paul D'Entremont, and Don Eisener from Metrology Division, and three hydrographers: Mike Eaton, J.S. Warren, and R.L. Tracy. After some initial scurrying around and a flurry of phone calls to the customs broker, we were able to borrow a Klein sidescan that was in the process of being delivered to the Canadian Hydrographic Service. We also borrowed an underwater video system from Charlie Godden, Marine Geology, AGC.

After the sidescan cable was put on the massive steam-powered winch on the ship's afterdeck, we sailed for Basin trials on 30 April. As was so common in those days, there ensued a series of catastrophes that left us working late into the night to dry out underwater electronic units and locate leaks. After successful Basin trials the following day, we departed for the search area. Shortly after we put the sidescan in the water it quit again. Meanwhile, a faint trace on the precision oceanographic echo sounder we had installed indicated that we had steamed over an interesting object on the bottom. Eventually, we got the sidescan working and over the next two days did a thorough survey of the search area using the Decca navigation system for positioning. While we identified two other

possible targets, we felt that the one we had seen on the echo sounder at the very beginning of the survey on the first day was most likely the helicopter wreckage. Lt.-Cmdr. Bob Coren, the naval person in charge of the operation, asked us to positively confirm our conclusion before DND mounted an expensive recovery operation.

After a hearty breakfast of CFAV *Sackville*'s specialty, Kentucky Fried eggs, we tried using the video system to do this. Because the ship had only a single screw and no bow thruster, this effort failed. Next, Paul Jollymore rigged the sidescan to tow on its side at a depth of about 15 m to create a high-resolution echo sounder with a fan-shaped beam. Our thinking was that the high frequency would produce a better reflection from the helicopter structure and the narrow beam would give us a better measure of the target dimensions. Several tows in different directions across the target provided us with a good measure of its length, width and height, which were consistent with Sea King helicopter dimensions. In spite of our certainty, DND officials insisted on a second week of work at the site. First, we repeated some of our survey efforts; then, with two naval tugs made fast to CFAV *Sackville*, we again attempted to get video footage to confirm our supposition. This turned out to be a lesson in bad seamanship with lines parting, angry interchanges over the radio, etc., so we gave up and concluded that phase of the operation.

In late May and again in early June, Des Dobson and I made two more unsuccessful attempts to obtain still and video footage of the target. Meanwhile, DND was organizing a major salvage operation. They shipped the Pisces IV submersible from the west coast and installed it on one of the large HMC Dockyard crane barges that were used within the harbour in those days. This was far from a sea-going craft, but that was all they had available with the necessary lifting capacity. The Queen's Harbour Master, Cmdr. Vondette, who was in charge of this phase of the operation requested that we place an acoustic marker as close to the target as possible. We secured the sidescan fish on its side to a pole, attached this to the rail of the naval tug CFAV *St. Charles* and used this system to maneuver the ship directly over the wreck. We then dropped an acoustic pinger to act as a marker for the submersible. After watching the first unsuccessful Pisces IV dive, we

returned to BIO.

Two weeks later, Lt.-Cmdr. Coren phoned to give me an update on operations. After some problems with equipment, weather, and underwater navigation, they found the helicopter about 8 m from the pinger we had dropped on day one. They eventually attached a lifting line, but that broke and they were forced to abandon the recovery attempt. The real point of Bob's phone call was to ask if there was any way we might be able to provide a means of positioning the submersible underwater as that seemed to be a critical requirement for the next recovery attempt. In those days, there were no commercial systems available, and so over the next few weeks Paul D'Entremont and I were able to jury-rig an acoustic system to do this using various electronic components available at BIO.

A second recovery attempt, again employing Pisces IV, was made in mid-summer. Paul spent several days on the crane barge at the site providing positioning information using our jury-rigged system. Eventually, the submersible was able to attach a lifting line to the rotor hub of the helicopter. However, the lugs securing the transmission to the helicopter frame had corroded so badly by this time that all they recovered was the rotor, transmission and port engine. A third attempt was made in autumn using DND's SDL-1 submersible which had finally completed a lengthy refit. Again, Paul provided positioning information throughout the operation. This time the submersible operators were able to attach a line to a strong point on the helicopter frame and it was finally brought to the surface.

At the conclusion of the operation, Cmdr. Vondette sent me a very lengthy letter describing the recovery effort, thanking us for our contributions and highlighting the contribution made by Paul D'Entremont. Also, Rear-



The Sea King helicopter is winched aboard a barge after its recovery by the SDL-1 submersible (foreground). Photo courtesy of the Canadian Forces.

Admiral Boyle, Commander Maritime Command, sent a very complimentary letter to Dr. W.L. Ford, Director, AOL, expressing his appreciation of our efforts. I make mention of this as I think that acknowledgements such as this are not done as often as they should be and are greatly appreciated by participants when received.

As a consequence of our success in positioning the submersible during the salvage operations, DND requested that we assist them during submersible dives on the *Irving Whale* the following year. This led directly to our development of Sea Rover and our efforts to measure the amount of oil remaining in its tanks, but that is a story for another time.

THE BIO-OA GOES TO McNABS ISLAND

BOB COOK

June has been a foggy and rainy month and a field trip to historic McNabs Island in Halifax Harbour could be miserable if it rained. A second rain date was planned as a precaution. Fortunately, this was not needed and Monday, 23 June 2008, turned out to be just perfect.

Twenty five BIO-OA members and guests boarded the *Peggy's Cove Express* at Murphy's on the Halifax waterfront at 10 a.m. and headed to Garrison Pier in McNabs Cove, the starting point for our expedition. Bob Cook, the tour coordinator, had hiking maps and a listing of points of interest available for everyone. Ad-hoc groups formed and headed out, some starting on the trail heading south towards Fort McNab and some north to Fort Ives. The trails were pleasantly accessible making for an easy walk. The only rule was for everyone to be back to the pier by 3 p.m. Everyone had brought a picnic lunch.

As one walked along the various trails through the natural and untouched woodlands and fields, it was hard to believe this quiet and beautiful oasis was sandwiched between the bustling cities of Halifax and Dartmouth. A deer fawn nestled in the woods was a key attraction. On the higher points on the trail, looking westward, the Halterm container-ship port loomed across the water at the edge of Point Pleasant Park; looking east, the oil refinery at Dart-

mouth took centre stage. Fallen trees from Hurricane Juan were in evidence everywhere.

The prime points of interest were the various fortifications that spanned well over 200 years of history. To the north, the Hugonin Battery gave a commanding view over the channel into Halifax Harbour. Farther north, Fort Ives,

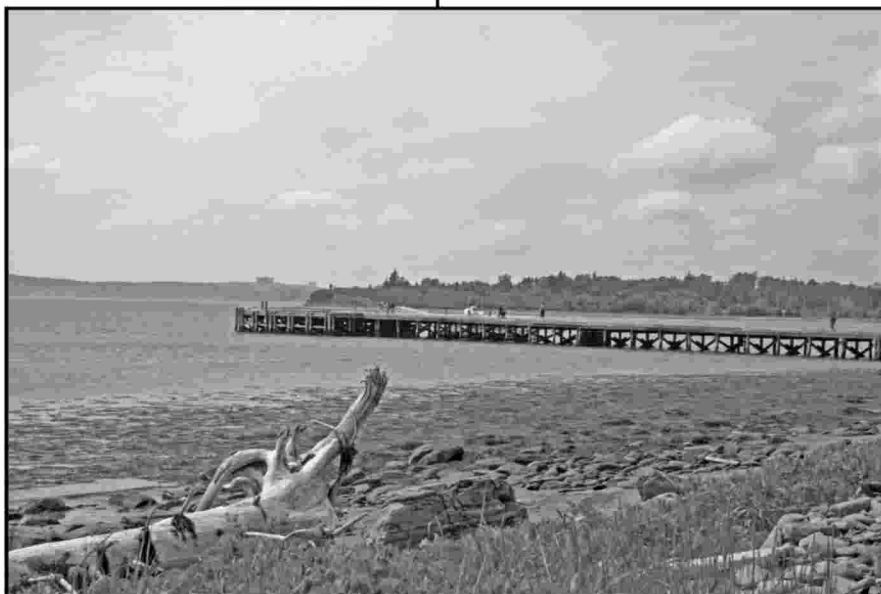
complete with many cannons stamped "VR", was clearly of a 19th century vintage. To the south, Fort McNab appeared to have a 20th century tone with observation bunkers, and more modern WW2 gun emplacements. It was

unfortunate to see all the fortifications in a sad state of disrepair. Given the historic "Warden of the North" presence of the Halifax Citadel and its many supporting fortifications such as those on McNabs Island, the consensus of the BIO-OA visitors was the need for the restoration of these landmarks.

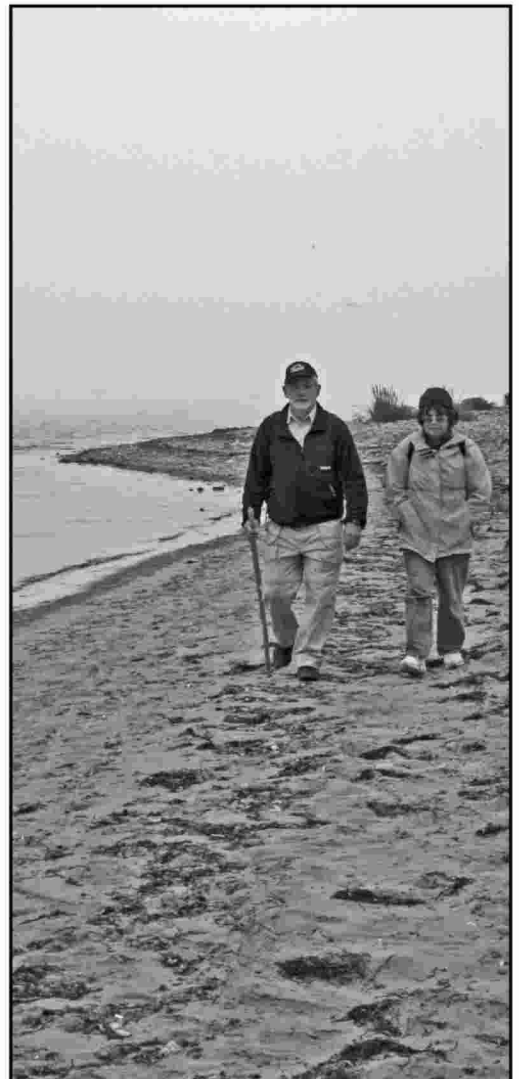
As the BIO-OA group boarded the boat back to Halifax, the final sight of Hangman's Beach, and its notoriety,

weighed on everyone's mind. Many years ago, to be a convicted mutineer did have its drawbacks!

Our visit to McNabs was a wonderful experience. Our thanks go to Carol Manchester and Clive Mason for their help in organizing this most interesting excursion. Check out the fol-



following web sites for more information:
www.novascotiaparks.ca/parks/mcnabs.asp
www.en.wikipedia.org/wiki/mcnabs_island
www.mcnabsisland.ca.





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

SPECIAL PUBLICATION:

THE UNITY OF ALL ORGANISMS

Shubin, Neil. 2008. *Your Inner Fish: A Journey into the 3.5 Billion-Year History of the Human Body*. Pantheon Books (Random House), New York, NY. 229 pp. Hardcover, \$28.00 (ISBN 9780375424472). – Neil Shubin, a leading fish paleontologist and professor of anatomy, takes us on an incredible journey of discovery of how the human body evolved into its present state and the connections between our anatomy and that of fish, amphibians, reptiles and other animals including invertebrates. He cleverly weaves together his adventures in paleontology including his co-discovery of a 375-million-year-old fossil fish, *Tiktaalik*, in the arctic and other exciting discoveries that demonstrate links between marine fish and early land-dwelling forms leading to the origins of the human body. This extraordinary book illuminates the subject of evolution (and the modern science of evolutionary biology) with amazing clarity, humour and infectious enthusiasm. Overall, Shubin presents the findings of paleontology, genetics, embryology, anatomy and physiology in a way that awakens and excites the "scientist" in all of us, and by doing so has created a book that is difficult to put down. Read, enjoy and learn how living things – including mankind – got to be what they are!

GENERAL REVIEWS

Bown, Stephen R. 2008. *Madness, Betrayal and the Lash: the Epic Voyage of Captain George Vancouver*. Douglas and McIntyre, Vancouver, BC. 254 pp. Hardcover, \$34.95 (ISBN 9781553653394). – Here is a book to be read by anyone interested in Canadian history and the exploration and mapping of the west coast of North America. George Vancouver, captain of the British ships *Discovery* and *Chatham*, departed England on 1 April 1791 and returned four years later after conducting one of the greatest marine surveys of all time. He and his men surveyed and charted more than 1,700 miles of the Pacific coastline in incredible detail, mostly in small open boats, and also discovered Vancouver Island. Not only did Vancouver accomplish the two major objectives set by the British Admiralty for the voyage – map the Pacific coast from California to Alaska and settle the sovereignty dispute with Spain – but brought his crew home without a single fatality and in good health (Vancouver was a pioneer in the battle to eradicate scurvy at sea). Despite these great achievements, Vancouver never received the recognition and applause he deserved, largely owing to the troublesome and well-connected Thomas Pitt, relative of then prime minister William Pitt, who served as midshipman on Vancouver's ship and had to be disciplined numerous times by Vancouver for theft and dereliction of duty. Once back in London, Pitt launched an effective smear campaign against Vancouver that destroyed his reputation. Although ignored by the British establishment of the day and subsequently by most nautical historians, Stephen Bown's book presents a thorough re-evaluation of George Vancouver and his accomplishments, finding Vancouver to be an "explorer-cartographer-mariner" extraordinaire, without question one of the greatest explorers of the "Age of Discovery". A must read for both historians and those interested in marine adventure stories filled with details of 18th century geopolitics and British society.

Dawkins, Richard. 2008. *The Oxford Book of Modern Science Writing*. Oxford University Press, Oxford, UK. 419 pp. Hardcover, \$34.95 (ISBN 9780199216802). – Here is a collection of science writing at its best, by many of the most outstanding scientists of the 20th and early 21st centuries, selected and introduced with personal commentaries by biologist Richard Dawkins. The collection is divided into four parts: "What Scientists Study", "Who Scientists Are", "What Scientists Think", and "What Scientists Delight In". Doubtless the task of selecting the best scientists and their best works to fit the four objectives of the volume was formidable. But Dawkins has

executed the selection process with precision and provides the reader with a most unique experience: not only identifying those science writings of special note and the reasons for their selection, but also giving us an insight into the personalities and inner workings of the scientists themselves. An informative and captivating read of the works of the world's most creative minds of the last 100 years and more.

Fortey, Richard. 2008. Dry Store Room No. 1: The Secret Life of the Natural History Museum. HarperCollins Canada, Toronto, ON. 338 pp. Hardcover, \$34.95 (ISBN 9780007209880). – In this volume, Richard Fortey, senior paleontologist at the Natural History Museum (London) and Fellow of the Royal Society, presents the history and formidable structure of the Museum, one of the most celebrated natural history museums in the world. He takes us behind the scenes, into the secret underground domain of the curators and their normally unseen cabinets and collections of priceless specimens and treasures. Although the tour emphasizes the past, Fortey also shows the nature of current investigations by the Museum staff into cutting-edge science, evolution, and the natural world. He underlines the significance of museum collections to the modern world of molecular biology and DNA analysis, and its application to widespread researches ranging from evolutionary science and systematics to a better understanding of the rise of pollution. This book is revealing and a wonderful read!

Grescoe, Taras. 2008. Bottomfeeder: How to Eat Ethically in a World of Vanishing Seafood. HarperCollins Canada, Toronto, ON. 326 pp. Hardcover, \$29.95 (ISBN 9780002007818). – It is common knowledge that fish and other seafoods contribute to good health and long life. This worldwide tour of fisheries by Taras Grescoe paints a disturbing and thought-provoking picture of the state of our seafood supplies and associated fish-eating habits. The book is designed menu-style, taking the reader from the familiar such as a local North American lobster franchise to a far-away foreign location in India serving curry-simmered fish and prawn dishes. What quickly becomes apparent on the tour is the widespread destruction of habitats of seafood species and the overexploitation of almost all species of choice. Also conspicuous through the globe-trotting exercise is the abysmal condition of aquaculture developments worldwide, a push to provide seafood by growing shrimp, salmon and other favoured species in small ponds and net-cages that are highly vulnerable to contamination and disease. Grescoe reviews the chemicals used to control and kill bacteria and viruses that thrive in the farms, and what it means to the quality

of the food produced; for example, in 2004, farmed salmon from Scotland to British Columbia contained as much as ten times more persistent organic toxins than wild salmon. He also provides details of some delectable seafood meals and fish that are safe, exciting and delightful to the palate, but these are in the minority. Although most of the news is bad, Grescoe ends his review on a cautiously optimistic note by stating that the knowledge necessary to save the world's fisheries and oceans exist, only the political will is absent.

Gribbin, Mary and John Gribbin. 2008. Flower Hunters. Oxford University Press, Oxford, UK. 332 pp. Hardcover, \$27.95 (ISBN 9780192807182). – Here is a story of eleven flower hunters from the annals of the history of biology. The authors, both master writers and reviewers of science history, have selected those men and women they consider to be the founding figures of the science of botany. They include familiar names: John Rae (1627-1705), Carl Linnaeus (1707-78), Joseph Banks (1743-1820), David Douglas (1799-1834), and Joseph Dalton Hooker (1817-1911). All eleven had common characteristics. For the most part, they were remarkable, eccentric, obsessive individuals who between them travelled to every corner of the world in search of new and exotic plants. The works they accomplished, and the scientific findings generated from them, stand as a testament to their heroic determination to advance knowledge of the plant world. The Gribbins have made another valuable contribution to the history of the natural sciences!

Krupp, Fred and Miriam Horn. 2008. Earth: The Sequel – The Race to Reinvent Energy and Stop Global Warming. W.W. Norton, New York, NY. 279 pp. Hardcover, \$24.95 (ISBN 9780393066906). – Fred Krupp, longtime president of the Environmental Defense Fund (USA), and research associate Miriam Horn, present a gripping and hopeful 'call to arms' concerning climate change. They state: "We can solve global warming. And in doing so, we will build the new industries, jobs and fortunes of the 21st century." Their argument is for the most part persuasive and convincing, and presented in clearly written, subject specific chapters: "A New Industrial Revolution", "Harnessing the Sun, Parts I and II", "Fuels from Living Creatures", "New Sources of Biofuels", "Ocean Energy", "Power from the Earth", "Reconsidering Coal", "Today's Solutions", and "A World of Possibility". This is a book to be read by those in search for solutions to global warming, from environmental scientists and concerned laypersons to politicians and political leaders.

Rick, Torben C. and Jon M. Erlandson (eds.). 2008. Human Impacts on Ancient Marine Ecosystems: A Global Perspective. University of California Press, Berkeley, CA. 336 pp. Hardcover, \$60.00 (ISBN 9780520253438). – This multi-authored volume containing summaries of comprehensive research by leaders in the fields of marine archeology, zooarcheology, and paleoarcheology makes a significant contribution to our understanding of early human impacts on marine ecosystems. In general, the archeological data collected to date show human adaptations to coastal environments began as early as 125,000 years ago. The eleven case studies reviewed – from the North Sea, Europe, Africa, Caribbean, Americas, Pacific Islands – shed light on the history of human exploitation of the marine ecosystems involved. They also show how humans interacted with these aquatic environments, the impact they had on them, and the lessons we can learn to apply to current problems with our oceans and marine fisheries. A most interesting exposé, one that will be useful to scientists of many disciplines.

Rothenberg, David. 2008. Thousand Mile Song: Whale Music in a Sea of Sound. Basic Books, New York, NY. 287 pp. Hardcover, \$29.50 (ISBN 9780465071289). – This unusual volume on whale vocalization by David Rothenberg -- musician and philosopher -- masterfully weaves science, art and adventure to produce a 'love song' to the incredible world of whale sound that is thought-provoking and moving. He tells the story of the discovery of whale song, something first determined in the early 1960s, and the subsequent researches done by scientists and musicians throughout the world to decipher

undersea music, an effort that continues. In ending, an attempt is made to create interspecies music, the results of which can be heard by listening to the bound-in CD of whale song. This is a special work that astounds the mind!

Shirihai, Hadoron. 2008. The Complete Guide to Antarctic Wildlife: Birds and Marine Mammals of the Antarctic Continent and the Southern Ocean (Second Edition). Princeton University Press, Princeton, NJ. 554 pp. Hardcover, \$54.50 (ISBN 9780691136660). – This is a comprehensive single-volume reference book to the natural history and wildlife of Antarctica, the Southern Ocean, and the subantarctic islands. It represents the revised version of the award-winning first edition published in 2002, updating the distribution maps and providing the most recent advances in taxonomy, as well as details of the authoritative species accounts that include detailed information on abundance, seasonal status and movements, reproduction, and conservation requirements. All breeding birds and mammals are covered, as are numerous nonbreeding species, migrants, and vagrants. The information presented goes far beyond descriptions of the birds and mammals of the region, with chapters devoted to details of the geography, geology, climate, general ecology and flora. The book also features 35 colour plates and a total of 920 colour photographs and illustrations including distribution maps of all the region's breeding birds and mammals. It will prove invaluable to tourists and scientists visiting the region, as well as those arm-chair travellers fascinated by the Great White Continent. A must acquisition for any marine or polar library!

ON THE LIGHTER SIDE

A man is dining in a fancy restaurant and there is a gorgeous redhead sitting at the next table. He has been checking her out since he sat down, but lacks the nerve to talk with her.

Suddenly, she sneezes, and her glass eye comes flying out of its socket toward the man!

He reflexively reaches out, grabs it out of the air, and gallantly hands it back.

"Oh my, I am so sorry," the woman says as she pops her eye back in place.

"I'm sure that must have embarrassed you so allow me to pay for your dinner to help make it up to you," she says to the man.

They then enjoy a wonderful dinner together, & afterwards they go to the theatre followed by cocktails. They talk, they laugh, she shares her deepest dreams, and he listens; he shares his

and she listens. After paying for everything, she asks him if he would like to come to her place for a nightcap.

They have a wonderful, wonderful time.

At 3:00 am, she cooks him a gourmet breakfast in bed with all the trimmings. He is amazed and totally impressed. Everything has been so incredible !

"You know," he says, "you are the perfect woman. Are you this nice to every guy you meet?"

"No..." she replies.

"You just happened to catch my eye."

This may come as a surprise to those of you not living in Las Vegas, but there are more Catholic churches there than casinos. Not surprisingly, some worshippers at Sunday services

will give casino chips rather than cash when the collection basket is passed.

The churches get chips from many different casinos, so they have devised a method to collect the offerings.

The churches send all their collected chips to a nearby Franciscan monastery for sorting and then the chips are taken to the casinos of origin and cashed in.

This is done by the chip monks.

(You didn't even see it coming did you?)

The phone rings and the lady of the house answers,

"Hello.";

"Mrs. Sanders, please."

"Speaking."

"Mrs. Sanders, this is Doctor Jones at Saint Agnes Laboratory."

"When your husband's doctor sent his biopsy to the lab last week, a biopsy for another Mr. Sanders arrived as well. We are now uncertain which one belongs to your husband."

"Frankly, either way the results are not too good."

"What do you mean?" Mrs. Sanders asks.

"Well, one of the specimens tested positive for Alzheimer's and the other for HIV. We can't tell which is which."

"That's dreadful! Can you do the test again?" questioned Mrs. Sanders.

"Normally we can, but Medicare will only pay for these expensive tests one time."

"Well, what am I supposed to do now?" she pleads.

"The folks at Medicare recommend that you drop your husband off somewhere in the middle of town. If he finds his way home, don't sleep with him!"

FROM THE ARCHIVES 37 YEARS AGO – 1971

Compiled by Bosko Loncarevic

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

{July – August, 1972. Vol. 6, No. 4} Nova Scotia Technical College (later renamed TUNS, now DalTech) awarded an honorary degree to Ced Mann. – Ced Mann will spend the next year at Laboratoire d'océanographie Physique in Paris. – Eight members of the Library Committee named. – In 1971, the average number of injuries in Canadian Public Service was 7.85 per 100 employees. – ICNAF Report on the 22nd Annual Meeting: "The Steady decrease in cod catches from the Northwest Atlantic fishing areas ..." – A Cabinet Memorandum on the Gulf of St. Lawrence Project was prepared and submitted. – Eric Levy reported on "Getting to Jerusalem to present a paper" – Metrology reported on the development of the Wave Follower, the Batfish, and the new electric Rock-Core Drill. – CSS Hudson weekly reports on the seismic and magnetic survey of the quiet magnetic zone; "Loran C excellent". – CSS Baffin on hydrographic surveys around Cape Bonavista and near St. Anthony using Hi-Fix and Mini-Fix. – Charter vessel MV Minna on hydrographic - geophysical survey in the northern portion of the Grand Banks collecting 1,000 to 1,500 nm of survey data per week. – Mr. Tom S. Hillis joined AGC on 4 July as Executive Assistant to the Director, AGC. – Dr. Francis Tan joined Chemical Oceanography Division.

{September, 1972. Vol. 6, No. 5} Report on 24th International Geological Congress in Montreal (12 BIO staff attended). – D. I. Ross attended JOIDES Planning Committee. Meeting in La Jolla, California. – S. B. MacPhee and R. M. Eaton made an interesting short trip in Woods Hole's new ship R/V Knorr from Todd Shipyard, Brooklyn, to Woods Hole Oceanographic Institution. – Numerous comings and goings at MEL: Ken Mann to Dal as Chairman of the Biology Department; Steve Kerr to Ministry of Natural Resources, Research Branch, in Maple, Ontario; Ivor Duedall to Professorship at State University

of New York, Marine Sciences Research Center; Vivien Srivastava temporarily retired to devote herself to being a full time housewife and mother; Bob Conover off to merry old Scotland on a year's sabbatical leave at Dunstaffnage Marine Research Laboratory in Oban; Gareth Harding arrived as Steve Kerr's replacement; Ken Denman, new research mathematician; Dave Krauel returned to Coastal Oceanography from educational leave at Liverpool University in England where he attained his Ph.D.; Anand Prakash returned to his old job in Biological Oceanography from a year's sabbatical at the Trondheim Lab.; Subba Rao Durvasula, our newest ecologist, will return from The Johns Hopkins University, Baltimore, Maryland, where he has been for the last 2 years since his Postdoctoral Fellowship at MEL.

{December, 1972. Vol. 6, No. 6} CHEMICAL OCEANOGRAPHY: Dr. Bjorn Sundby joined the Division as an NRC Postdoctoral Fellow. Dr. Levy has recently been appointed to an International special consultative group working on the analyses of oil and dissolved constituents in sea water. Congratulations to Sharon & Bert Hartling who became proud parents on 10 October with the birth of a 5 lb. 15 oz. son, Adam James, their first child. – The MS 26 B echo sounder used as a teaching tool by marine geology students. – Long "Christmas Poem" by Olive Ross. – Dr. Fred Dobson of Air-Sea and Dr. Jim Elliott of Ocean Circulation took part in a planning meeting in Hamburg, Germany for JONSWAP II, an international wave observation experiment. – Dr. C.S. Mason participated in a scientific and technological exchange mission in the Federal Republic of Germany. – OCEAN CIRCULATION: Dr. Charles Quon returned after a year with the Geophysical Fluid Dynamics Institute, Florida State University, Tallahassee, Florida. – A darling baby girl was born to Dr. and Mrs. R.A. Clarke (Al). Suzanne Michelle made her debut on 2 November 1972. – COASTAL OCEANOGRAPHY: Don Lawrence and his wife recently became the proud parents of a new baby girl; Best wishes also to the Dave Krauel's on the birth of their first child, a girl, born on 29 November; Charlie Butler has just returned from Norway where he received training on Aanderaa current meters. – MEL: Dr. L.M. Dickie will be on sabbatical leave at Dalhousie University for 12 months. During this period, Dr. R.W. Trites will be acting Director of M.E.L. – BIO Christmas dance was a great success.

CANADA'S NINTH DOMINION HYDROGRAPHER SAILS AWAY GERALD NEIL EWING (1932-2008)

"He was the kindest and most generous of men I have known" said Ross Douglas, Canada's 11th Dominion Hydrographer, on hearing the news of Gerry's passing. Gerry's kindness and consideration for others was a constant theme in comments of many of his friends and colleagues.

Born in Hampton, New Brunswick, to a large family, Gerry quickly expressed his ambition and competitive spirit through excellence in sports, particularly hockey and soccer. He was the MVP of the 1965 BIO Tournament, recorded in a memorable movie by Roger Belanger.

When Gerry was only nine, his elder brother Kenny (then aged 16) was captured in Hong Kong and spent three and a half years in various Japanese POW camps. This made a strong impression on young Gerry. The wartime experiences of his father and brothers, coupled with economic pressure to become self-sufficient, helped him decide on a military career which eventually involved him in combat service in Korea. After graduating from high school in 1950, he served with the Canadian Army (Militia), then with B Squadron Lord Strathcona Horse (R.C.) in Canada and Korea from 1950-1953.

Later, he served with the Canadian Officer Training Corps from 1953-1956, then the Canadian Army (militia) 1956 - 1968. He won the Sam Brown Belt and Major General Wor-



Gerry as a young soldier ca. 1953.

thington Sword as the outstanding Royal Canadian Armoured Corps Officer Cadet in 1955 (top of the class).

In spite of these successes, he felt that his talents could be put to better use by acquiring more education. With the military's student support, he completed a B.Sc. in Geology and graduated from St. Frances Xavier University in 1957. Seismic exploration in western Canada was then expanding and he was quickly swept up by Mobil Oil of Canada. He was assigned to one of their field parties working alongside another Maritimer, Al Grant who comments: "Gerry and I

spent three winters on the same crew in the bush camps of northern Alberta. The memorable phase of these winter operations was the spring break-up, when the muskeg thawed and we had to hightail it south with all our heavy gear before the road bans were decreed. Gerry and I always enjoyed the 'bright spot' of making it to the first 'watering hole'.

In the early 1960s, rumours of the establishment of a new Oceanographic Institute in Dartmouth reached the backwoods of Alberta and Gerry and Al decided to head East. Gerry was hired by the legen-

dary Bill Cameron and first assigned to work with the Atlantic Oceanographic Group (AOG) under Neil Campbell. He joined the newly established Marine Geophysics group at BIO in the summer of 1963 but left after a few months to do graduate work, becoming student number three in Mike Keen's group at Dalhousie University (Donny Barrett and Keith Manchester were numbers one and two). He graduated with his M.Sc. in 1965: his thesis described seismic work in the Gulf of St. Lawrence, proving that the Gulf was underlain by thick continental-type crust. Returning to BIO in 1965, he assumed responsibilities for multidisciplinary surveys, a joint project of the Geophysics Group and the Canadian Hydrographic Service (CHS). Many months at sea brought him in close contact with hydrographers and their work. "He was the nicest fellow to work with" says Burt Smith, then Chief of Hydrographic Parties. "He never lost his cool and never had a harsh word for anybody. But he could not take *Baffin's* rolling, and spent long hours in his bunk, suffering from seasickness."

A new opportunity opened up in 1969 when the position of Assistant Regional Hydrographer was established at BIO. The intention was to strengthen the progress of CHS modernization and Gerry seemed well suited for that task. He won the competition, but the appointment was not without resentment. Promotion in the traditional service was earned by many months of

work in small boats and many years of surveys in hydrographic ships. Gerry was an outsider. Nevertheless, Burt Smith, who was one of the unsuccessful candidates in that competition, says without any bitterness: "Gerry was a delightful person to work with because of his calm and methodical approach. He was never afraid to ask for an explanation if unfamiliar with a particular hydrographic practice."

His next promotion in 1972 as the Ninth Dominion Hydrographer (DH) was even more controversial and the appointment was appealed. Again, he soldiered on soon winning the loyalty and devotion of Headquarters and regional staff.

His six years as the DH were marked by at least three significant accomplishments. He was instrumental in negotiating an MOU between CHS and GSC establishing a series of "Natural Resource Charts" which brought the results of multidisciplinary surveys to the hydrographic mapping standards. Wide dissemination of these charts (both in paper and digital format) stimulated industry exploration for hydrocarbons, especially on the Grand Banks.

The second part of Gerry's legacy is the publication of the 5th edition of GEBCO (General Bathymetric Chart of the Oceans). While fostering the development of Canadian marine science, Gerry became increasingly involved in international cooperation, especially working with the International Hydrographic Organization and the International Hydrographic Bureau. As a Canadian Delegate to these organizations, he rescued them from a serious crisis by offering to produce the fifth edition

of the General Bathymetric Chart of the Oceans using Canadian resources and expertise. Through his efforts, Canada became one of the leading nations in the art of ocean charting. With David Monahan as Scientific Coordinator (and overall manager of the project), the first two bathymetric sheets were rushed through production in 1975 and 200 copies were ready for distribution to all the delegates at the UN Conference on the Law of the Sea. This was another step in enhancing Canada's international reputation as a leading maritime nation.

"The other legacy that can in part be attributed to Gerry is the success of CHS in computer assisted chart production" says Gerry's successor, Steve MacPhee, the tenth DH. "Gerry strongly supported a team that worked on a project entitled GOMADS (Graphical On-line Manipulation and Data System). This system was initially intended to manipulate digital chart files. GOMADS evolved over the years and in 1981 CHS was instrumental in having Dr. Salem Masry, a photogrammetry professor at University of NB, establish Universal Systems Ltd. in Fredericton, NB. This company took over the programme and after some years and much further development, the system emerged as CARIS (Computer Assisted Resource Information System). CARIS is now in use in more than 60 countries as a survey and chart production tool and in different forms is used in many other applications. This is not only a tribute to CHS in this period but is also a fine testament to Canadian research and development."

A fine example of Gerry's generosity from that period

was provided by Dave Wells. "I received a 'cold call' from Petr Vanicek asking me to consider joining UNB as a faculty member. [...] I was concerned that the work I was doing at BIO might not continue were I to leave. As an ADM, Gerry helped me make the decision. He spent some time discussing with me whether to remain at BIO or move to UNB. He arranged for me to be granted a three-year leave without pay (safety net) while I tried out the waters at UNB. And he predicted even then that I would choose to remain at UNB at the end of that three year period. When I expressed my concerns about leaving projects unfinished, he told me that 'The work needs to get done, by you preferably. It can be done by you staying here [at BIO], or by you under contract while at UNB. Don't let that be a consideration in your decision.' I was overwhelmed at Gerry's generosity and support."

As an ADM, Gerry had a significant impact on the Huntsman Award. He was able to persuade Fisheries Minister Romeo LeBlanc to make a substantial grant to the newly formed Huntsman Foundation. He also persuaded the Organizing Committee of the International Association for Physical Oceanography (IAPSO) to donate to Huntsman Foundation a portion of the surplus funds from their successful conference in Halifax. With a subsequent large grant from the Offshore Petroleum Operators Association, the endowment was well established and provides to this day funds for the Huntsman Award.

The period of Gerry's appointment as the ADM, Ocean Science and Surveys (OSS), was not a very happy time. After the death of his first wife

Peggy (from leukemia, in March 1979) some of the "joie de vivre" evaporated and new challenges became difficult to cope with. "He took a hard hit and may have found himself in deep water" says Art Collin who was a close friend and preceded Gerry as the Dominion Hydrographer. The merger of Fisheries and Marine Science changed the Government priorities, and Gerry had to preside over painful budget cuts. It was heart rending to watch the 'white fleet' deteriorate and the ship replacement program disappear.

His major task at this point was the need to allocate resources and personnel to the newly established Maurice Lamontagne Institute (MLI) at Mont-Joli, Que. It was a politically driven move as exemplified by the name, location away from the University in Rimouski, and no direct access to ships. Geoff Holland, his close associate in those days, says: "As I recall, one of his biggest decisions was the establishment of the new ocean science centre in Quebec at MLI, which meant a reappportioning of scarce resources to that region. It was a difficult time, but he was driven [to do it] by what he thought was right." The result was establishment of an architecturally outstanding Institute with a stunning view of the mouth of the great St. Lawrence River."

It came almost as a relief, when his ADM appointment was terminated through reorganization within the Department in 1985. He was briefly on an Executive Interchange as the first Director of the Centre for Frontier Engineering Research at the Technical University of Nova Scotia (TUNS, now DalTech) and completed his public service as the Chairman (1986-1989) of the Fish-

eries and Oceans Research Advisory Council (FORAC). On completion of his time as ADM Science, he did not waste any time in returning to Nova Scotia and building, with his second wife Marie, a beautiful retirement residence in Lakelands, near Mount Uniacke. It was on their lawn that the proto BIO - OA had its first, informal, summer picnic in July 1997.

Back in Nova Scotia, Gerry

started rebuilding the old friendships. He joined the Legion and again became involved in sports taking up lawn bowling with enthusiasm, a sport more suitable for his age. This idyllic life did not last. In 1998 he suffered a debilitating stroke which severely limited his participation in community activities. He suffered the final blow in October 2002 when his second wife died, also from cancer. The last official function he

attended was at BIO in 2003, celebrating the award of the Order of Canada to Mike Eaton, a long-time CHS champion of the Electronic Chart Project. Soon, the medical problems started piling up with increasing severity leading to much suffering in his final days.

Gerry had an outstanding career. One gets the impression, and Art Collin agrees, that he was not driven by “blind ambi-

tion” but instead that his loyalty and sense of duty compelled him to accept larger and larger challenges as they were presented to him. Throughout that career he remained a quiet, generous, and kind person, which is how his many friends will remember him. He was a consummate team player and a great friend.

(Written by Bosko D. Loncarevic with the assistance of Gerry's family, many friends, and colleagues.)

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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