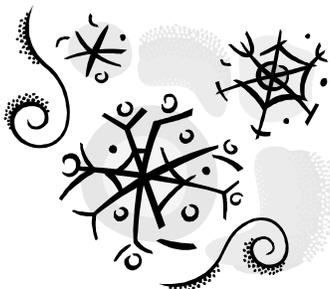


BIO-OCEANS ASSOCIATION NEWSLETTER

Issue 41, January 2009

CONTENTS

| | |
|---|----|
| From the President | 1 |
| Footnotes and putting the run to a myth | 2 |
| Noteworthy reads: Book reviews in brief | 4 |
| A collection of proverbs | 7 |
| From the archives 37 years ago - 1972 | 8 |
| In Memoriam | 8 |
| Adding to the BIO Photo Archives | 9 |
| Membership List - BIO Oceans Association | 10 |
| On the lighter side | 11 |
| News sought from retired GSC Atlantic Staff | 12 |
| About the Association | 12 |



FROM THE PRESIDENT

Was it only yesterday that I last communicated with you on the various activities of the Association? Lots is going on which will become apparent from what follows.

As part of the Association's Commemorative Stamp project, Dale Buckley gave a well-attended talk at BIO in November on the history of BIO. You might recall that Dale's items on the history and scientific accomplishments of BIO were in the BIO-OA newsletter (issue 40, pp. 6-9). His talk afforded an opportunity for he and the audience to interact on the Institute's history. I encourage everyone to read his articles and send him any comments and observations that you may have.

On another historical note, Keith and Carol Manchester, with the help of Betty Sutherland and Don Peer, are preparing a history of the HMCS *Sackville's* contributions to oceanographic research. They are combing through cruise reports archived in the BIO library and the BIO annual and biennial report series that Bosko Loncarevic has digitized, plus they will be interviewing graduate students who participated in its cruises, and so on. The plan is to place this history on the Association's website, so keep an eye out for it. Also, watch for information on the Association's Beluga Award which our webmaster Bosko Loncarevic will be posting on the site.

Regarding BIO - OA social events, things are a bit quiet as 2009 begins, but rest assured that Gordon Fader and Georgina Phillips are hatching a great roster of events for next spring and summer.

We had a mini-crisis recently. The Association's Beluga Award had disappeared in BIO and no one knew where it was! After some detective work, Dale Buckley, with Bill Bewsher's help, located it in a small room beside the Gully display near the cafeteria. It had been moved there when the Institute was renovating. It is now safe and sound, and prominently visible, in a worthy display case close to the Right Whale exhibit near the BIO front door. Phew!

In other news on displays, Dave McKeown with Charles Schafer, Claudia Currie, and Richard Eisner is creating a permanent display of BIO artifacts. As you are no doubt aware, Dave has been working on ensuring that these

artifacts are not lost to posterity and this display is one element of his 'master' plan. BIO management has agreed to purchase the building materials and Dave reports that the display should be ready for viewing at BIO in fall 2009. Pierre Clément will be linking information on the displayed artifacts with the Association's website.

Just so everyone knows, our treasurer, Bob Reiniger, informed the Executive at a recent meeting that our finances are well in hand. No, the Association did not invest in some, well, 'thought-to-be-secure' blue chip stocks and short selling was not an option! We should end the financial year with the books all square.

On a sadder note, Roger Belanger, winner of the first Beluga Award, passed away in early December. Roger was not only a fantastic photographer, but also a close colleague and friend to many of us. In fact, I haven't met anyone who failed to respond to his genuinely warm, and large personality. He will be missed. Our thoughts go out to his family. He has kindly offered his two-album collection of his best photographs to the Association. The originals will be housed in the BIO library and the Association will be digitally scanning the photographs for presentation on DVD to his family as a souvenir. Roger will always be with us.

— Bob O'Boyle

Feedback from A Reader FOOTNOTES AND PUTTING THE RUN TO A MYTH

Alan Ruffman

David McKeown had a most interesting look back at the 26 April 1973 offshore loss of a Sea King helicopter (see *BIO Oceans Association Newsletter*, Issue 39, July 2008, pp. 2-3). This prompts me to add some interesting footnotes to the story.

The first concerns the involvement of Geomarine Associates Ltd. The company was formed in May 1973, and we were initially operating from a tiny room in the old Brewery at 1475 Hollis Street. In our first summer, John Stewart and I were fortunate to begin a long-term and rewarding relationship with Ocean Research Equipment, Inc., of Falmouth, Massachusetts. ORE gave us a chance to interpret the pre-drilling wellsite survey data on the Shell Cap Rouge B-52 site in the Gulf of St. Lawrence. This was our first introduction to the value and inter-

pretation of sidescan sonar data as an ocean floor mapping tool.

Some time after the Sea King helicopter's salvage was completed, this early sidescan experience allowed us to successfully propose to interpret David McKeown's Klein sidescan survey of the Helicopter Search Area, a postage-stamp-sized patch of ocean floor. This was apparently only the second time that a sidescan sonar was used to map a portion of the Scotian Shelf*. The search area was about 15 km² with sidescan sonar lines about 200 m apart to give 100 % coverage of the seafloor. It was Geomarine's first contract for the Atlantic Geoscience Centre (AGC), and resulted in our first Geological Survey of Canada Open File report - see Stewart and Ruffman (1974) in the reference list.

Sidescan sonar quickly became part of the equipment repertoire of Geomarine Associates and of AGC, and remains a valuable tool for ocean floor mapping today, be it to locate wrecks, pipelines, cables, iceberg scours, sand waves, bedrock outcrop, or subtle changes in seafloor sediments.

The second footnote concerns a longstanding belief of mine that has now been disproven. I had always understood that the first two attempts to recover the sunken helicopter had failed. This was because, on both attempts, the *Pisces IV* submersible had attached a line to the helicopter at a depth of 160 m and then a winch on the barge had lifted the helicopter to mid-depth levels to wait for military brass from Halifax to arrive at the site some 25 km south of ...p. 3

* It was David McKeown who recalled on 20 November 2008 that BIO had had an opportunity to evaluate an early sidescan sonar built by Kelvin-Hughes. Prof. W.D. Chesterman of the University of Hong Kong provided what was then called an "oblique echo-sounder" which was mobilized onto the *CSS Kapuskasing* for a three-week period in the late summer and early fall of the 1965 field season. A University of Hong Kong graduate student, Mr. K. Wang [sic Mr. How Kin-Wong], assisted in the testing. Reg Gilbert, CHS personnel,

Lew King, and Doug Loring were all involved from BIO. Doug got considerable data around the Magdalen Islands, and Lew got a single one-day traverse over Emerald Bank.

D. H. Loring, D.J.G. Nota, W.D. Chesterman and H.K. Wong wrote their results up in 1967 in the *Canadian Journal of Earth Sciences* under the title "Delineation of Sedimentary Environments with an oblique Sonar System" as BIO Contribution No. 90 and the same authors later appeared in *Ma-*

rine Geology in 1970, Vol. 8, No. 5, May with BIO Contribution No. 96, in what are probably the first BIO publications using the results of sidescan sonar to map the ocean floor.

The potential of the tool was realised, and in the following years David McKeown and Paul Jollymore were involved in designing refinements to a possible BIO sidescan sonar. When the Sea King helicopter search came along in the spring of 1973, David was well-qualified to be involved.

Chebucto Head before winching the helicopter aboard the recovery barge. The attempts failed when the helicopter could not be held in place at the mid-level depths. The third lift in the fall of 1973 after the Canadian Forces *SDL-1* submersible attached a line to the helicopter succeeded.

This recollection of mine is perhaps a good lesson in how oceanographic myths are born and propagate. When my first draft of this letter reached David McKeown, this was not as he recalled it. David was on hand for the second lift attempt, and he recalled that the lifting line had broken during the first attempt. There was no recovery on the first attempt, and David recalls that the naval personnel involved did not feel that the helicopter had even left the seafloor on the first attempt.

David's own words of 21 August 2003 best describe the second attempt, and put the run to the mistaken myth:

"I can remember some discussion about lifting the helicopter at a meeting at the Dockyard prior to the first [sic second] attempt. As best I can recall, it was stated that the normal practice is to lift a helicopter by its rotor hub although there are also lifting points on the airframe. However, concern was expressed that the attachment of the transmission to the airframe might have been weakened by corrosion as this unit was made of a magnesium alloy and the helicopter had been submerged for a lengthy period prior to the lift attempt. I don't recall the outcome of that discussion but, as the *Pisces IV* crew attached the lift line to the rotor hub, I guess they decided to try it.

"I was invited on board the barge for the second attempt. It was a beautiful day with very little swell. The plan was to bring the helicopter up to a depth of 15 m then put divers over to attach more lifting lines before the helicopter was lifted clear of the water. The lift line was hauled in and stopped at the 15 m point. Divers were then sent into the water immediately with additional lines. Shortly after that, one of them surfaced and shouted that there was no helicopter on the end of the line, only the rotor [and engine/transmission].

"I do not remember any talk of waiting for brass from the Dockyard to arrive before

the exercise was completed and I do not recall any inordinate delay in the lift process. I thought the whole operation from start to finish was done very professionally and would be surprised if the officers in charge would have risked loss of the helicopter after the lift began while waiting for the brass to arrive. If there was a need to wait, I believe they would have delayed the start of the lift."

The third attempt by the *SDL-1* submersible in the Fall of 1973 recovered the fuselage to finish the job. I went back to the original Geomarine Report to the Atlantic Geoscience Centre and found no support for the myth, and I have pushed 'delete' for that portion of my memory.

I will end with the observation that the BIO sidescan search for the helicopter was done exactly as a seafloor search should be done. The sidescan swaths slightly overlapped to give better than 100% coverage, much of the seafloor and possible targets were acoustically "illuminated" from opposite sides, and the search area was covered systematically from one side to the other with several tie lines. The resulting survey data set allowed David and his fellow searchers a chance to evaluate all targets and to choose to return to the best targets and to easily locate the best target to examine from a submersible.

In 1983, Geomarine Associates mobilized our sidescan gear along with Dominion Diving to locate the wreck of the *Seaforth Jarl*. This vessel had set out from the Strait of Canso with a million dollars worth of K4 anchor chain needed by Petro-Canada in Marystown, Newfoundland, to equip a semisubmersible drilling rig and to get it out onto a Grand Banks drilling site. The rig supply vessel set out in good weather with the very long, heavy anchor chain laid out in a series of side-by-side lengths on the rear deck. In the rush, no vertical keeper posts were set on the deck to keep the lengths of chain from shifting if the vessel began to roll. The weather deteriorated south of Saint Pierre and Miquelon on St. Pierre Bank, and the moving chain broke out through the side of the rear deck and ran out to the ocean floor with one end still tethered to the vessel's winch. The vessel was doomed. No lives were lost, but a very

valuable length of K4 chain lying on the ocean floor was costing Petro-Canada well over \$200,000 per day by having its drilling rig being stuck in Marystown without the needed length of anchor chain.

Our sidescan survey began as an expanding box from the last transit satellite fix taken by the *Seaforth Jarl*. About 24 hours later, we had a clear contact with the sunken vessel. To my later frustration, when Sarah Whitaker of Geomarine Associates got a chance to interpret the data, the sidescan survey had been broken off immediately, and we never got a chance to "look" at the wreck and to look at the detailed location of the pile, or length of anchor chain lying on the ocean floor. Petro-Canada's efforts to grapple the chain, while partly successful, were done essentially in the dark without the benefit of a sidescan map that would have offered the salvers a method of planning their approach and, most certainly, more success.

References

King, L.H. 1965. Marine Geology, Physical Geology and Geochemistry, Scotian Shelf. in Bedford Institute of Oceanography, Fourth Annual Report 1965, Part A, The Annual Report for 1965 of the Atlantic Region, Marine Sciences Branch, Canada Department of Mines and Technical Surveys, Dartmouth, Nova Scotia, Report BIO 65-17, p. 35, col. 1 (bottom); Anonymous. 1965. Hydrography, Instrument Evaluation, Oblique echo-sounder, p. 44, col. 2 (middle); Gilbert, R.L.G. 1965. Engineering Services, Electronics Instrumentation Laboratory, Oblique echo-sounder, pp. 49, col. 2 (bottom)-50, col. 1 (middle).

Loring, D.H. 1965. Investigators' Summaries of Current Research, Environmental Oceanography, Oblique echo-sounder survey of the shelf around the Magdalen Islands. in Bedford Institute of Oceanography, Fourth Annual Report 1965, Part B, The Annual Report for 1965 of the Atlantic Oceanographic Group, Fisheries Research Board of Canada, Dartmouth, Nova Scotia, Report BIO 65-17, pp. 89 and 90, col. 2; including Fig. 17, Photograph of Acoustical record of sea floor near Magdalen Islands, from Kelvin-Hughes oblique echo-sounder equipment.

Stewart, John M. and Alan Ruffman. 1974: Side-scan Sonar Examination of Helicopter Search Area, Scotian Shelf. Geomarine Associates Ltd., Halifax, Nova Scotia, Project 73-15-4, Contract Report for Canada Department of Energy, Mines and Resources, Geological Survey of Canada, Atlantic Geoscience Centre, Bedford Institute of Oceanography, Dartmouth, Nova Scotia, June 28, Contract OSR.3-0063, Analysis of Helicopter Search Seafloor Data, Geological Survey of Canada, Open File 384(1976), 30 pp. text and 5 unpaginated plates, plus Appendices A to C, pp. 31-79; 84 pp. *in toto*, 5 enclosure maps in separate map case, dated March, 1:20,000.



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:

ESCAPE THE WINTER BLAHS!

Beare, Emma (ed.). 2008. 501 Must-Visit Islands. Bounty Books (Octopus Publishing), London, UK. 544 pp. Hardcover, \$38.00 (ISBN 978-0753716946). – This is a dreamer's book, of white sand beaches, turquoise seas, and the tranquility of far-away island retreats in the Caribbean or the South Pacific, or any one of the 501 outstanding islands presented. More than an escape guide from the reality of northern winters, this compilation is an invaluable reference source of the world's most fascinating islands. The book is divided into six parts, each written by experts, covering the Americas & the Caribbean, Europe, Africa & Arabian Gulf, Indian Ocean, Asia, and Oceania. Each site presented occupies a single page with a succinct descriptive text accompanied by details of the resident population, when and how to get there, along with highlights of the area and a stunning colour photograph of the local environment. After submerging yourself in this volume, the difficulty will be deciding which one of these idyllic paradises to visit first!

GENERAL REVIEWS

Brown, Nancy Marie. 2008. The Far Traveler: Voyages of a Viking Woman. Harcourt, New York, NY. 306 pp. Softcover, \$19.50 (ISBN 978-0156033978). – An examination of the findings of archaeologists and anthropologists who have

researched the travels of a Viking woman named Gudrid (985-1050) who is purported to have crossed the North Atlantic eight times 500 years before Columbus. The Icelandic saga and recent investigations indicate a three-year stay in the New World including Newfoundland and southern Greenland. Although specific details are lacking, author Brown brings the story to life along with a well researched and comprehensive overview of the archeology, social structure and technology of the era. This thorough summary of the life and travels of Gudrid will excite students of Icelandic archeology, sociology and literature, and stimulate the rest of us to learn more about the medieval Icelandic sagas.

Bruemmer, Fred. 2008. Arctic Visions: Pictures from a Vanished World. Key Porter Books, Toronto, ON. 279 pp. Hardcover, \$45.00 (ISBN 978-1554700922). – World renowned arctic writer and photographer Fred Bruemmer reviews the past 40 years of his northern travels, and by doing so, reveals the ancient way of life and how it has diminished over time and become lost. Most of Bruemmer's previous works on arctic peoples – *The Long Hunt* (1969), *Seasons of the Eskimo* (1971), *The Arctic* (1974), *Children of the North* (1979), *The Arctic World* (1985), *Arctic Animals: A Celebration of Survival* (1986), *Seals in the Wild* (1998) -- have made use of colour photos or a mix of colour and black and white illustrations to show the people, the beauty of the land and its fauna and flora. But the photos in this book are all in black and white, and succeed in capturing the wide array of events recorded through four decades of change in the north: the harsh transition of Arctic people from hunters to villagers. This collection of unique photographs and accompanying text vividly reveals the harshness of the land, the formidable challenge of northern living and the pain, but also the land's serenity and peace. *Arctic Visions* is a "must-have" book for anyone with an interest in the Arctic, its people, and their future welfare.

Buller, Fred. 2008. Giant Salmon: A Record of the Largest Atlantic Salmon Ever Caught. Firefly Books, Richmond Hill, ON. 480 pp. Hardcover, \$85.00 (ISBN 978-1554074389). – An enormous and expensive tome packed with fishing stories and lore about Atlantic salmon fly catches exceeding 50 pounds. These stories from fly fishermen took four decades to compile and verify, records from around the world including Canada, Finland, Ireland, Norway, Scotland and Sweden. Details are given for each record catch: location and date, maps of catch site and photographs where available, fly type, and information sources. The data for salmon caught are presented in tables and analyzed statistically. This nicely produced book will excite and stimulate any fishing enthusiast or naturalist with an interest in salmon – definitely a unique addition to their book collection!

Coates, Ken S., P. Whitney Lackenbauer, William R. Morrison and Greg Poelzer. 2008. Arctic Front: Defending Canada in the Far North. Thomas Allen Publishers, Toronto, ON. 261 pp. Hardcover, \$29.95 (ISBN 978-0887623554). – *Arctic Front* is a “wake up” call to Canadians about the endangered future of Arctic Canada. It presents a clear and well written challenge to all Canadians – from politicians and decision-makers to everyday citizens – to take a solid look at what is taking place in our northern lands and what needs to be done immediately to correct the urgent environmental, political and economic problems that exist. Do Canadians want to see challenges to our arctic sovereignty by foreign countries (Denmark, Norway, Russia, United States) go unanswered? Not to address these northern realities and failures will ensure a very bleak future for our northern lands and waters through the 21st century and beyond. The authors, four of Canada’s leading northern experts, succeed in showing major weaknesses in Canada’s current position and make important recommendations for immediate action by the federal government to establish Canada’s sovereignty over northern regions of the country.

Cramer, Deborah. 2008. Smithsonian Ocean: Our Water, Our World. Smithsonian Books in association with Harper-Collins Publishers, New York, NY. 296 pp. Hardcover, \$42.95 (ISBN 978-0061343834). – Published on the occasion of the opening of the Ocean Hall at the Smithsonian National Museum of Natural History in September 2008, this moving and beautiful work by science writer Deborah Cramer provides a clear picture of the extraordinary importance of the earth’s oceans to life, past and present. The book has four parts: Foreword and Introduction, Beginnings, Touched by the Sea, and Touching the Sea. Each of these four sections is expanded into detailed and comprehensive overviews of all aspects of marine history and oceanography. But the overriding message is one of marine conservation and protection, the need for us to recognize how human activities are altering the health of the oceans and endangering present life forms including ourselves, as well as earth’s life-giving waters for the emergence of future living things. The book represents an outstanding accomplishment by a gifted writer and teacher -- it provides us with a visual and thought-provoking treatise of our water world and how our lives depend on the sea.

Fischer, David Hackett. 2008. Champlain’s Dream: The Visionary Adventurer Who Made a New World in Canada. Alfred A. Knopf Canada, Toronto, ON. 834 pp. Hardcover, \$37.00 (ISBN 978-0307397669). – This scholarly work by Pulitzer Prize for History winner David Fischer is truly an amazing accomplishment. Although many biographies of Samuel de Champlain have been written, Professor

Fischer’s massive account stands out by its exemplary research and completeness. Without question, “Champlain’s Dream” replaces all previous biographies and will stand alone for many years to come as the most authoritative account of this remarkable man who did indeed “make a New World in Canada”. Fischer treats his subject with great care and thoroughness, working meticulously through Champlain’s life in chronological order from its beginning in the little village of Brouage, France, through his development over time as soldier, spy, master mariner, explorer, cartographer, artist, visionary leader and politician under the auspices and encouragement of two French monarchs, Henri IV and Louis XIII. Altogether, Champlain made 27 trans-Atlantic crossings spanning three decades, explored six Canadian provinces and five American states, established the first permanent settlement in Canada (Quebec city, 1608), and demonstrated that societies comprising peoples of differing races, religions and languages can live in peace and harmony. The book’s structure divides neatly into seven parts after a short introduction, the first six on Champlain – A Leader in the Making (c. 1570-1601), Explorer of Acadia (1602-07), Founder of Quebec (1608-16), Builder of New France (1616-32), Father of French Canada (1632-35), Conclusion (A Leader’s Long Reach) – and the last an exhaustive set of source materials including 16 appendices, notes, bibliography, map sources, art credits, and a detailed index. In summary, this is a book to own and cherish for years to come, a very special exposé of a unique man ahead of his time who laid the foundation for Canada as we know it today, and whose work 400 years ago shows how peaceful co-existence can be attained even in today’s diverse and complex world. David Fischer is certainly deserving of a second Pulitzer Prize for History for his “*Champlain’s Dream*”!

Hamilton, Garry. 2008. Arctic Fox: Life at Top of the World. Firefly Books, Richmond Hill, ON. 231 pp. Hardcover, \$39.95 (ISBN 978-1554073412). – An in-depth look at the Arctic Fox including evolution, adaptations, survival strategies, hunting and scavenging, reproduction, winter ecology and the fur trade. The clear, informative, and readable text is supplemented by carefully selected colour photographs by award-winning National Geographic nature photographer Norbert Rosing. Overall, a beautiful and thorough account of one of the most fascinating mammals of arctic regions, a work that will be of interest to a wide audience from arctic buffs and naturalists to the general reader.

Impey, Andrew, Mark Steer, and Hayley Birch (eds.). 2008. Defining Moments in Science: Over a Century of the Greatest Discoveries, Experiments, Inventions, People, Publications, and Events that Rocked the World. Cassell Illustrated/Sterling Books, New York, NY. 800 pp.

Softcover, \$26.95 (ISBN 978-1844036417). – This book, produced and edited by a team of scientists associated with the science magazine *Null Hypothesis*, take the reader on an enlightening exploration of some of the great advances made in science since the turn of the 20th century. The editors have divided the book into decade-long chapters, highlighting ground-breaking discoveries like quantum theory, Marconi's radio signals, Einstein's theory of relativity, Brownian motion, the Big Bang theory, the splitting of the atom, and much more. Each entry defines the achievement and scientist(s) responsible for its discovery, the social and historical contexts, and explains why it is so important to science history and humankind. In summary, a most impressive compendium of one of the most significant eras in the history of science -- a book that makes the complexities and secrets of the universe and the world accessible to everyone. Read and be amazed!

Quammen, David (ed.). 2008. Charles Darwin: On the Origin of Species – The Illustrated Edition. Sterling, New York, NY. 544 pp. Hardcover, \$38.00 (ISBN 978-1402756399). – Edited and introduced by award-winning science journalist and author, David Quammen, this edition of Darwin's 1859 seminal work provides an unprecedented insight into the development of the theory of evolution by natural selection. More than 300 illustrations – from letters, newspaper clippings and paintings to photographs, botanical and zoological studies – have been inserted in appropriate parts of the text to highlight subjects and topics. An outstanding beginning to the deluge of publications that will doubtlessly appear in 2009 to celebrate the 200th anniversary of Charles Darwin's birth (12 February 1809) and the 150th anniversary of the publication of "The Origin of Species"! Certainly a 'must-have' addition to the shelves of any student or collector of "Darwinia".

Sachs, Jeffrey D. 2008. Common Wealth: Economics for a Crowded Planet. Penguin Press, Toronto, ON. 386 pp. Hardcover, \$27.95 31.00 (ISBN 978-1594201271). -- Jeffrey Sachs, world-renown development economist and author ("The End of Poverty"), comes out hard and clear about the crises facing humanity and the world today, and offers solutions that are available to correct them. The problems are daunting – climate change, water shortage, excessive population growth, poverty and disease – but can be dealt with through global cooperation and removal of the political log-jams that exist. Through careful analyses of economic data, demographic trends, and climate science, Sachs demonstrates with great clarity both the nature of the problems and what government actions are required if mankind is to avoid global catastrophe. This work represents a "tour de force" and provides a realistic blueprint for survival.

Sandler, Martin W. 2008. Atlantic Ocean: The Illustrated History of the Ocean that Changed the World. Sterling, New York, NY. 480 pp. Hardcover, \$38.00 (ISBN 978-1402747241). – Here is a historical examination of "the Ocean that changed the World" by its function as a corridor for the fundamental exchange and transfer of ideas, cultures and technologies between peoples over vast spans of space and time. Martin Sandler, accomplished historian and writer, takes the reader on an in-depth history of human activities associated with the Atlantic Ocean – cultural developments, political, socio-economic and scientific -- starting in 300 B.C. His review reveals how Europe, Africa, and the Americas became a regional system in the late 15th century, one that has persisted to the present time. It also identifies the overall make-up of the Atlantic Ocean and the major characteristics that have shaped the development of civilization for centuries. This unique book, beautifully illustrated with period maps, paintings, engravings, documents and photographs, is a gem to read and view.

Uhlenbroek, Charlotte (ed.). 2008. Animal Life. American Museum of Natural History, Dorling Kindersley DK Publishing, New York, NY. 512 pp. Hardcover, \$55.00 (ISBN 978-0156639860). – Here is a beautiful, oversized, multi-authored book covering a vast array of animal groups (invertebrates, arthropods, vertebrates) and subjects including an introduction to the Animal Kingdom, Anatomy, Behaviour and Ecology with details on habitat, hunting and feeding, defense, sex and reproduction, birth and development, society, communication and intelligence. Overall, an innovative overview of the animal kingdom and a "must-have" reference book for animal enthusiasts of every level, from student to professional.

Ulanski, Stan. 2008. The Gulf Stream: Tiny Plankton, Giant Bluefin, and the Amazing Story of the Powerful River in the Atlantic. University of North Carolina Press, Chapel Hill, NC. 232 pp. Hardcover, \$34.00 (ISBN 978-0807832172). – Here is a fascinating and comprehensive account of the great river in the sea, the Gulf Stream, a natural wonder that plays a key role in changing weather patterns and the climate of the North Atlantic region. Marine geologist and environmental scientist Stan Ulanski explores this mighty sea highway's history, oceanography, biology, and challenges for humans living under its influence. He takes the reader from its discovery by Ponce de León in 1513 through the many and varied findings that followed including: the rich biological life present, its diversity and complexity, the scientific discovery of ocean circulation, and the role of ocean currents in the settlement of the New World. The economic benefits of this ocean conveyor belt are also reviewed, past and present, from the growth of trans-Atlantic

commercial trade, the slave trade, fisheries developments to enhanced transportation and mail services. Overall, a significant introduction to the Gulf Stream and all its wonders -- certainly a book for anyone interested in the history and dynamics of the North Atlantic.

Zurawski, Richard. 2008. The Maritime Book of Climate Change. Portersfield Press, Porters Lake (Halifax),

NS. 192 pp. Softcover, \$16.95 (ISBN 978-1895900972). – Ever want to understand what's going on with the weather in Atlantic Canada, the "ups and downs" of most climatic parameters and their unpredictability? Well, here is a chance to at least better relate to the wide variations in weather conditions, both within and between years, that residents of the Maritime Provinces are subjected to throughout the year, and

what is likely to happen in the critical years ahead. Richard Zurawski tells it as it is, based upon existing records, and provides an excellent summary of an often challenging and complex topic. Read, understand, and prepare!



A COLLECTION OF PROVERBS

Below are but a small selection of proverbs to be found at:
www.opossumsal.com/Quotes/proverbs.html

To give quickly is a great virtue. Hindu proverb

He who forgives ends the quarrel. African proverb

He who gives to me teaches me to give. Danish proverb

Even a small star shines in the darkness. Finnish proverb

Don't look where you fall, but where you slipped. African proverb

Experience is a comb which nature gives us when we are bald. Proverb of uncertain origin

Worry often gives a small thing a big shadow. Swedish proverb

Write injuries in sand, kindnesses in marble. French proverb

"To climb a tree to catch a fish is talking much and doing nothing." Chinese proverb

Age gives good advice when it is no longer able to give bad example. American proverb

The whisper of a pretty girl can be heard further than the roar of a lion. Arab proverb

He who lends a book is an idiot. He who returns the book is more of an idiot. Arab proverb

Once the game is over, the king and the pawn go back in the same box. Italian proverb

He who is outside his door has the hardest part of his journey behind him. Dutch proverb

I never ask God to give me anything; I only ask him to put me where things are. Mexican proverb

Before enlightenment - chop wood, carry water. After enlightenment - chop wood, carry water. Zen Buddhist proverb

If you understand, things are just as they are; if you do not understand, things are just as they are. Zen proverb

The best time to plant a tree was 20 years ago. The second best time is now. Chinese proverb

Everyone should carefully observe which way his heart draws him, and then choose that way with all his strength. Jewish proverb

Fear less, hope more; eat less, chew more; whine less, breathe more; talk less, say more; hate less, love more; and all good things are yours. Swedish proverb

If you want happiness for an hour, take a nap. If you want happiness for a day, go fishing. If you want happiness for a year, inherit a fortune. If you want happiness for a lifetime, help somebody. Chinese proverb

Yesterday is ashes; tomorrow is wood. Only today does the fire burn brightly. Old Eskimo proverb

Life without a friend is like death without a witness. Spanish proverb

A friend is one to whom one may pour out all the contents of one's heart, chaff and grain together, knowing that the gentlest of hands will take and sift it, keep what is worth keeping and with a

breath of kindness blow the rest away. Arab proverb

It is a good answer which knows when to stop. Italian proverb

"But" is a fence over which few leap. German proverb

He who speaks the truth must have one foot in the stirrup. Armenian proverb

A bad cause requires many words. German proverb

The work will teach you how to do it. Estonian proverb

Not the cry, but the flight of the wild duck, leads the flock to fly and follow. Chinese proverb

It is by believing in roses that one brings them to bloom. French proverb

Do not protect yourself by a fence, but rather by your friends. Czech proverb

Who seeks a faultless friend remains friendless. Turkish proverb

No one is so generous as he who has nothing to give. French proverb

Old age isn't so bad when you consider the alternative. Chinese proverb

Few people know how to be old. Arab proverb

Find an aim in life before you run out of ammunition. Latin proverb

Who does not thank for little will not thank for much. Estonian proverb

FROM THE ARCHIVES 37 YEARS AGO — 1972

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.]

(July-August, 1972. Vol. 6, No. 4) Cedric Mann awarded Doctor of Engineering (Honoris Causa) degree by the NSTC in Halifax – New Library Advisory Committee formed (again). – Long article on work injuries by S.H.Scott – Report on 22nd ICNAF Meeting discussed “The steady decrease in cod catches ...” – A Cabinet memorandum on the Gulf of St. Lawrence Project submitted. – Trip to Israel by Eric Levy. – Development of a new electric rock-core drill. – The potential of Batfish demonstrated to international buyers on CFAV *Bluethroat*. – Ship Reports: CSS *Hudson* on geophysical cruise of the quiet magnetic zone; CSS *Baffin* on hydrographic surveys off Newfoundland; MV *Mina* (Charter) multiparameter surveys in Labrador Sea. – Tom Hillis joined AGC; Dr. Francis Tan joined Chemical Oceanography Division.

(September, 1972. Vol. 6, No. 6) An article on

“Communications” from Office Overload. – Marine Geology reported on the 24 International Geological Congress in Montreal (12 from BIO). – Marine Geophysics reported on Deep Sea Drilling Project. – S.B.MacPhee and R.M.Eaton visited new ship *Knorr* at WHOI. – Ken Mann appointed Chair, Dept. of Biology, Dalhousie U. – Steve Kerr to Ministry of Natural Resources at Maple, ON. – Ivor Duedall to State U. of New York. – Vivien Srivastava temporarily retired. – Bob Conover on year’s sabbatical in Oban, Scotland. – New Faces at MEL: Gareth Harding, Ken Denman, Dave Krauel, Anand Prakash, Subba Rao Durvasula, and Paul Vandall. – Approx 40t of scrap metal disposed of. – Side-scan sonar fish MOBY 1 recovered by Pisces submersible SDL-1.

(December, 1972. Vol. 6, No. 6) M.J.Keen proposed the use of MS-26B sounder as a teaching tool. – Library announced acquisition of Consumer Reports. – Fred Dobson and Jim Elliot in Hamburg for a planning meeting of JONSWAP II. – C.S. Mason in Germany for Science exchange mission, - C.R. Mann on sabbatical leave in Paris; Charlie Quon on leave at Florida State University; New daughter to Dr. and Mrs. R.A. Clarke; Same for Don Lawrences; and Dave Krauel. – Dr. L.M. Dickie on sabbatical leave at Dalhousie U. – Annual Christmas party declared a success.

IN MEMORIAM

Roger Bélanger, on 9 December 2008, aged 73. Following a career in photo reconnaissance with the Canadian Air Force from 1954 to 1966, Roger worked in the Photographic Unit at BIO until his retirement in 1991. His dedication, photographic achievements, and contributions to BIO’s reputation were recognized in 2001 when he was presented with the first Beluga Award by the BIO – Oceans Association. A spring memorial service for Roger is to be held and members will be notified of the details once they are known.

Garfield U. Chinn, on 2 January 2009. Garfield served in the Merchant Marine during World War II and then with the Halifax Dockyard,

with BIO aboard CSS *Baffin*, and with the Department of Fisheries and Oceans.

George Roland MacHattie, on 8 January 2009, aged 64. George was employed as an Electronic Engineering Technician at BIO from 1966 until his retirement in 1998.

Captain Andrew J. Ray, on 4 January 2009, aged 80. Captain Rae was not a BIO employee but often sailed on BIO ships on the first day of a cruise to adjust and repair the ship’s magnetic compass if needed. A Master Mariner and businessman, he was also known to ship officers as the developer of a self-study curriculum that they followed to acquire a Master Certification.

Arnold Woo Shue, on 24 December 2008, aged 76. A Master Mariner, Arnold worked at the Bedford Institute of Oceanography aboard CSS *Baffin*. He was subsequently an instructor at the Nova Scotia Community College in Port Hawkesbury.

Kim Tai Tee, on 29 November 2008, aged 62. After obtaining an MSc in physics and a PhD in oceanography from Dalhousie University, Kim worked at BIO from 1975 to 1997. He was known for his work in developing, for example, numerical models of tidally induced residual currents and upwelling in the Gulf of Maine region.

ADDING TO THE BIO PHOTO ARCHIVES

Michael Latrémouille

For Clive Mason and I, visiting Mary Louise Rippey in early December 2008 at her home outside Windsor was a delightful opportunity for an excursion outside HRM. Mary Louise had invited us to look over some of her husband Jim's photographs and souvenirs of BIO. Jim is presently residing at the Dykeland Lodge nursing and lifecare home in Windsor.

James (Jim) Albert Rippey joined BIO in 1967. He began as a mechanic on *CSS Baffin* and worked his way up to become Chief Engineer in the mid-seventies on *CSS Hudson*, a position he retired from in 1987. Before joining BIO, Jim had served on *The Gypsum Queen* and before that had owned and operated his own service station (pictured below).

According to Mary Louise, Jim always thoroughly enjoyed his seagoing life aboard ship and would frequently regale his family with tales of his experiences at the supper table. He was proud to have traversed the Panama Canal twice on BIO ships during his career. That may help explain how four of Jim and Mary Louise's six children came by their sea legs and joined him in seagoing careers. This includes sons James Wilfred, Kenneth Charles, and Dani Victor, and daughter Helen Belle Hayden. James Wilfred served on *CSS Baffin* with his dad when she traversed the Northwest Passage during the Hudson '70 expedition.

The top photo here is of (left to right) Donald Tansley, then Deputy Minister of Fisheries and Oceans Canada, Captain Fred Mauer, and Chief Engineer Jim Rippey at a reception aboard *CSS Hudson* shortly after her successful 1981 circumnavigation of North America. Below that are photos (left to right) of Jim and his daughter Gayle Eileen aboard ship and of Jim and Mary Louise. Some of these photos will become welcome additions to the Photo Archives that are being created in BIO's Library. We are always interested in receiving donations of photographs that contribute to preserving BIO's history.



MEMBERSHIP LIST – BIO OCEANS ASSOCIATION

| | | |
|------------------------------------|-------------------------------------|--------------------------------------|
| Al Adams 463-1739 | Steve Grant 829-2656 | Shirley Parker 902-477-2410 |
| Richard Addison 250-537-1558 | Joan Guilderson 254-3405 | Vic Parkes 455-9481 |
| Robert Aggas 860-0935 | Jennifer Hackett 832-1158 | Arthur Parsons 435-3776 |
| Carl Amos 011-44-1794-518679 | Iris Hardy 861-4797 | Donald Peer 857-9268 |
| Betty Anderson 443-2572 | Barry Hargrave 519-371-5908 | Bernie Pelletier 613-829-9257 |
| Robert Anderson 435-0131 | Albert Hartling 477-0102 | Evelyn Penney 455-5047 |
| Penny Bambury 435-4103 | David Harvey 435-1517 | Georgina Phillips 823-3401 |
| Susan Banks 443-0365 | Richard Haworth 542-8601 | Patricia Pocklington 542-1903 |
| Brad Blackford 479-3213 | David Heffler 861-3991 | David Porteous 677-2821 |
| Martin Blaxland 604-925-3456 | Raymond Hiltz 752-3433 | Pushpa Prakash 613-726-0963 |
| Gordon Bowdridge 865-7530 | Michael Hughes 860-0784 | Charles Quon 462-2633 |
| Donald Bowlby 883-9169 | Leamond Hunter 597-3906 | Robert Reiniger 477-9833 |
| Joe Bray 366-2366 | Ruth Jackson 426-3791 | Sherry Richardson 826-2146 |
| Paul Brodie 820-2311 | Paul Jollymore 613-925-4910 | James Rippey 798-2706 |
| Mary Brooke 461-4151 | Marlene Karg 434-8617 | Kevin Robertson 456-9923 |
| Veronica and Lyle Brown 860-2460 | Charlotte Keen 477-9153 | Charles Ross 758-2533 |
| Dale Buckley 434-5734 | Vivian Kerr 866-3489 | David Ross New Zealand |
| Ralph Cameron 434-0316 | Norman Kimber 462-0175 | James Ross 445-4886 |
| Rose Cameron 463-2728 | Sally King 434-5050 | Raymond Rosse 462-5094 |
| Doreen Campbell 861-3978 | Timothy Lambert 845-2189 | Terence Rowell 463-5132 |
| Roger Cassivi 826-1744 | Michael Latrémouille 434-4036 | Alan Ruffman 477-5415 |
| Janet Charest 462-8512 | Donald Lawrence | Andrew Safer 422-8476 |
| Barry Chase 757-3420 | John Lazier 429-5063 | Matt Salisbury 835-4470 |
| Allyn Clarke 420-0632 | David Lemon 422-4191 | Doug Sameto 469-0960 |
| Arthur Collin 613-236-3146 | Elmer Lewis 834-2744 | Helmut Sandstrom 469-0005 |
| Gerald Connolly 434-0894 | Mike Lewis 466-2781 | Charles Schafer 861-3145 |
| Robert Cook 868-2948 | Sharon and Donald Locke 835-5209 | Karen Scott 905-337-2364 |
| Roy Cooper 613-592-3906 | Bosko Loncarevic 835-9606 | Linda Seto 479-2461 |
| Chris Corkett 445-3964 | Alan Longhurst 33 05 65 40 76 37 | Lester Shatford 434-7907 |
| Roch Cormier 418-336-2726 | Douglas Loring 861-2767 | Rod Shaw 826-7060 |
| Art Cosgrove 443-7945 | Ronald Loucks 443-1113 | William Silvert 351-212-900 385 |
| Keith Crawford 613-258-0297 | Sharyn Lucas 429-0010 | Michael Sinclair 835-5823 |
| Elizabeth Crux 435-2541 | Graham Lutwick 624-0183 | Bert Smith 757-2884 |
| Carl Cunningham 434-5749 | Alastair Macdonald 462-1317 | Ted Smith 826-2059 |
| Claudia Currie 426-7442 | Myles MacKinnon 469-4486 | Muriel Smith 835-2533 |
| Jackie Dale 466-2584 | Florence MacLaren 454-7587 | Stuart Smith 434-2489 |
| Paul d'Entremont 833-2736 | Brian MacLean 426-3703 | Florence Spencer 832-1148 |
| Jean-Guy Dessureault 469-6375 | Gregory MacLellan 582-1428 | Shiri Srivastava 434-6437 |
| Lloyd Dickie 435-1545 | Grant MacLeod 435-6478 | Michael Stepanczak 462-5819 |
| Donald Dinn 469-4647 | Ronald MacNab 463-3963 | William Stephen 863-1580 |
| Fred Dobson 604-542-4928 | Stephen MacPhee 613-258-0283 | James Stewart 826-2025 |
| William Dobson 469-9981 | Carol and Keith Manchester 861-3509 | Patrick Stewart 780-481-0056 |
| Ross Douglas 613-825-4695 | Kenneth Mann 443-3214 | Nicholas Stuijbergen 466-2962 |
| Dick Dowd 543-0071 | James Marlowe 910-457-0938 | Betty Sutherland 454-6557 |
| André Ducharme 792-1757 | Clive Mason 469-2085 | Betty Tillman 860-1978 |
| Stewart Dunbrack 681-0053 | Alasdair McKay 466-6461 | Willem van der Linden 3130 691 05 60 |
| Subba Rao Durvasula 463-7804 | David McKeown 477-5887 | John Vandermeulen 860-0219 |
| Gerald Dwyer 462-6485 | Florrie Meadwell 765-4099 | Edward Verge 434-4987 |
| Michael Eaton 434-1654 | Robert Miller 466-5210 | Richard Vine 434-1573 |
| Richard Eisner 832-0140 | Eric Mills 766-4606 | Earle Wagner 477-5589 |
| Gillian and James Elliott 434-6072 | Raymond Mills 443-5278 | Donald Waldron 203-254-1891 |
| Gordon Fader 455-6100 | William Moore 466-7977 | Rosalee Wambolt 462-2875 |
| Allin Folinsbee 403-286-1816 | Richard Morgan 435-4234 | Ying Wang (China) 86(25)620-7810 |
| Thomas Foote 466-2906 | Carol Morrison 860-0101 | Richard Wardrope 434-4174 |
| George Fowler 462-5784 | Laura Muise 435-3268 | David Wells 506-454-2650 |
| Michael Friis 434-8189 | Edmund Murray 479-1515 | Peter Wells 477-3674 |
| Margaret Garolitz 867-390-2113 | David Nettleship 826-2360 | William Whiteway 861-1021 |
| Chris Garret 250-598-1345 | Brian Nicholls 780-426-3278 | Heinz Wiele 852-2922 |
| Pat Gilbert 435-2858 | Neil Oakey 469-5259 | Kenneth Williams 475-1532 |
| Sherman Glazebrook 434-5823 | Robert O'Boyle 835-6065 | Gary Winters 835-2212 |
| Donald Gordon 469-2798 | Lisa O'Neill 864-7153 | Malcolm Youden 709-528-3256 |
| Michael Gorveatt 463-5432 | Charles O'Reilly 477-7616 | Scott Young 861-3322 |
| Alan Grant 463-2710 | Ann Orr 757-0274 | Maurice Zinck 462-0333 |
| | Richard Palmer 434-7372 | |

ON THE LIGHTER SIDE

A tour bus driver is driving with a bus load of seniors down a highway when he is tapped on the shoulder by a little old lady.

She offers him a handful of peanuts, which he gratefully munches up.

After about 15 minutes, she taps him on the shoulder again and gives him another handful of peanuts.

She repeats this gesture about five more times.

When she is about to hand him yet another batch he asks her, 'Why don't you eat the peanuts yourself?'

'Well, we can't chew them because we've got no teeth', she replies.

The puzzled driver asks, 'Why do you buy them then?'

The old lady replies, 'We just love the chocolate around them.'



An atheist was walking through the woods, thinking to himself:

"How beautiful the animals are! How majestic the trees are! How powerful the rivers are!"

As he walked along the river, he heard rustling in the bushes behind him. He turned and saw an 8-foot grizzly bear charging towards him. He ran along the path as fast as he could, but when he looked over his shoulder, he saw that the bear was closing in on him.

He kept running, but when he looked over his shoulder again, and the bear was even closer. Then he tripped and fell on the ground. The bear was right

on top of him with his right paw raised to strike him. At that instant, the atheist cried, "God help me!"

Time stopped. The bear froze. The forest was silent.

A bright light shone upon the man and a voice from the sky said, "You've denied my existence for all these years and have taught others that I don't exist. You've even credited creation to a cosmic accident. Why would you expect me to help you out of this predicament? Are you now a believer?"

The atheist looked into the light and said, "Well, I would be hypocrite to suddenly ask You to treat me as a Christian now, but could you, maybe, make the bear a Christian?"

"Very well," said the voice.

The light went out. The sounds of the forest resumed.

The bear lowered his right paw and brought both paws together. He bowed his head, and said: "Lord, bless this food which I am about to receive from your bounty. Amen."



A professional juggler, driving to his next performance, is stopped by the police.

"What are you doing with these matches and lighter fluid in your car?" asks the police officer.

"I'm a juggler and I juggle flaming torches in my act."

"Oh yeah? Let's see you do it," says the officer.

So the juggler gets out and starts juggling the blazing torches masterfully.

A couple driving by slows down to watch.

"Wow," says the driver to his wife. "I'm glad I quit drinking. Look at the sobriety test they're giving now!"



Murphy's Laws on Computers

- As soon as you delete a worthless file, you'll need it.

- Installing a new program will always mess up at least one old one.

- You can't win them all, but you sure can lose them all.

- The likelihood of a hard disk crash is in direct proportion to the value of the material that hasn't been backed up.

- There are only two kinds of computer users: Those whose hard disks have crashed, and those whose hard disks haven't crashed - yet.

- Anything can be made to work if you fiddle with it. If you fiddle with something long enough, you'll break it.



A man was telling his neighbor: "I just bought a new hearing aid. It cost me four thousand dollars, but it's state of the art. It's perfect."

"Really," answered the neighbor.

"What kind is it?"

"Twelve thirty."



Q: The Stanley Cup was recently on tour in my town, and I kissed it. Do I have to worry about being infected with listeria?

A: You are safe. The Stanley Cup has not been in contact with any Maple Leaf product in over 40 years.

News Sought from Retired GSC Atlantic Staff

The fall 2009 issue of the *Geological Survey of Canada's Old Timers Newsletter* will have news about what retirees have been up to recently on a personal level or professionally. Charles Schafer has been asked to report on what GSC –A retirees have been up to. He will be reporting to Thomas Frisch who edits the newsletter.

If you would like to contribute, please reply to Charles at charlestschafer@hotmail.com [telephone 902-861-3145].

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.

OFFICERS AND DIRECTORS

| | | | |
|---------------------|-------------------|----------------------------|------------------------------|
| PRESIDENT | Bob O'Boyle | 835-6065(h) 446-1301(o) | bcubed@accesswave.ca |
| VICE-PRESIDENT | Don Gordon | 469-3278(h) 426-3278(o) | gordond@mar.dfo-mpo.gc.ca |
| VICE-PRESIDENT | Charles Schafer | 861-3145 | charlestschafer@hotmail.com |
| PAST PRESIDENT | Betty Sutherland | 454-6557 | jesuther@dal.ca |
| SECRETARY | Iris Hardy | 861-4797 | bob.iris@ns.sympatico.ca |
| VICE SECRETARY | David McKeown | 477-5887 | davidmckeown@hfx.eastlink.ca |
| TREASURER | Bob Reiniger | 477-9833 | rreiniger@hfx.eastlink.ca |
| DIRECTORS AT LARGE: | Bob Cook | 868-2948 | bobheather@eastlink.ca |
| | Gordon Fader | 455-6100 | gordon.fader@ns.sympatico.ca |
| | Mike Hughes | 860-0784 | hughes@accesswave.ca |
| | Timothy Lambert | 426-3872 | lambertt@mar.dfo-mpo.gc.ca |
| | Carol Manchester | 861-3509 | k.manchester@ns.sympatico.ca |
| | Georgina Phillips | 823-3401 | tandgphillips@eastlink.ca |

COMMUNICATIONS: NEWSLETTER, PR, AND WEB SITE

| | | | |
|-------------------|----------------------|----------|----------------------------|
| NEWSLETTER EDITOR | Michael Latrémouille | 434-4036 | latremouille@accesswave.ca |
| ASSOCIATE EDITOR | David Nettleship | 826-2360 | dnnlundy@navnet.net |
| PR AND MEMBERSHIP | Clive Mason | 426-4163 | masoncs@mar.dfo-mpo.gc.ca |
| WEBMASTER | Bosko Loncarevic | 468-3392 | infocd@cd-books.com |

COMMITTEES/ WORKING GROUPS: CHAIRS

| | | | |
|-------------------------|----------------------------|----------|------------------------------|
| BELUGA AWARD | René Lavoie | 826-2175 | rene.lavoie@ns.sympatico.ca |
| BIO COMMEMORATIVE STAMP | Dale Buckley | 434-5734 | dbuckley@ns.sympatico.ca |
| EQUIPMENT ARCHIVES | David McKeown | 477-5887 | davidmckeown@hfx.eastlink.ca |
| GRAPHIC DESIGN | Art Cosgrove | 443-7945 | acosgrove@hfx.eastlink.ca |
| HMCS SACKVILLE HISTORY | Keith Manchester (contact) | 861-3509 | k.manchester@ns.sympatico.ca |
| LIBRARY ARCHIVES | Bosko Loncarevic | 468-3392 | infocd@cd-books.com |
| PHOTO ARCHIVES | Michael Latrémouille | 434-4036 | latremouille@accesswave.ca |
| SOCIAL PROGRAMS | Gordon Fader | 455-6100 | gordon.fader@ns.sympatico.ca |