

BIO-OCEANS ASSOCIATION NEWSLETTER

Issue 30, April 2006

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FROM THE OUTGOING PRESIDENT

As the sun again crosses the line into our spring, we leave behind a record breaking warm winter. I can now start finishing up my inside jobs, refastening a 15-foot rowing and sailing boat, and refinishing a bathroom with a new floor and toilet (cracked bowl). I won't miss working on plumbing in the crawl space under the house, but work on lapstreak planking provided some relief. We are now preparing to travel to England where we will live off our son and his lady friend for the month of April—one way to get even with your children! On our return I hope to spend the months of May and June on my favourite project—a 20-foot sloop outside under a tarp. This year I hope to come up with the answer question most asked of me: "When will she be in the water?"

This spring marks the end of my two-year term as president of the Oceans Association. I would at this time like to thank the entire executive for their help and advice. The members of the various committees deserve special mention, as they are the ones who do the actual work of the Association. It is good to know that the affairs of the Association are in capable hands. It has been wonderful to reconnect with people whom I have known and worked with during my 30 years at BIO.

Again this year, out of respect for winter weather, our winter social event was held during the day on Sunday, 12 February. Weather should not have been a concern considering the mild winter that we had been experiencing. As luck would have it we did in fact have a snowstorm predicted for that day and so attendance was not as high as we had hoped. For those who chose to defy the forecast to attend, it was a great experience to hear Zoe Lucas - author, photographer and naturalist/researcher - tell us about Sable Island and show her photographs of the plants and animals. As things turned out, the show did not start until mid afternoon, and the occasion was definitely worth the drive from Hubbards in the snow!

Expect to see lots of upcoming social events now that the social program committee is up and running under the chairmanship of Gordon Fader, ably assisted by George Anderson. We are hoping to attract lots of new members this way, and so please tell any friends you think might be interested in the Association. Pass on some of the newsletters to potential new recruits and invite them to some of the social events and to our website at <http://www.bedfordbasin.ca>.

Perhaps the best news this year was that BIO management has found a way to allow members of the Association to have reasonable access to the Bedford Institute of Oceanography within existing security regulations (Note: details were presented in the last newsletter, issue 29). Any member wishing to apply for regular access should give their names to Clive Mason or Dave McKeown.

Finally, keep in mind Wednesday 3 May, the date of our Annual General Meeting including this year's Beluga Award presentation. I hope to see you all there.

— Don Peer

THE HALIFAX FISHERIES RESEARCH LABORATORY

James E Stewart

Following publication of the article "*A retrospective: three quarters of a century at the Halifax Fisheries Research Laboratory*" (J.E. Stewart & A. Safer. 2005. Proc. Nova Scotian Inst. Sci. 43:19-44; copy available in the BIO Library), I was asked to prepare a digest for the BIO - OA Newsletter. As the original paper is readily available, I have met the request, not by a simple condensation, but rather by a quick sketch of the origins and programs in general, and a brief discussion of a sample project. (Note: see also the brief review of the paper included on page 6.)

With the introduction of steam-powered fishing vessels in the latter half of the 19th century and the consequent surge in landings came the fear of over fishing that led directly to the development and application of marine sciences to fisheries conservation and management. Domestically, one of the most important and continuing influences was the Canadian Fisheries Expedition of 1915 led by the invited, outstanding Norwegian scientist, Johan Hjort. His landmark approaches and methods were introduced and marked the real beginnings of marine sciences in Atlantic Canada. The results provided an immense amount of information through operations combining physical oceanography, qualitative and quantitative plankton studies, information on eggs and larvae of commercial species of fish, and detailed herring biology.

Hjort's influence also extended to much needed demonstrations and advice on the handling of catches resulting in significantly improved product quality and increased incomes. Coupled with extensions of this work, the obvious benefits led to a federally financed Fisheries Technological Program (FTP) initiated in Halifax in 1925 to provide scientific research and technical assistance to improve the handling, processing, and quality of fisheries products in Atlantic Canada.

The founding director of the FTP, A.G. Huntsman (1925-1928), also the director of the Biological Station at St. Andrews at the time, was charged by the Biological Board of Canada to carry out the required program and conduct an educational program to ensure that industry personnel were made directly aware of the scientific findings and received training on their application.

The first project tackled was to develop a smoke-house with appropriate environmental controls to ensure the fish were neither dried out nor cooked while being processed. By 1937, the engineers had developed a prototype which became the standard for the Atlantic fishing industry, ensured quality control, and also markedly increased the flow-through rate. In parallel with this work, they also developed a mechanical saltfish dryer considered to be the salvation of the saltfish industry in eastern Canada. At that time, saltfish and smoked products were important parts of the east-coast fishery.

From these early studies through to 1979, the scientists at 1707 Lower Water Street, Halifax, worked to ensure: higher grades of fresh and frozen products, fundamental and applied studies on protein and lipid chemistry, the biochemistry of spoilage via innate enzymes and/or bacteria, the selection of marker compounds as indices of spoilage, and grading and inspection systems. Recognition that the condition of the final product was influenced to a high degree by the condition of the fish and shellfish, prior to harvest, led to extensive studies on the physiology and biochemistry of the live animals.

Work begun in the mid-1960s added intensive studies on the health and well-being of live lobsters and technical support for aquaculture ventures including health and nutritional requirements, environmental aspects, and physical structures. These studies were made possible by construction of an extensive and sophisticated fresh and saltwater aquarium system.

The wide ranging fundamental and applied research program at the Halifax Fisheries Research Laboratory was performed by a broad array of professionals. These included engineers, food scientists, chemists, biochemists, microbiologists, physiologists, nutritionists, and histologists supported by a highly skilled technical support staff capable of building, maintaining, modifying and using the diverse pieces of equipment and systems these programs relied on. At its peak in the 1960s, the staff tallied about 90 members.

Apart from the quality considerations and the direct involvement in the development of reliable products, staff also undertook to combat threats to other aspects of the fisheries industries. One case study can serve as a typical example - i.e., the reduction of the high mortality rates among captive lobsters occasioned by poor holding conditions and the contagious, bacterial disease, gaffkemia (caused by *Aerococcus viridans* [var.] *homari*).

Since 1980, the lobster fishery in eastern Canada has landed between 40,000 and 50,000 tonnes (ca. 90-110 million lbs.) annually. Approximately 70% is held in various tank units or tidal pounds for periods ranging from weeks to several months before delivery live to the consumer. Kept under conditions ranging from good to poor, these lobsters suffer losses (termed "shrinkage") from a variety of sources, that have been estimated conservatively at 10% of the holdings (i.e., in the vicinity of 6-8 million lbs./year). This figure can balloon significantly when epizootics of gaffkemia break out. Fortunately, the disease does not affect people, but it kills lobsters. During an epizootic, losses as high as 10% per day have been recorded for affected storage units. As the economic return for lobsters to the east coast is considered to be roughly \$10 per pound, at today's values and catches the annual shrinkage costs the lobster industry around \$60-80 million, more when gaffkemia outbreaks occur.

Extensive investigations from 1962 until the late eighties revealed the sources of the bacterial agent of gaffkemia, how it persisted, how it was transmitted (through breaks in the shells), the effects of temperature, salinity, and diet, how it caused death, and various procedures to reduce its occurrence and minimize the severity of the outbreaks. Additional information was provided on diagnostic procedures, use of refrigeration, improved handling, and holding and shipping conditions. Nutritional studies conducted with lobsters also made possible a higher quality animal able to command higher prices. This work, at approximately \$1 million per year in today's money, cost about \$25 million in total, an investment that when properly applied has the potential for eliminating much of the \$60-80 million minimum annual loss to the industry.

Although the lobster industry as a whole has not yet applied all of the research findings, considerable improve-



The Halifax Fisheries Research Laboratory at 1707 Lower Water Street in Halifax was demolished in January 1999.

ment has occurred. For example, 20-30 operations have instituted dry-land holding units with chillers, better handling methods, use of serum protein values to predict meat yields and gaffkemia screening. As more experience of this kind is gained within the industry and benefits accrue, it is anticipated that more of the research findings will be applied and permit greater profits in the industry.

The Fisheries Technology Program was terminated across Canada in 1979. In Halifax, the laboratory space and aquarium were used by the Fisheries Resource Branch for the programs of the Benthic Fisheries and Aquaculture Division that included the Invertebrate Population Biology section, Fish Health and Disease section, Nutritional studies and the Invertebrate Culture Unit, and some elements of Freshwater and Anadromous Division. By the time the Halifax Fisheries Laboratory-Laboratory closed in 1997, the bulk of the staff and activities moved to the Bedford Institute of Oceanography. The nutritional studies went to the St. Andrews Biological Station and the National Research Council Laboratories in Halifax and the Fish Health and Disease Studies moved to the Moncton Centre. In 1999, the Halifax Fisheries Research Laboratory was demolished.



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. The principal aim is to identify titles of new publications from a variety of disciplines including oceanography (physical, chemical, biological), geology, natural history, nautical engineering and design, etc. Most books listed are available at local bookstores and via HRM libraries; book prices are regular retail in Canadian funds, but remember that discounts of 20-30% are normally available on line at: e.g., amazon.ca or chapters.indigo.ca. Anyone interested in contributing a book review to 'Noteworthy Reads' should contact David Nettleship (voice: 902-826-2360; internet: dnnlundy@navnet.net).

SPECIAL PUBLICATION:
NURSING ADVENTURES IN NORTHERN CANADA

Scott, J. Karen and Joan E. Kieser (eds.). 2005. Northern Nurses II: More Nursing Adventures from Canada's North. Kokum Publications, Oakville, ON. 232 pp. Softcover, \$34.00 (ISBN 0973039213; available from booksellers and J.K. Scott: ph, 905-337-2364; e-m: jkscottRN@sympatico.ca). – Kudos to Karen Scott (RN, B.Sc.N.), former Chief Medical Officer aboard the CSS *Hudson*, and her friend and co-editor Joan Kieser, for producing a second volume of true accounts by medical providers in Canada's North, a very special breed of nurses that display attributes required nowhere else. The first book entitled "*Northern Nurses: True Nursing Adventures from Canada's North*", published in 2002, was so well received by such a diverse and large audience, that it demanded the compilation of another volume with additional stories by other nurses about their unique and fascinating experiences in remote areas across northern Canada. The present work comprises 52 accounts (by 45 authors) that span the vastness of Canada's North: from Newfoundland and Labrador and northern parts of central Canada through Nunavut, the Northwest Territories, to the Yukon and Vancouver Island. Together, the sto-

ries show the enormous variety of challenges faced by nurses in these isolated regions, and the limits to travel and communication placed upon them by weather. The scope of situations described in the delivery of health care to northern communities is unimaginable to non-northerners, as are the talents, creativity and determination required to succeed in such a harsh and unforgiving environment. Read these exciting true adventures – on land, at sea and in the air - of the remarkable people that chose to work as northern nurses, and learn about the demands of living and surviving in Canada's North. Together, the two volumes of "*Northern Nurses*" form an important review of the history of providing health care in Canada's north, and are 'must' reads for anyone interested in the north, from armchair travellers to northern residents and governmental decision-makers. Of course, Karen Scott's own contribution "Nursing on the High Seas", an account of her tenure aboard the *Hudson* including the 9-month voyage round the North American continent in 1981 will doubtless trigger fond memories by many members of the BIO-OA and the Bedford Institute of Oceanography.

GENERAL REVIEWS

Clinton, Michael. 2005. Global Snaps: 500 Photographs from 7 Continents. Powerhouse Books, New York, NY. 352 pp. Hardcover, \$44.95 (ISBN 0976585111). – Here is a book that celebrates the beauty of our planet! A representative sample of the visual wonders of planet Earth is vividly captured in 500 colour photographs by world traveller and world-class photographer Michael Clinton. He whisks us away on a tour across more than 100 countries, organized by continent, showing us both natural and man-created visual gems. These range from penguins navigating across the Antarctic ice, the majestic peak of Mount Kilimanjaro in Tanzania, and the lunar-like landscape of Namibia in southern Africa to the Pyramids of Giza outside Cairo, the Coliseum in Rome, and the stunning facade of a cathedral in Siena, Italy, and more. This book represents communication at its best, using outstanding photography as the medium.

Eldredge, Niles. 2005. Darwin: Discovering the Tree of Life. W.W. Norton, New York, NY. 256 pp. Hardcover, \$49.00 (ISBN 0393059669). – Did you ever wonder how Darwin's ideas evolved in the 23 years between his post-Beagle return to England and the publication in 1959 of '*On the Origin of Species by Means of Natural Selection, or the Preservation of the Favoured Races in the Struggle for life*'? Well, here is the opportunity to find

out. Niles Eldredge sifts through Darwin's notebooks and manuscripts to offer fresh insights. He provides a solid introduction to the man and to his work, and covers all the major points to set the stage for "discovering the tree of life". The book is clearly written and is extremely well illustrated. While the emphasis, as expected, is on Charles Darwin, Eldredge skillfully uses Darwin and his life as a way to get to the theory of evolution. It is a fascinating and stimulating story, one that must be on the reading list of anyone interested in Charles Darwin, the father of modern evolutionary theory and the man who discovered the key mechanism of natural selection.

Fagan, Brian. 2006. Fish on Friday: Feasting, Fasting and the Discovery of the New World. Basic Books, New York, NY. 338 pp. Hardcover, \$30.56 (ISBN 0465022847). – Here is an exciting account by world-renowned anthropologist Brian Fagan who raises the query: "Did the European taste for seafood trigger North America's discovery?" Fagan states it was fish, not spices, that led to the discovery of the New World and presents solid evidence in support of his claim. '*Fish on Friday*' forms a remarkable chronicle that begins with the traditional Christian rule against meat on Fridays and ends with the booming fishing trade off North America's Atlantic coast. Complete with a carefully developed review of the growth of European populations and the increased demand for more fish from the 9th to 13th centuries, Fagan convincingly demonstrates the push of the international fishing industry westward across the Atlantic in search of bigger catches. He speculates that it was sailors from the fisheries of western England who were the first to cross the ocean and discover the rich fishing banks off the coasts of Newfoundland and New England. Right or wrong, '*Fish on Friday*' sheds considerable new light on critical events in the history of world exploration. A most stimulating read.

Flannery, Tim. 2006. The Weather Makers: How We are Changing the Climate and What it Means for Life on Earth. HarperCollins Canada, Toronto, ON. 357 pp. Hardcover, \$34.95 (ISBN 0002007517). – The message delivered clearly and carefully in this book by Australian paleontologist and distinguished science writer is one to pay attention to immediately. This authoritative and disturbingly important work will rudely awaken the climate-change deniers inside and outside the oil industry. The frightening changes in climate reported here and the evidence presented identifying the root cause – carbon pollution from the world's great 200-year-old fossil fuel fiesta - clearly identifies the need for immediate and sus-

tained carbon reductions. Flannery's warning, based upon existing evidence and knowledge, is blunt and accurate: "If humans pursue a business-as-usual course for the first half of this century ... the collapse of civilization due to climate change is inevitable." Can actions be taken in time to mitigate the impact and correct the core problem? The simple answer given is "Yes", but only if the peoples of the world and their governments set and enforce stringent regulations on carbon pollution. Read and pay heed to the warning presented by Tim Flannery, and force our decision makers to put us on the right road. [Note: see also, Hoffman et al. 2005.]

Hoffman, Jennifer, Tina Tin and George Ochoa. 2005. Climate: The Force that Shapes our World and the Future of Life on Earth. Rodale Press, Emmaus, PA. 288 pp. Hardcover, \$50.88 (ISBN 140508782X). – This important book tells the story of the primary force that has shaped the world – climate – and our limited understanding of the factors responsible. The authors review events from the first rainfall on primordial Earth to the hothouse climate of the Cretaceous dinosaurs, through the ice age in which modern humans got their start to the interglacial period in which human civilization arose. We learn about the changes in climate that have taken place over the last four billion years and how conditions gradually altered to support living things. We see how climate facilitated the rise of our own species two million years ago, when Africa's climate changed from cool and dry to a warm and humid one, a switch that made it easier for hominids to migrate from the equator. Through this wide-ranging review of conditions on Earth, the authors underline the fact that whereas climate has caused many extinctions in the distant past through natural processes, the relatively rapid changes being noted today – global temperature increases, melting polar ice, and other signs of large-scale change – are likely due to human activities that may be permanently altering the climate with destructive consequences. Overall, the authors and their book '*Climate*' focus on a problem of humankind and the planetary force whose impact cannot be overestimated. [Note: see also, Flannery 2006.]

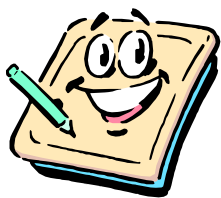
Pálsson, Gísli. 2005. Travelling Passions: The Hidden Life of Vilhjalmur Stefansson. University of Manitoba Press, Winnipeg, Manitoba. 374 pp. Hardcover, \$39.95 (ISBN 0887551793). – Another biography of Vilhjalmur Stefansson, Canada's most renowned arctic explorer of the 20th century, you might ask? Stefansson, born in 1879 in rural Manitoba to Icelandic immigrants, became Canada's greatest modern explorer and the last of the ex-

plorers of the 'heroic age' to discover unknown lands in Arctic America. Stefansson began his arctic explorations in 1906, and after two productive expeditions, led the Canadian Arctic Expedition of 1913-18, a venture that solidified his celebrity status in polar exploration. Stefansson was a prolific writer (25 books plus hundreds of scientific and popular articles) and international lecturer, and promoted Arctic exploration and development throughout his lengthy career. Although his work and scientific accomplishments are well documented, it is clear through the detective work of Icelandic anthropologist Gisli Pálsson that our knowledge of Stefansson's personal life was incomplete. Nowhere in Stefansson's writings or lectures did he reveal his relationship with Fanny Pannigabluk, an Inuk widow that he met in 1908, with whom he lived and had a son, Alex, in 1910. It is the existence of Stefansson's Inuk family that this book focuses upon, a review of new and old biographical information - including a collection of private letters found in 1987 and recent interviews with his Inuk grandchildren - that confirm not only his northern family but also the major influence Pannigabluk had on him during his early arctic years by teaching him the Inuk language, culture and survival techniques. This expose by Pálsson reveals a previously unknown part of Stefansson's character and personality, information that will certainly alter our view of this icon of Canadian arctic exploration.

Parsons, Robert C. 2005. Ocean of Storms, Sea of Disaster: North Atlantic Shipwrecks of the Strange and Curious. Pottersfield Press, Porters Lake, NS. 253 pp. Softcover, \$19.95 (ISBN 1895900743). – Robert Parsons has been writing about disasters at sea for some considerable time and has produced many books about wrecks, particularly about Newfoundland ships. Books about wrecks abound and continue to have a wide readership. Perhaps it is the excitement of the unknown that attracts readers, questions such as: Why did the ship sink? Was it off course and ran aground, or was it struck by some foreign object? Did weather conditions play a part, and was there loss of life? Well, Parson's latest work '*Ocean of Storms, Sea of Disaster*' will stir the imagination as stories of some 60 selected shipwrecks in the North Atlantic are presented, accounts that range from the old and mysterious from the 1870s to recent times, and include mutiny, piracy, fire, explosions, storm disasters, and simple disappearance. The individual accounts are brief, a few pages at most, but capture and retain the reader's interest throughout. A good read for anyone interested in the 'glory' of travel at sea and the drama of mishaps and tragic happenings.

Stewart, James E. and Andrew Safer. 2005. A Retrospective: Three Quarters of a Century at the Halifax Fisheries Research Laboratory. Proceedings of the Nova Scotia Institute of Science, Volume 43 (Part 1): 19-44. – Although not a book, this substantial paper by Stewart and Safer is an important review of the history of the federal Fisheries Technological Program on the Halifax waterfront from its initiation in 1925 to its termination in 1979, and subsequent closure of the Halifax Fisheries Research Laboratory and staff relocation in 1997. The paper separates into two parts, the first focusing on the Fisheries Technological Program and its 53 years of operation, and the remainder (post 1979) on the Fisheries Resource Branch Program and its amalgamation with the Ocean Science and Surveys Branch to form the current Science Branch of the Department of Fisheries and Oceans. The historical background and details of the Technological Program – its development, aims and objectives, researches and applications – are revealing. They show the breadth and magnitude of the studies on fish processing undertaken and the significance of those research findings both nationally and internationally, as well as the rationale for closing the Fisheries Technological Program. Overall, a succinct retrospective of the Halifax Fisheries Research Laboratory and the significant role it played to the Atlantic fisheries. [Note: see also article by J.E. Stewart on page 2.]

Winchester, Simon. 2005. A Crack in the Edge of the World: America and the Great California Earthquake of 1906. HarperCollins Canada, Toronto, ON. 463 pp. Hardcover, \$37.95 (ISBN 0060571993). – Simon Winchester, Oxford-trained geologist, and exemplary storyteller of science-based events has done it again with his latest book '*A Crack in the Edge of the World*'. As he did in '*The Map that Changed the World*' and '*Krakatoa: the Day the World Exploded*', Winchester applies his masterful storytelling abilities to the San Francisco earthquake of 1906. Although the story is focused on the tragic consequences when the San Andreas fault shifted shortly after 5 am on 18 April 1906 – quake measured 8.6 on the Richter scale, destroying 490 city blocks and 25,000 buildings with 600 deaths recorded and 200,000 people left homeless – detailed review discussions are also given about other earthquake sites across the United States, tectonic plates and the geological forces that cause earthquakes. Overall, Winchester provides an exhaustive description of one of history's great catastrophes, in a gripping and informative manner.



WHAT'S GOING ON:

APRIL - JUNE 2006

Here are some current and upcoming events in the Halifax Regional Municipality and adjacent regions that may interest members. Send in event listings to David Nettleship, for inclusion in future issues of the newsletter (voice: 826-2360; internet: dnnlundy@navnet.net).

1 & 2 Apr.: "Who's Afraid of Virginia Woolf?", Neptune Theatre — For details, call 429-7070 or go to www.neptunetheatre.com.

1 & 2 Apr.: "Annual Orchid Society Show & Sale", Museum of Natural History (Sat., 9:30 am to 5 pm; Sun., 1-5 pm) – A stunning display of exotic orchids, tips on growing them, and the opportunity to take some home! Admission: \$2.00.

1-17 April: "Bug World: Before dinosaurs, insects ruled the earth!", Museum of Natural History — A special exhibit of giant models of insects and a Bug Zoo featuring living insects. The seven models include a six-metre praying mantis, a desert locust with spread wings, and two fighting Atlas beetles. A display not to be missed! Special admission rates apply, for details, call: 424-3563.

1-30 Apr.: "Lunenburg County NSCAD Students' Show", Lunenburg Art Gallery, Lunenburg — A special presentation of the works of young artists from Lunenburg County.

1-30 Apr.: "Nova Scotia Printmakers Association Bi-annual Exhibition", Acadia University Art Gallery, Wolfville — An exhibition of outstanding prints.

1 Apr. to ? : "The World's Fastest Indian", Oxford Empire Theatre – One of the best films of the year and Anthony Hopkins gives one of his greatest performances. Based on the life of New Zealander Burt Munro and his eccentric quest to rebuild a motorcycle into a winner – a heart-lifting story!

1 Apr. to ? : "Tsotsi", Park Lane 8 Empire Theatre – A film of deep emotional power, based on a novel by

the great South African writer Athol Fugard, set in Soweto, near Johannesburg, South Africa, that just won the Oscar as best foreign film. A sad story about poverty and despair, but one that also shows change and opportunity.

1 Apr. to 7 May: "Christopher Pratt", Art Gallery of Nova Scotia – (open 7 days a week, 10 am to 5 pm, Thurs. until 9:00 pm). Exhibition of original artwork by renowned Newfoundland artist Christopher Pratt. For additional information call: 424-7542.

1 Apr. to 21 May: "Art of the Ancient Mediterranean World: Egypt, Greece, and Rome", Art Gallery of Nova Scotia (open 7 days a week, 10 am to 5 pm, Thurs. until 9:00 pm) – Exhibition from the collections of the Art Gallery of Greater Victoria – explore the world of pharaohs and emperors! For additional information call: 424-7542.

1 Apr. to 21 May: "Do You Believe in Magic?", Grafton Street Dinner Theatre, Halifax – Musical comedy featuring music of the 1970s & '80s. For information and reservations, call: 425-1961.

3 Apr.: "Take Me to your Pilot: the Pilot Service in the Port of Halifax", Maritime Museum of the Atlantic (7:30 pm) – Join Captain Alex MacIntyre for an illustrated talk about his 23 years as a Pilot in Halifax Harbour: the exciting ship experiences and all about this little known cog in the life of our city and its economy.

4 Apr.: "Canada Council Author Reading: Carol Bruneau", Tantallon Library (7:00 pm) – Carol Bruneau reads from her book "Berth", a novel that explores the human propensity to seek 'greener' pastures, and by turn, to suffer the dangers of the status quo.

4 Apr.: "Our Coastal History as Seen From a Sea Kayak", Maritime Museum of the Atlantic (7:30 pm) - Join Dr. Scott Cunningham, Coastal Adventures, for an adventure paddle among intriguing remnants of our past along Atlantic Canada's vast shores including shellfish middens, shipwrecks, and abandoned settlements. An illustrated lecture not to be missed.

4 & 18 Apr.: "Tales of Pirates & Privateers of the North Atlantic", Maritime Museum of the Atlantic (7:00 pm) - Come and hear about tales of piracy in

eastern Canada and discover the differences between villainous pirates and patriotic privateers; different tales are presented each evening.

4-23 Apr.: “Tuesdays With Morrie”, Neptune Theatre — For details, call 429-7070 or go to www.neptunetheatre.com.

7 Apr.: “Writing Series: How Do I Get Published?”, Spring Garden Library (7:00 pm) – Get together with publishers Jim Lorimer of Formac Publishing, Sandra McIntyre of Nimbus Publishing, and Heather White of *Saltscapes* and hear their views about: What kind of stories sell? What are publishers looking for and how do writers approach them? All of these issues and more will be discussed.

7, 14, 21 & 28 Apr.: “Skills of the 19th Century Sailor”, Maritime Museum of the Atlantic (4:00 pm) – Hands-on presentation by heritage interpreter Derek Harrison: learn to splice rope, stitch canvas, make a Turk’s-head rope mat and a host of other things done by early sailors; a different skill is featured each week. For details, call 424-7490.

11 & 25 Apr.: “Guided Tour: Ghosts & Marine Folklore”, Maritime Museum of the Atlantic (7:00 pm) – Hear stories from a Museum Interpreter about NS resident ghosts and restless spirits that have been seen, sensed or heard by more than one person. For more information, call: 424-7490.

12 Apr.: “Acadian Root Baskets of Atlantic Canada”, Museum of Natural History (7:30 pm) – An illustrated talk by Joleen Gordon, NS Museum research associate and author of recently published ‘Acadian Root Baskets of Atlantic Canada’, that explores the art of Acadian basket making and how Acadian, Black, and Mi’kmaq styles have overlapped and influenced each other.

12 Apr.: “Author Reading: Linda Yates”, Alderney Gate Library (7:00 pm) – Meet author Linda Yates and hear her read from “Just Wait ... There’s More: Surviving Cancer”, a memoir that looks at the bizarre and often crazy life of living in the land of cancer.

18 Apr.: “Knitting as a Hobby”, Bedford Library (7:00 pm) – Let award-winning knitting designer and teacher Lucy Neatby show you how knitting can be a fun and rewarding hobby. Registration required: call 490-5757.

18 Apr. to 28 May: “EVITA”, Neptune Theatre — For details, call 429-7070 or go to www.neptunetheatre.com.

19 Apr.: “Hot and Cold: Atlantic Canada’s Climate through Time”, Museum of Natural History (7:30 pm) — An illustrated talk by Dr. Pierre Jutras, St. Mary’s University, showing how changing climates are revealed by ancient soils, rocks, and fossils – a journey through 500 million years!

19 Apr.: “Organic Lawn Care”, Woodlawn Library (7:00 pm) – Do you dream about a green lawn, but don’t know how to achieve it naturally? Come and hear lawn expert Hector Gonzalez tell you what’s required. Registration required, call: 435-8352.

20 Apr.: “An Introduction to the Magic of the Symphony”, Keshen Goodman Library (7:00 pm) – Peter Tongi, CBC Radio Two host, will use the rich music of Nordic composer Jean Sibelius as a starting point to introduce novice listeners to the expansive world of orchestral music.

21 Apr.: “Climate on the Edge”, Spring Garden Library (12:00 pm) – This 1-h NFB film (2003) examines the Arctic as the front line of climate change and explores this complex issue through interviews with: climatologist Jean Jouzel, glaciologist Fritz Koerner, oceanographer Eddy Carmack and computer modeler Francis Zwiers.

22 Apr.: “Earth Adventures in the Halifax Region”, Keshen Goodman Library (2:00 pm) – Celebrate Earth Day with Janet Barlow, Daily News columnist and co-author of “Earth Adventures in the Halifax Region”, as she provides tips on where to go, exiting activities to try, and preparation – there’s lots to explore.

22 Apr.: “Tour of the Museum of Industry, Stellarton”, Industrial Heritage Society of Nova Scotia (IHSNS) – Come on a ‘field trip’ to the Museum of Industry (Stellarton), organized by the IHSNS, for a guided tour through the museum including a look behind the scene at artifacts in the storeroom not yet on public display. For details, contact coordinator: David Heffler (Fall River), 865-3991.

22-23 Apr.: “African Violet Show & Sale”, Museum of Natural History (Sat., 1-5 pm; Sun., 1-4 pm) – Come and join in on the Halifax African Violet Society’s display of flowering plants, and learn and

share information on plant care. The violets presented will also be judged in several divisions including 'Container Gardens', 'Interpretive Flower Arrangements', and 'Novice Design'.

22 Apr. to 4 Sep.: "Northern Jaws: Sharks of Canada", Museum of Natural History – A must-see exhibit based on recent scientific findings on sharks and their evolution, behaviour and anatomy. Learn the truth behind shark myths, medicinal properties of shark cartilage, and play with interactive modules. Fun for all.

25 Apr.: "Thirty Years of Archaeology in Halifax Regional Municipality", Museum of Natural History (7:30 pm) – Join archaeologists Steve David and April MacIntyre and hear about recent archaeological projects in HRM including the Shubenacadie Canal (Metro Park), Jefferson Property, and Salter's Gate (Brewery Market), and other topics related to the buried heritage of the province.

26 Apr.: "The Life & Works of Great Composers: J.S. Bach", Madrigal Records, Spring Garden Place (7:30 pm) – An informative talk, accompanied by selections of the best recorded music of J.S. Bach. Come and enjoy, admission is free. For information, call: 423-6453.

26 Apr.: "Update on Cape Forchu", Maritime Museum of the Atlantic (8:15 pm) – Come and hear Nancy Knowles, president of 'The Friends of the Yarmouth Light', describe the beauty of the Cape Forchu lighthouse in the approaches to Yarmouth Harbour and the joys/challenges of maintaining the site since ownership was transferred from the CCG to the Municipality of Yarmouth. [Talk is part of the NS Lighthouse Preservation Society's AGM that begins at 7:00 pm – everyone is welcome.]

26 Apr.: "Maritime Gardens and Gardeners", Museum of Natural History (7:30 pm) – Join botanist Alex Wilson for a look at some of our regional heritage gardens including horticultural projects such as the Irving Botanical Garden at Acadia University and the incredible rock garden at the NS Agricultural College in Truro.

26 Apr.: "Water Gardens", Keshen Goodman Library (7:00 pm) – Join John Bywater, landscaper and gardening instructor, and learn how to create and bring your water garden to life, a soothing and beautiful addition to any landscaping project.

29 Apr.: "Library Book Sale", Alderney Gate Public Library (10 am to 4 pm) – The Library's biggest book sale of discards. For information, call: 490-5718.

29 Apr.: "Popular Herbal Products", J.D. Shatford Library (2:00 pm) – Join pharmacists from Hubbards Pharmasave for a 1-hour discussion of common uses of herbal products such as Echinacea and ginseng, as well as their effectiveness, side effects and precautions for use.

29-30 Apr.: "Model Makers' Showcase", Maritime Museum of the Atlantic (Sat., 10 am to 5 pm; Sun., 10 am to 4 pm) – See the nearly 300 ship models made by more than 80 of Atlantic Canada and New England's model makers. Talk of ship models and how they are crafted, and see newly completed models unveiled by master builders. You may get 'hooked' by their amazing craft and passion.

1 May: "Alchemy on Rails: An Illustrated Look at Haligonian Tramways as Agents of Change", Maritime Museum of the Atlantic (7:30 pm) – Come aboard a virtual tram with IHNS member Bob Tennant and experience the challenge and response of people in Halifax to this new technology when introduced in the late 1800s and how it changed people's activity patterns forever.

1, 8, 15, 22 & 29 May: "History Out of a Dufflebag", Maritime Museum of the Atlantic (2:00 pm) – Come aboard the CSS Acadia and rummage through a sailor's dufflebag with Heritage Interpreter Derek Harrison: read and view crewman's letters, journal entries, pictures, and discover what life was like on this historic vessel.

2, 4, 9, 11, 16, 18, 23, 25 & 30 May: "Remembering Halifax's Darkest Day: 6 Dec. 1917", Maritime Museum of the Atlantic (2:00 pm) – Join Heritage Interpreter Johanna Kristjansson, as she shares stories of tragedies and triumphs from that dark day when Halifax was devastated by an explosion that claimed the lives of nearly 2,000 people and the miraculous survival of her own great-grandmother.

3 May: "2006 BIO—OA Annual General Meeting", Main Auditorium, Bedford Institute of Oceanography — Come celebrate the 2006 AGM: 9:30 am – Social, 10:00 am – Year-end Review, 11:05 am – Beluga Award Presentation. Everyone is welcome.

3, 10, 17, 24 & 31 May: “Enemies At Our Gates”, Maritime Museum of the Atlantic (2:00 pm) – Join Derek Harrison, Heritage Interpreter, for his program describing the presence of German submarines close to Halifax Harbour during World War II as they lay in wait to launch surprise attacks on convoys before they could enter the safety of the harbour – tactics used by both German and Canadian Navies are described and assessed.

3, 10, 17, 24 & 31 May: “Lifeline to Victory”, Maritime Museum of the Atlantic (3:00 pm) – Join Heritage Interpreter Richard MacMichael for a guided presentation of the World War II merchant ship formations, known as the “Lifeline to Victory”, used to transport vital supplies overseas under armed escort.

10 May: “The Good, the Bad and the Ugly”, Museum of Natural History (7:30 pm) – Let entomologist Dick Rogers introduce you to the amazing diversity and habits displayed by the 1 million species of insects than inhabit the world. Human perceptions of the good, the bad and the ugly in the insect world will be explored in an entertaining and informative manner.

12 May: “The Big 3!”, Spring Garden Library (12:00 pm) – Bring your lunch and listen to the Symphony NS’s Library Players play Bach, Mozart, Beethoven – need more be said? Coffee and tea will be provided.

27 May: “Plant Sale Fiesta”, Scott Manor House, Bedford (10 am) – Special sale of unusual plants from the gardens of members of the Bedford Horticultural Society at very reasonable prices. Proceeds are being donated to the N.S. Agricultural College

scholarship.

31 May: “The Life & Works of Great Composers: G.F. Handel”, Madrigal Records, Spring Garden Place (7:30 pm) – An informative talk, accompanied by selections of the best recorded music of G.F. Handel. Come and enjoy, admission is free. For information, call: 423-6453.

1, 6, 8, 13, 15, 20, 22, 27 & 29 Jun: “Remembering Halifax’s Darkest Day: 6 Dec. 1917”, Maritime Museum of the Atlantic (2:00 pm) – For details, see entry for 2, 4, 9 May above.

4 Jun.: “Derek Edwards: Sleepless in Gogama”, Rebecca Cohen Auditorium (8:00 pm) – Live performance by Canadian Comedy Awards winner Derek Edwards – described as one of the top comic talents in Canada. For tickets, call: 494-3820.

5, 12, 19 & 26 Jun.: “History Out of a Dufflebag”, Maritime Museum of the Atlantic (2:00 pm) – For details, see entry for 1, 8, 15 May above.

7, 14, 21 & 28 Jun: “Enemies At Our Gates”, Maritime Museum of the Atlantic (2:00 pm) – For details, see entry for 3, 10, 17 May above.

7, 14, 21, & 28 Jun: “Lifeline to Victory”, Maritime Museum of the Atlantic (3:00 pm) – For details, see entry for 3, 10, 17 May above.

28 Jun.: “The Life & Works of Great Composers: F.J. Haydn”, Madrigal Records, Spring Garden Place (7:30 pm) – An informative talk, accompanied by selections of the best recorded music of F.J. Haydn. Come and enjoy, admission is free. For information, call: 423-6453.

NOTE TO OUR READERS

The “What’s Going On” column covers local events over a 3-month period.

We printed it as the centre page of the newsletter so that it could be easily removed and put up in a more convenient location for easier reference. We hope this will prove useful.

2006 BELUGA AWARD RECIPIENT:

CAPTAIN JOE BRAY

Joe Bray, this year's Beluga Award recipient, is a native Nova Scotian, born in Canso. As a youngster of seven, his family moved to PEI and later to New Brunswick; however, after about eight years his father saw the error of his ways and returned the family to Canso. Apart from three years in Truro while his wife Linda attended the Provincial Normal School to obtain her teaching degree, Joe has lived in Canso ever since. He and Linda have raised three children, two girls and a boy.



Like most young fellows who grow up in fishing towns and villages along the Nova Scotia coast, Joe was at home on the water and proficient in handling small boats. In 1968, this skill, along with his engaging personality, won him a position with the Canadian Hydrographic Service. He came up through the ranks in the Service, starting out as a hydrographic launch coxswain attached to the CSS *Kapuskasing*, and received a thorough grounding in practical navigation. After five years aboard the *Kapuskasing*, Joe had stints aboard CSS *Dawson* and CSS *Baffin* before he joined the hydrographic shore party and operated survey launches in Cape Breton and Newfoundland. Around this time, he began course work at the Nautical Institute and was successful in obtaining a Mate's ticket. After two years aboard the charter vessel, *Martin Karlsen*, he signed on

as mate on the CSS *Maxwell*. From the *Maxwell*, while upgrading his ticket in the off season, he spent time on the CSS *Dawson*, CSS *Hudson* and CSS *FTG Smith* before taking command of the MV *Navicula* in 1989. Joe served as captain of the MV *Navicula* for 14 years before she was retired in 2003. Since then, he has skippered the fisheries patrol vessel CCGS *Point Caveau* stationed off northwest Nova Scotia. Joe still has a few more years to go before leaving the service, but when he does you can be sure he won't stray too far from a boat.

This year's choice for the Beluga Award will be extremely popular, as the accolades for Joe came in from all branches of the government service here at BIO and from as far away as Newfoundland and Quebec. A common theme was prevalent in the many testimonials sent in support of his nomination: the words friendly, competent, cooperative and considerate appeared in nearly every submission. Joe is a model skipper; he is held in high esteem by his crew, leading by example, not by clout of rank. His consideration for others has taken many forms: he invariably gave first choice of leave to his crew before taking his own; he would work on a piece of equipment for you over a weekend to make sure it was ready for the next week's work; he was always sympathetic to anyone suffering from seasickness providing medication if needed. Those who have worked with Joe over the years could come up with many more examples of these little 'extras' that endeared him to his colleagues.

Working and living on a small vessel, like *Navicula*, in cramped quarters is not the easiest thing. The captain has to be sensitive to his crews' feelings and needs to use respect and tact when dealing with the inevitable disagreements. Joe is more than equal to the task and has proved to be a real diplomat in sorting out rare personal conflicts on the boat. These have always been resolved amicably, for he is highly respected by this crew. This respect is well earned for he would not ask his crew to do anything he wouldn't do himself and he regularly joins in to assist, whether it is mending nets, painting decks, or repairing engines.

He has been at the wheel of a number of smaller vessels over the years and could easily have, and has been offered, command of larger vessels. However, he eschews the larger command, preferring the variety of work and more 'hands-on' demands offered aboard a vessel like *Navicula*.

(Continued on p. 12)

Whoever was scientist-in-charge (SIC), they soon found out that Joe was an essential part of their scientific team. His ingenuity in solving gear deployment problems ensured the success of many an otherwise 'doubtful' cruise. Never content to just remain behind the wheel providing taxi service to and from the study site, Joe has displayed a keen interest in the project-at-hand as has been evident from early days of his career. This admirable quality began with making transit readings to assist a survey team in the Arctic and has continued since, most recently aboard *Navicula*, with helping sort the species in a groundfish catch. During these fishing trips, Joe kept his own detailed records of the work carried out. These included measurements of the trawl net dimensions, annotations on hydrographic charts regarding tear ups, bottom type, quantity of major species caught, and electronic records of set locations. All of this was done without request from the SIC; just part of the service! A number of supporters of Joe's nomination remarked on his ingenuity in devising ways of deploying and retrieving the unusual scientific sampling devices brought aboard his vessel. No piece of gear fazed him; some devices might invoke a smile and a raised eyebrow, but if Joe couldn't make it work, no one could! His advice on accomplishing the task at hand is ever timely and useful.

Joe enjoys coastal steaming and frequent stops in many ports large and small. He is a real 'people person' and he has gained the friendship and respect of many local residents throughout Atlantic Canada, from fishermen, local trades people and tourists to members of the RCMP. In addition to his concern for morale and working conditions aboard his vessel, he is acutely aware that the boat represents the DFO, and that its appearance should be exemplary. In fact, with Joe at the helm, the *Navicula* and her crew was one of the department's best public relations vehicles, better than all of the paper generated by communications departments. Local residents always met the boat's arrival with great enthusiasm and, within minutes of tie-up, visitors would begin arriving to greet Captain Joe and his crew to exchange the latest news.

The ships' officers and crews manning our research vessels have played a major role in the success of BIO research. The international reputation of the Institute is owed in no small way to these unsung heroes. In epitomizing this dedication and professionalism, they could not wish for a better person to represent them, as recipient of the 2006 Beluga Award, than this modest, unassuming man, Captain Joe Bray.

"BEAT THE WINTER BLUES": YOUR INVITATION TO HELP ORGANIZE AND PARTICIPATE IN A CELEBRATION

BIO's main auditorium doors will open at 7:00 pm on Saturday, 29 April 2006, to kick off the 8th Annual "Beat the Winter Blues" concert dance. Some of the reasons you won't want to miss this year's celebration are that:

- It is being held in association with the 4th Annual Employee/Family Arts, Craft, and Hobby Show in the 'Iceberg' area outside BIO's main auditorium. This Show is tentatively scheduled to run from 25-30 April.
- Local musical and artistic talent will be showcased in the first two hours of the "Beat the Winter Blues" concert.
- From 9:00 to 12:30 am, we will be entertained by the musical rhythms of the Rastacadian Reggae Band which are sure to bring out the dancer in all of us.
- Non-alcoholic and alcoholic drinks will be available at a cash bar and pot-luck finger foods donated by volunteers will also be sold at the event.

Come see your old friends from BIO ... and discover their other talented sides! Ticket prices are not yet established, but they will be put up for sale one or two weeks before the event and at the door. All cash and food proceeds will be donated to the Parker Street Food and Furniture Bank, which provides not-for-profit services to needy people in our community. (Note: check them out at www.parkerstreet.org.)

Jim Reid is the general organizer of the "Beat the Winter Blues" evening, but he needs our volunteer participation to help make the evening a success. If you can spare some time, you will be welcomed as a volunteer.

- ✓ If you are willing to sell tickets, set up exhibits, decorate the auditorium, or help with any aspect of logistics, we would love to hear from you.
- ✓ Join us to exhibit your arts, crafts, and hobbies. Last year, we had 15 BIO participants in an exhibit demonstrating their many artistic endeavours.
- ✓ We are always on the lookout for performers.

If you are interested in helping out, please contact Jim Reid at ReidJ@mar.dfo-mpo.gc.ca or you can call him at work (426-6980) or at home (829-2850). He will be on vacation listening to Cuban music (in the name of research) until 11 April, but messages can be left for him at either number.

BENTHIC HABITAT STUDIES: AN ENGINEER'S PERSPECTIVE – PART II

David McKeown

In Part I, I described how I became involved with the BRUTIV towed video survey vehicle and concluded at the point where Dave Harvey and Scott Young spent a long winter and spring designing, building, and refurbishing parts of the device (see Issue 29: 2-3). In July 1991, we began sea trials aboard *Sigma-T* with Tim Foulkes, the BRUTIV creator, who had travelled from Newfoundland to participate. Shakedown trials in Bedford Basin were so successful we hungered for adventure, so we went out to Mars Rock at the mouth of Halifax Harbour. There, we were able to fine-tune the altitude control system so that BRUTIV would climb up one side of the rock then down the other without crashing into or losing sight of it.

On our final day of sea trials aboard *Sigma-T*, we demonstrated the vehicle's capabilities to Bob Miller of the GSC (Atlantic) and Terry Rowell of the Habitat Ecology Division. I had worked with Bob and his colleagues Lew King and Gordon Fader for many years, so I had a good appreciation of how BRUTIV might further their survey objectives. However, I do not remember how I made contact with Terry or why we initially joined forces, as, prior to that time, I had virtually no contact with the benthic habitat community at BIO. It is my firm belief that one of the great strengths of BIO is the breadth and depth of the scientific community, and the fact that people of diverse backgrounds such as a benthic ecologist and an engineer can so readily make contact with each other to common benefit. Both Bob and Terry were enthusiastic about the potential of BRUTIV as a bottom imaging tool to ground truth sidescan surveys and to identify how representative bottom-grab samplers were of their surroundings.

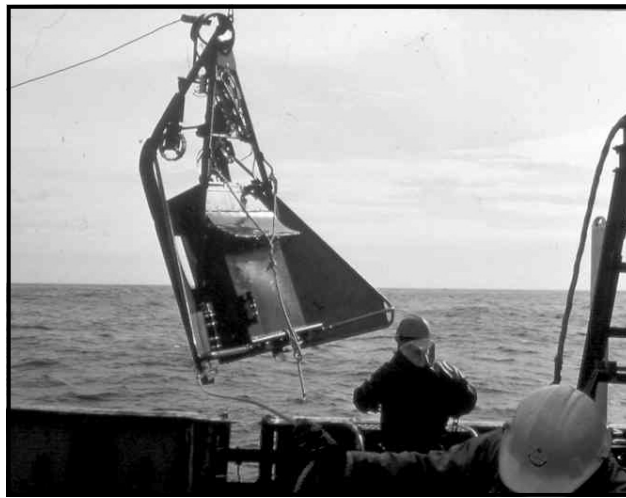
Meanwhile in 1991, Don Gordon had successfully obtained preliminary funding from the Atlantic Fisheries Assistance Program (AFAP) to begin preparations for a long-term study of the impact of bottom trawling on seafloor biological communities. This funding enabled him to commence work on development of two seafloor sampling devices, a remote controlled bottom grab and a towed sled for sampling the top few centimetres of the seafloor.

Geologists and benthic ecologists have used bottom

grabs for more than a century to sample the seafloor. The analogy often employed to describe this process is lowering a grab sampler through heavy cloud cover from a helicopter to capture a sample of the earth's surface, then trying to interpret what the area might be like based on the contents obtained. In other words, the problem is to establish how representative the sample is of its surroundings. In the late 1980's, our current BIO-OA president, Don Peer, attached a video camera to a Van Veen grab in an effort to address this question. While the results were very encouraging, the system lacked engineering elegance so the AFAP funding offered an opportunity to take the concept to the next stage. Mark Chin-Yee, George Steeves, Peter Vass, and Garin Awalt developed a bottom grab that had a high-resolution video camera aimed down through the bucket opening. A hydraulic system on the grab closed and opened the jaws under remote control from the ship. While somewhat ungainly and difficult to use under adverse sea conditions, this unit successfully addressed two issues. It allowed the operator to select a sample site that was truly representative of the surrounding area and the sampling process could be repeated as often as required to obtain a good sample without recovering the unit to the ship between attempts. The device was initially known as the AFAP Grab. However, a few years later we were suddenly and very emphatically told by DFO Communications that we must never again use that term, and so it was renamed the Video Grab.

The second development that the AFAP program funded was the Epibenthic Sled. Gerard Thouzeau, a scientist from France, had originally developed this device and brought it to Canada to study immature scallop populations. As it was towed across the seafloor, it scraped off a thin layer of organisms and mud into a mesh basket somewhat like a scallop rake. It was fitted with a video camera to allow the operator to observe how well it was sampling, but it lacked adequate monitoring instrumentation and it often landed on the bottom upside down. After initial familiarization trials in December 1991, Dick Vine, Dwight Reimer and Peter Vass set about addressing these problems. They added a pair of dihedral wings to solve the landing problem and added a second odometer wheel and other sensor electronics to improve the monitoring of the sleds performance on the seafloor.

In August of 1992, members of the Metrology Division, Engineering and Technical Services and Habitat Ecology put out to sea on CSS *Parizeau* to conduct the first sea trials of the Video Grab and Epibenthic Sled, and the



The videograb at left and the epibenthic sled above.

first 'large ship, open-ocean trials of the renovated BRUTIV. While some engineering issues were identified, the performance of the Video Grab met all expectations. To quote Mark Chin-Yee's cruise report contribution "... the ability ... to view the bottom from 6 metres up, then to observe in great detail the sample area once the grab was landed on the seafloor, was spectacularly evident". The Epibenthic Sled performed within specification. BRUTIV accomplished several successful tows at various depths down to 260 metres before a telemetry system failure put an end to testing.

The equipment trial cruise was followed immediately by a 13-day cruise led by Terry Rowell to select locations on the Western and Grand banks for use in planned trawling impact experiments and to conduct some preliminary observations of areas previously trawled during ground fish surveys. We first went to Western Bank

where we surveyed two different areas with sidescan sonar and BRUTIV, then sampled the bottom with the Video Grab. After returning to BIO to collect material required to repair the Video Grab cable termination, we proceeded to the Grand Banks where we repeated the survey and sampling exercises at a pre-determined location within an area closed to commercial fishing before terminating the program in St. John's, Newfoundland.

By the time I had completed this second cruise, I realized that I found the opportunity to participate in a benthic ecological study very intellectually fulfilling. My engineering knowledge and experience were recognized and greatly appreciated by the Habitat Ecology team and its members were simply a great group of people to work with. Thus, began a very happy and fulfilling 13-year involvement with the team. More of that in Part III.

SOME REASONS WHY THE ENGLISH LANGUAGE IS HARD TO LEARN...

The bandage was wound around the wound.
The farm was used to produce produce.
We must polish the Polish furniture.
He could lead if he would get the lead out.
The soldier decided to desert his dessert in the desert.
Since there is no time like the present, he thought it was time to present the present.
A bass was painted on the head of the bass drum.
When shot at, the dove dove into the bushes.
I did not object to the object.
The insurance was invalid for the invalid.

There was a row among the oarsmen about how to row.
They were too close to the door to close it.
The buck does funny things when the does are present.
A seamstress and a sewer fell down into a sewer line.
To help with planting, the farmer taught his sow to sow.
The wind was too strong to wind the sail.
After a number of injections, my jaw got number.
Upon seeing the tear in the painting, I shed a tear.
I had to subject the subject to a series of tests.
How can I intimate this to my most intimate friend?

FROM THE ARCHIVES ... 36 YEARS AGO

Compiled by Bosko Loncarevic

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

{August, 1970, Vol. 4, No. 8} - Capt. William John Vieau (50) died on board CSS Dawson. "He doing a very fine job running a very happy ship" reported Chief Scientist Dr. Michael Keen. - Noon hour showing of HUDSON 70 films - "Travel tips" around backwoods of Nova Scotia (These are still worth investigating!). - Library giving away surplus material. - Japan joins ICNAF, Bole return to Poland. - Marine Geophysics reported on Phase VII of HUDSON 70, mostly two-ship seismic work off Vancouver Island. With CNAV ENDEAVOUR. - Activities of seven ships reported including three weekly reports from DAWSON and HUDSON. - Ivor Duedall reported on CHILE 70 exploration of fjords by HUDSON with UBC Scientific party in charge. - Whale research by sailboat conducted by Peter Beamish. - Personals: Dr. Wm. L. Ford and Mrs. Marjorie Jones married on Aug 2.; Linda Wright and Jean Cournoyer married on Aug 29; Sarah, daughter of Clive and Elizabeth Mason, born on 11 July. - New arrivals included: Paul Green, G.M. Purdy, Muriel Kotlar, Sharlyn Young, N. Muise, H. Wiele, Connie Isnor, Judy Hall, and Dr. A. Walton

{September, 1970, Vol. 4, No. 9} - Plans for "Welcome Home HUDSON" announced. - Marine Superintendent Capt. S.W. Howell retired. - First report of BAFFIN's discovery of underwater Pingo's in Beaufort Sea. - Scotty's Travel Tips around Cape Breton. - Andy Atkinson left BIO to take up position as Chief of Engineering and Scientific Services at Burlington Centre. - Five long "Weekly Messages" from HUDSON. - Frances Wagner reported on "HUDSON 70 Plaque" dedication on Cornwallis Island, NWT. - A questionnaire was circulated to see how the Cafeteria Service could be improved.

{September, 1970, Vol. 4, No. 10} - List of Seminars for the Fall Term published. - Dr. C.S. Mason attending NATO Colloquium in Brussels to discuss Oil Pollution at Sea [Following ARROW accident, BIO became a world Centre for the Research]. - Chemical Oceanography Section welcomed new Head, Dr. Alan Walton, arriving from Glasgow University. - Dr. Mike McMullen, Chief of Library Services, left BIO. -

Alan Ruffman reported on JOIDES Leg 12, drilling 9 sights in Labrador Seas including the Orphan Knoll. - Another funny story by Betty Lumsden. - Allan Ruffman started a petition to establish a CBCFM Service in Halifax. - Reports on Geophysical work on BAFFIN and HUDSON in Lancaster Sound. - Andrew Bennett made "A Plea" for retaining the Fahrenheit. - Warren Forrester proved that the World is ROUND by going from Halifax to Dartmouth via Las Vegas, Hawaii, Tokyo, Hong Kong, Bangkok, Delhi, Istanbul, Athens, Copenhagen and Dublin (and not claiming a bridge token on his Expense Account). - John Woodside contributed "A Prayer for Civil Servants":

"O, Lord, Grant that this day we come to no decision, neither run we into any kind of responsibility, but that all our doings may be ordered to establish new departments, for ever and ever. Amen." (Has anything changed?).

{November, 1970, Vol. 4, No. 11} - Dr. J. A. Elliott, One of the first BIO employees in 1962, returned to BIO after completing his Ph.D. degree. - The Winter Works Programme resulted in interviewing 109 candidates and sending out offers to 72. - A.O.L. Stable Platform moored in the approaches to Halifax. - A joint programme to study spawning of herring on Georges Bank with USA and USSR included two Soviet ships (which had better chess players). - Scotty's "Travel Tips" through the Valley to Yarmouth. - Metrology reported on the NATO Colloquium on Oil Pollution in the Sea. - Harry Tomes, District Supply Officer left BIO. - Personal: Michelle, daughter of Mr. and Mrs. Paul D'Entremont, born on October 27th.

{December, 1970, Vol. 4, No. 12} - Notices of Seminars to be given by: J.E. Blanchard (NSRF), R.T. Dempster (Memorial), D.R. Grant (GSC-Ottawa), G.E. Sigvaldson (Reykjavik), F. Medioli (Dalhousie), D. Davis (MIT), J.A. Jacobs (Alberta) and D.F. Strong (Memorial). Also a series of five public lectures by Prof. H.B.S. Cooke on "Prehistory and the Development of Man" - Dr. G. T. Needler returned to BIO after spending a year at the Woods Hole Oceanographic Institution on a Rossby Memorial Fellowship. - Dave Ross reported on a trip to Rhode Island. - F. Keyte reported that a new high-speed link between Washington and Tokyo has just been inaugurated in the first step of full implementation of the main trunk circuit for a global weather reporting system with unprecedented speed and capacity (beginnings of global internet).

And that was that at the end of Year 1970.

FROM THE GROANER FILES

A Polish immigrant goes to apply for a Canadian driver's license and is told he has to take an eye test. He is shown a chart on which these letters appear: C Z J W I X N O S T A C Z. "Can you read this?" the examiner asks. "Read it?" he replies, "I know the guy!"

My husband goes to a female dentist just for the novelty of hearing a woman tell him to open his mouth.

A reporter interviewing a 104-year-old asks, "What do you like best about this age?"
"No peer pressure", comes the reply.



**Coming in our July issue –
“A Year in Geoje”**

*Richard and Jean Addison recently lived on the beautiful island of Geoje off the south-eastern tip of South Korea. They went there in March 2004 when Richard was hired to help set up a research programme at a government lab in Jangmok. In his article on their stay for our newsletter, Richard will recount in words and photos some of the memorable experiences he and Jean shared during that special time.
Don't miss it!*

ABOUT THE ASSOCIATION

The Bedford Institute of Oceanography Oceans Association was established in 1998 to foster the continued fellowship of its members; to help preserve, in cooperation with the Institute's managers and staff, BIO's history and spirit; and to

support efforts to increase public understanding of the oceans and ocean science. Membership is open to all those who share our objectives. Most current members are present or past employees of BIO or of the federal departments of Environ-

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

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