Canadian National Committee for SCOR
Comité national canadien pour SCOR

Scientific Committee on Oceanic Research

CANADIAN OCEAN SCIENCE NEWSLETTER
LE BULLETIN CANADIEN DES SCIENCES DE L'OCÉAN

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Northern Research Internships

NSERC established the Northern Research Internships program in 2003. The initial number of awards proposed is 10 per year. This is expected to increase to 30 over the next two years. The NSERC internship award is for up to $10,000 for a 16-week internship (includes a logistics allowance of $4,000). Northern Research Internships are tenable in a northern Canadian organization that will benefit from the research conducted, either directly or through the sharing of knowledge. Partner organizations can include colleges, federal and provincial government departments, companies, non-governmental organizations (NGOs) or communities. To be eligible to apply for this program, you must be a graduate student, or have received your Ph.D. in the natural sciences or engineering, within the past five years, and have secured a formal agreement with a northern partner who will contribute financially to the internship or will provide in-kind support. Program details and application forms may be found on the NSERC web site at: http://www.nserc.gc.ca/sf_e.asp?nav=sfnav&lbi=nri

Scholarship Available: Graduate Studies in Microalgal Systematics - Polar Oceanography

Université du Québec à Rimouski (UQAR)

The Institut des sciences de la mer (ISMER) of the Universite du Quebec a Rimouski (UQAR) announces the availability of a scholarship for graduate studies in microalgal systematics - polar oceanography within ArcticNet, a Network of Centres of Excellence of Canada that brings together scientists in the natural, human health, and social sciences with their partners in northern communities, government agencies, and the private sector to study the impacts of climate change on the coastal Canadian Arctic. The scholarship is available beginning in January 2005. The study of marine phytoplanktonic communities of the Canadian High Arctic and the Hudson Bay will be conducted aboard the Canadian research icebreaker Amundsen. Graduate studies may lead to M.Sc. or Ph.D. degrees in oceanography. As a pre-requisite, a B.Sc. degree in biology or environmental sciences, or an equivalent degree is required to enter these programs. Candidates may conduct their research and write their dissertation or thesis in the language of their choice (French or English). It is also possible for non-French speaking candidates to take their courses in English because all faculty members are fluent in English.

For more information, please contact: Dr. Michel Poulin, Canadian Museum of Nature, E-mail: mpoulin@mus-nature.ca

With a copy to: Professor Michel Gosselin, Université du Québec à Rimouski,
E-mail: michel_gosselin@uqar.qc.ca

Bourse d'études avancées en systématique microalgale - océanographie polaire

L'Institut des sciences de la mer (ISMER) de l'Université du Québec à Rimouski (UQAR) annonce la disponibilité de soutien financier pour des études avancées en systématique microalgale - océanographie polaire dans le cadre du programme de recherche ArcticNet, un Réseau de centers d'excellence du Canada qui regroupe des scientifiques en sciences naturelles, en sciences de la santé et en sciences sociales avec leurs partenaires des communautés nordiques, des organismes gouvernementaux et du secteur privé, pour étudier les impacts des changements climatiques dans l'Arctique canadien côtier. La bourse d'étude est disponible à partir de janvier 2005. L'étude des différentes communautés phytoplanctoniques marines du Haut Arctique canadien et de la baie d'Hudson sera menée à bord du brise-glace canadien de recherché Amundsen. Les études avancées mènent à la maîtrise ès sciences (M.Sc.) ou au doctorat ès sciences (Ph.D.) en océanographie. Le prérequis est un diplôme de baccalauréat (B. Sc.) en biologie ou en sciences de l'environnement ou une équivalence universitaire reconnue. La langue d'enseignement à l'UQAR est le français, mais tous les professeurs parlent aussi couramment l'anglais de telle sorte que les étudiants peuvent effectuer leur recherche et rédiger leurs mémoires ou thèses dans la langue de leur choix (en français ou en anglais). Des bourses pour la Francophonie canadienne sont également disponibles auprès du Fonds québécois de la recherche sur la nature et les technologies (FQRNT).

Pour plus d'information, veuillez vous adresser à: Dr. Michel Poulin, Musée canadien de la nature, Courriel: mpoulin@mus-nature.ca

Avec copie à: Professeur Michel Gosselin, Université du Québec à Rimouski
Courriel: michel_gosselin@uqar.qc.ca

Announcement, Director IPY International Programme Office

ICSU and the WMO invite applications for the post of Director of the International Polar Year 2007-2008 (IPY) International Programme Office (IPO), which is being established at the British Antarctic Survey, Cambridge, UK, with core funding from the UK Natural Environment Research Council. The concept of the IPY 2007-2008 is of an intensive burst of internationally coordinated, interdisciplinary, scientific research and observations focused on the Earth's polar regions. An IPY Joint Committee (JC) will be responsible for overall scientific planning, coordination, guidance and oversight of the International Polar Year 2007-2008. The IPY IPO will promote the IPY and will support the activities of the Joint Committee. For more information on the IPY, the Joint Committee and the responsibilities of the IPO please see the IPY Framework Document, which is posted on http://www.ipy.org The successful candidate will have a MSc/PhD degree in a relevant discipline and an excellent knowledge of English. Knowledge of other UN languages would be an advantage. The candidate should have experience with international research collaborations. The deadline for applications is 31st December 2004. Additional details may be found at:
http://www.icsu.org/1_icsuinscience/INIT_Ipy_position.pdf

IPY and DFO physical oceanography

Report by Simon Prinsenberg, PrinsenbergS@mar.dfo-mpo.gc.ca

During my attendance at both the recent CLIVAR meeting in Baltimore and the NSF sponsored Ice-tethered Profilers Workshop at Woods Hole, I was often questioned by international colleagues as to what I and other Canadian Arctic physical oceanographers are planning to do during the IPY 2007/08 and towards the Arctic Observation System.
These question were somewhat embarrassing as at that time (summer 2004) no real plans were underway. In contrast the workshop in Woods Hole was basically called to organise the US submission to NSF for the IPY and beyond towards the Arctic Observation system. It was also attended by European scientists who were busy organising their nation's work and proposals. The answers I usually gave follow the ideas below some of which are now being incorporated into DFO physical oceanography plan for the IPY. So here are some ideas of the sea ice group at Bedford Institute could do and along with the help of Institute of Ocean Sciences of Sidney, B.C. The projects will require new funds and logistic ship support. They will highlight the Arctic Instrumentation technology developed Canadians and hopefully will leave a "legacy" behind in the form of new young scientists continuing Arctic research in a Polar country like Canada.

1. Continuation of BIO and IOS mooring effort in the Canadian Arctic Archipelago through the IPY period.

Both Institutes through B-base funding have extensive mooring programs that along with numerical modelling work are monitoring and simulating the mass, freshwater and heat fluxes through the three main straits of the Canadian Archipelago. The projects are internationally highly regarded (and therefore have NSF and NOAA funding) and contribute to both the international ASOF and SEARCH programs and to the Canadian University-led ArcticNet program. These projects require DFO funds in order to be extended to the end of the IPY (summer 2008). Funds to each Institute would help to offset the high cost of refurbishing the moorings and field travel and would show the other funding agencies that DFO itself also regards these projects highly.

2. A Beaufort Sea shelf-basin line during the IPY.

Depending on summer ship and winter field support, an IOS-led physical-biological-chemical survey of the Beaufort Sea line crossing the shelf and slope as stated in several Arctic DFO priority documents would be a second highly international regarded project for the IPY. The interaction between shelf and basin is not well understood nor the biological ecosystem over the shelf and slope. Using a CCG icebreaker, the line could be occupied in the summers of 2007 and 2008 and moorings could be placed and recovered along the line for a year-long deployment. Moorings would monitor the seasonal cross-shelf exchanges, ice drift/draft and upper 50m layer physical-biological properties. The ice drift-draft mooring developed by IOS and the surface layer ocean profiler by BIO are Canadian technologies that should be used as a combined Canadian DFO effort. Biological and chemical projects should of course also be incorporated within DFO and combined with project of colleagues in ArcticNet.

3. Ice properties by Helicopter-borne sensors.

One other unique Canadian technology developed by BIO is the helicopter-borne sensor technology that should and could be used during the IPY. It requires helicopters that could be based on land (maybe PCSP) or on a CCG icebreaker and is best to be done in late winter early spring during maximum ice extent. If an icebreaker is frozen in during the IPY, a survey during April15-May15 can be done similar as the recently successfully completed survey in CASES. Other Biological and marine habitat work can be done as part of a joint DFO-IPY and ArcticNet effort. Another possibility is to use PCSP-type logistic support from land for just the April-May period and do the survey along with other CTD and biological Twin Otter work from there.

Summary: The above ideas are projects that when funded by DFO could be done and highlight our Canadian Arctic developed technology on the international stage during the IPY. There are probably other projects. The technology mentioned above is available and used in B-Base projects now. New funding for the projects should be found as A-Base funding for Arctic research is at an all time low. Hiring new young scientist for the projects will further ensure that Canadian Arctic oceanography will continue as it should for any Polar nation such as Canada.

Potential Impacts of Seismic Activity on Snow Crab

Contact: Michael Chadwick, ChadwickM@dfo-mpo.gc.ca

In December 2003, DFO carried out a field program in collaboration with the offshore petroleum industry and a local snow crab fishermen's association to investigate the potential impacts of seismic energy on snow crab. Female snow crab were captured and moored in cages on the seafloor along the seismic survey route. Crab were also caged at an adjacent site, with similar environmental conditions, which was not ensonified. DFO scientists examined the survival and health of the crab, including any changes to various body organs, from the two sites immediately following the seismic survey. In addition, some crab were also left caged at the two locations for several months to determine potential long-term effects on survival and health. The results of this project were subject to a peer review process at Moncton, New Brunswick on September 29, 2004.

A report summarizing the results of the peer review can be viewed on DFO's Canadian Science Advisory Secretariat's web site:
English – http://www.dfo-mpo.gc.ca/csas/Csas/status/2004/HSR2004_003_E.pdf
French – http://www.dfo-mpo.gc.ca/csas/Csas/etat/2004/HSR2004_003_f.pdf

DFO Conducts a Scientific Review of Existing Knowledge of Potential Seismic Impacts on Marine Life

Contact: Hugh Bain, BainH@dfo-mpo.gc.ca

The potential effect of seismic sound on marine organisms is an environmental concern. To address this concern, literature reviews of primary and secondary literature related to

experimental studies and field monitoring of the effects of sound were compiled by Fisheries and Oceans Canada (DFO) scientists. The reviews were evaluated in May and October 2004 by a panel of scientists from DFO, other federal and international government agencies, university researchers, the hydrocarbon exploration industry and environmental groups. Although the existing global body of knowledge is limited, the background papers and scientific deliberations resulted in several conclusions, including the identification for future research needs.

A report summarizing the May 2004 workshop can be viewed on DFO's Canadian Science Advisory Secretariat's web site:
English – http://www.dfo-mpo.gc.ca/csas/Csas/status/2004/HSR2004_002_E.pdf
French – http://www.dfo-mpo.gc.ca/csas/Csas/etat/2004/HSR2004_002_f.pdf

IAPSO/SCOR Ocean Mixing Conference

Chris Garrett, garrett@uvphys.phys.uvic.ca and Barry Ruddick, barry.ruddick@DAL.CA

The IAPSO/SCOR Ocean Mixing Conference, organised by Working Group 121, took place at the Victoria Conference Centre from 11 to 14 October and was attended by approximately 120 scientists from around the world. The structure of the conference was modelled on that of Gordon conferences, with 7 half-hour invited talks each day, 5 in the morning and 2 in the afternoon. This permitted a two-hour break in the middle of the day for lunch, strolls by the harbour, discussion, and preliminary viewing of the hundred or so posters. These were divided into two groups, each displayed for two of the four 3.30 to 6 p.m. poster sessions. This all seemed to work well. Details may be found at http://www.jhu.edu/scor/WG121/Symposium.htm

Some of the invited talks were jointly-authored, but of the 28 presenters there were 5 Canadians (4 working in the US and one recently returned to Canada), 10 "rising stars" under 40 (we think!), and 6 women. (There was an overlap between these groups!) We hesitate to interpret these numbers, but the mix seemed to be appreciated. On the other hand, only 7 of the presenters were from outside North America, perhaps reflecting insufficient attention to ocean mixing in other parts of the world.

The talks were grouped into three sessions: Global Concepts and Large-Scale Models, Observations, Processes. The final afternoon featured two talks in a session entitled Towards the Future (as opposed to backwards from it?) followed by a round-table discussion led by the working group (this didn't actually add a lot). The speakers and presenters of posters have been invited to contribute papers for a special issue of Deep-Sea Research II.

Space does not permit even a summary of the many themes that emerged during the conference. One recent development, however, is the use of numerical models to investigate idealised theoretical problems that are analytically intractable. An example is the nonlinear evolution of bottom-generated internal tides. There were many suggestions for topics that deserve greater emphasis in the future. Two were dense overflows and the region just below the base of the surface mixed layer.

It was also recognised that a gap remains between those using large scale ocean circulation models and those who delight in unravelling the detailed physics of small-scale processes. The first group may not pay sufficient attention to the sensitivity of their model output to the parameterization of unresolved processes, and, in fact, continue to be plagued by numerical difficulties that can produce, for example, a greater numerical diapycnal diffusivity than the real physical one. The second group does not always pay much attention to developing useful parameterizations of the processes they unravel. There seems to be a need for more people in an independent "bucket brigade" to convert results from process studies into formulae that are appropriate for the large models and can be used in sensitivity studies.

The Conference Banquet was held in the Crystal Ballroom of the Empress Hotel. The preceding reception was graced by the attendance of Her Majesty Queen Elizabeth II (a.k.a. Carolyn Sadowska; see "Laugh with Liz" at http://www.pinc.com/~queen/). After mingling with the guests she bestowed a knighthood on the banquet speaker, Walter Munk.

Arise, Sir Walter! (Photo by Jenny Brauch.)

Her Majesty also recited a poem of her own composition, reproduced here:

ODE TO OCEAN MIXING

If we could see a simple sea, with everything the same
Nothing moving, nothing mixing, that would be a shame
It would be but one colour and that simply wouldn't do,
We'd have no aqua green, no shades of teal, no Royal blue!

Ocean currents are like people, changing all the time
Some are hot and some are cold and some are more sublime
Some move very slowly while others travel fast,
Some are filled with sediment, others carry gas.

I do applaud the work you do, I say with admiration
But sometimes you must feel the need..to have some relaxation.
So when you tire of studying the turbulence and tide
Do drop by the palace and bring yourself inside.
We'll make sure you're entertained and adequately fed
Once you leave those waves and take this wave instead.
We'll dine on clams and lobster and chowder of the day
...the "OCEAN MIX" the Royal Family carries on a tray!

Sir Walter Munk's banquet speech on "Tides and the Climate" emphasized the role of internal tides in ocean mixing and hence circulation and climate. He drew attention to the variation of the moon's declination, and hence tidal forcing in different frequency bands, over the 41,000 year obliquity cycle. He also suggested that Otto Pettersson (1848-1941) deserved more recognition for his early proposals, dismissed at the time, for the role of tidal mixing in coastal waters.

Overall, the conference was a considerable success, aided by warm, sunny weather at a transitional time of year when other conditions are climatologically likely.

PICES 13th Annual Meeting – Honolulu, Hawaii

Contributed by Ian Perry, perryi@pac.dfo-mpo.gc.ca

The Thirteenth Annual Meeting of PICES was held October 14-24, 2004, in Honolulu, Hawaii. PICES is the acronym for the North Pacific Marine Science Organization, which includes Canada, the United States, Russia, Japan, Korea and China. The theme of this meeting was *Beyond the continental slope - complexity and variability in the open North Pacific Ocean*. Dr. Jeffrey Polovina (NMFS, US) presented the Keynote Address, titled *Send out the turtle fleet*, in which he described the use of radio-tagged turtles to examine oceanic habitats and migration pathways of these animals in the sub-tropical North Pacific. This presentation was followed by the theme session for PICES XIII, which considered issues of complexity and variability in the open North Pacific. Papers dealt with causes and potential predictability of the Pacific Decadal Oscillation, with large-scale environmental monitoring of physical conditions and circulation in the North Pacific, with regime-like changes in lower and upper trophic levels of the sub-tropical North Pacific, and with classification of marine pelagic environments in the open North Pacific Ocean. Variability, on both large and small temporal and spatial scales, is a dominant feature of these sub-tropical open ocean ecosystems, which is in marked contrast to the traditional view. Other sessions (and lively discussions) were held on "Mechanisms that regulate North Pacific ecosystems: Bottom up, top down, or something else?", "Hot spots and their use by migratory species and top predators in the North Pacific", "Introduction of marine species", "Marine protected areas", "Application of global observing systems to physics, fisheries, and

ecosystems", "The impacts of climate change on the carbon cycle in the North Pacific", "The impacts of large-scale climate change on North Pacific marine ecosystems", among other topics. Several workshops, which provided more time for discussion, were held both before and after the main meeting on topics that included "Scale interactions of climate and marine ecosystems" (co-sponsored with CLIVAR), "The seasonal cycle of plankton production in continental shelf waters around the Pacific Rim", and "Linking open ocean and coastal ecosystems". The sessions on what regulates North Pacific ecosystems, "hot spots", and the workshop on North Pacific modelling are planning to publish selected papers in the primary literature. Brief summaries of all sessions including discussions are published in the PICES Annual Report for 2004.

Up-coming major meetings and symposia of PICES include:

- *Climate Variability and Sub-Arctic Marine Ecosystems*, 16-20 May 2005 in Victoria, Canada (co-sponsored with GLOBEC);
- *State of Pacific salmon and their role as indicators of the health of North Pacific ecosystems*, fall 2005 in Korea (jointly with NPAFC);
- PICES XIVth Annual Meeting in Vladivostok, Russia, in September-October 2005, with the theme of *Mechanisms of climate and human impacts on ecosystems in marginal seas and shelf regions.*
- *Marine bioinvasions*, spring 2006 (convened jointly with ICES);
- *Climate variability and ecosystem impacts on the North Pacific: a basin-scale synthesis*, in April 2006 in Hawaii, convened by the PICES Climate Change and Carrying Capacity Program
- *4th International zooplankton symposium*, May 2007 in Japan (jointly with GLOBEC and ICES);
- *Young Marine Scientists' Conference* proposed for 2007 (jointly with ICES).

For more information on these and all the other activities of PICES, please visit the web site at www.pices.int

Symposium on "Quantitative ecosystem indicators for fisheries management"

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250 participants from 43 countries attended the April 2004 SCOR/IOC Symposium on "Quantitative ecosystem indicators for fisheries management", hosted by the Intergovernmental Oceanographic Commission (IOC) at the UNESCO headquarters in Paris. The program included 40 presentations and close to 150 posters. The topic of the symposium reflects the growing understanding that exploited fish populations must be considered as integral components of ecosystem function instead of phenomena that operate independently of their environment. Internationally, there has been wide recognition of the need to move toward an ecosystem approach to fisheries, a development spearheaded by FAO (UN Food and Agriculture Organization) through the Code of Conduct for Responsible Fisheries, and supported by many regional and national institutions as well as academia, NGOs and the public-at-large. Intergovernmental organizations such as PICES, require meaningful indicators that adequately reflect the state of marine ecosystems.

Internationally, the first major initiative related to the use of ecosystem indicators for sustainable fisheries development was taken by the Government of Australia in cooperation with FAO, through a Consultation in Sydney in January 1999, involving 26 experts from 13 countries. The consultation resulted in Technical Guidelines No. 8 for the FAO Code of Conduct for Responsible Fisheries: Indicators for Sustainable Development of Marine Capture Fisheries. The Guidelines were produced to support the implementation of the Code of Conduct; they deal mainly with the development of frameworks, and they set the stage for using indicators in the decision-making process.

The Guidelines do not, however, discuss the properties of indicators, nor how they are used and tested in practice. Instead, this became the task of an international Working Group, formed jointly by the Scientific Committee on Oceanic Research (SCOR) and the IOC. SCOR/IOC Working Group 119 on Quantitative Ecosystem Indicators for Fisheries Management was established in 2001, with 32 members drawn from a large number of countries. The Working Group was designed to support the scientific aspects of using indicators for an ecosystem approach to fisheries, to review existing knowledge in the field, to demonstrate the utility and perspectives for new indicators reflecting the exploitation and state of marine ecosystems, as well as to consider frameworks for their implementation.

The Working Group met first in October 2001, in Reykjavik (Iceland), to plan and report on progress; and then in December 2002, in Cape Town (South Africa), to organize its efforts with a series of task forces working in parallel on:

- Environmental indicators including habitat changes
- Species-based indicators
- Size-based indicators
- Trophodynamic indicators
- Integrated indicators
- Selection criteria
- Data sets and reviews, and
- Frameworks for implementing indicators.

As part of their work, the task forces reviewed the current status of using indicators for ecosystem approaches to fisheries, as well as seeking to develop new theory, applying it, and evaluating the performance of indicators. The major results of these endeavours formed the core of the presentations at the Paris Symposium. More than 200 abstracts were submitted for presentation at the Symposium. The Program Committee of the Symposium thus faced a very difficult task in selecting oral and poster presentations when they met at the PICES Secretariat in November last year. This was, however, a wonderful problem when planning a symposium, and it clearly indicated that the timing was perfect for evaluating the role of indicators for an ecosystem approach to fisheries.

Looking back at the Symposium, it is clear that we have moved a long way toward ecosystem approaches to fisheries within a relatively short time span. The presentations outlined a vast array of well-defined indicators for fisheries management, described their properties, and evaluated how they can be used at the ecosystem-level to describe the impact of fisheries, as well

as to evaluate the relative contribution of environmental and fisheries impact. Given the number of available indicators that have been developed and applied, it is also clear that emphasis has to be directed toward methodologies for selecting indicators, and evaluating how capable indicators are of detecting trends in a noisy environment. While these topics were treated at the Symposium, it is yet too early to draw clear conclusions. It is noteworthy though, that by being dealt with explicitly as part of the Symposium, it is clear from the very onset of using indicators as part of ecosystem approaches to fisheries, that what we are aiming for is not to find the 'best' indicator, but rather a suite of indicators with known properties, and that this includes methodologies for selecting indicators as an integral part of the effort. Guidelines for how to test indicators and develop frameworks for their application is thus of essence.

The conclusion of the Symposium as expressed through a final panel discussion is clear: we have the science in place with regards to ecosystem indicators that is needed to make an ecosystem approach to fisheries operational. We anticipate that the special issue of the ICES Journal of Marine Science, due within a year, will present the major findings from the Symposium and will underline that the science is ready, and we are sure the special issue will become a reference publication for the scientific aspects of using ecosystem indicators as part of an ecosystem approach to fisheries. What is needed now are guidelines for how to implement ecosystem approaches for fisheries, and how to operationalize the role of ecosystem indicators.

Call for Pre-proposals in Support of the International Polar Year

The Canadian Steering Committee for IPY met on December 14-15, 2004 to consider pre-proposals received by December 13. Pre-proposal forms for research related to IPY were posted on the Canadian IPY Web site at http://www.ipy-api.ca/english/proposals.html

The pre-proposal can be limited to a title and one or two paragraphs. The Steering Committee will use these pre-proposals only to identify the core research areas that will be part of Canadian participation in the IPY. No funding decisions were to be made at the December 14-15, 2004 meeting.

The IPY Secretariat will receive pre-proposals on an ongoing basis until February 15, 2005, but will also offer later opportunities to submit research proposals, even if the applicant has not submitted a summary pre-proposal. However, any researcher proposing a project that requires complex logistical support or extended preparations should submit a pre-proposal as soon as possible.

Consult the IPY Web site at http://www.ipy.org for information on the objectives and priority research areas for polar research. For further information, please contact: Canadian IPY Secretariat, Fax: (780) 492-9234, E-mail: ipy@ualberta.ca

New SCOR Working Groups: Advance Information

The call for new working group proposals to be considered at the 2005 SCOR Executive Committee meeting will be made in early January and the deadline for proposals will be **15 April 2005**. This call for proposals will emphasize physical oceanography and marine geology and geophysics activities.

First SCOR Electronic Newsletter

International SCOR has just produced its first electronic newsletter. It is available at http://www.jhu.edu/scor/SCOR-NL-1.pdf This issue primarily covers news from the Sept. 2004 SCOR General Meeting. The current plan is to issue the newsletter 3-4 times per year, with the next one available in early March 2005. Please feel free to let the SCOR Executive Director, Ed Urban at scor@jhu.edu, know if you have any suggestions for additional information you would like to see included. The most recent issue of the newsletter will always be available from the front page of the SCOR Web site http://www.jhu.edu/~scor/ (see red boxes down left-hand side).

The Timothy R. Parsons Medal

The Department of Fisheries and Oceans (DFO) has established an award to recognize excellence in Canadian ocean sciences. The Timothy R. Parsons medal will be awarded to residents of Canada for distinguished accomplishments in multidisciplinary facets of ocean sciences either during their lifetime or for a recent outstanding achievement.

The award is being named in honour of Dr. Tim Parsons. Dr. Parsons has had a distinguished career in Canadian and international oceanography. Presently he is a Professor Emeritus at the University of British Columbia and an Honorary Research Scientist at the Institute of Ocean Sciences in Sidney, British Columbia. His lifetime work has been to establish a new ecosystem approach for the management of fisheries using oceanographic information. Throughout his research career, Dr. Parsons has devoted himself to obtaining a holistic understanding of ecology, and in particular understanding how pelagic organisms are interconnected in the oceanic food-web. He has made major contributions to the development of Biological Oceanography and is personally responsible for many of the standard analysis methods used in his field. Dr. Parsons' goal has been to present an alternative method for the management of fisheries based on the measurement of dynamic relationships between fish and their physical, chemical and biological environment.

In most countries of the world, oceanography and fisheries research are funded independently of each other. Dr. Parsons has always been a proponent of ensuring close links between fisheries science and of oceanography and has repeatedly pointed out how the ever-changing environment of the oceans impacts fisheries. He was the founding editor of the journal "Fisheries Oceanography". Dr. Parsons has also worked to encourage a holistic approach to the evaluation of human impacts on the environment using his experience in biological oceanography. As such

he has contributed to understanding the impacts of the construction of the Aswan High Dam, the impacts of large oil spills and has advised industry on countless occasions. On April 27th, 2001, Dr Tim Parsons was the recipient of the 17th Japan Prize, awarded by the Emperor of Japan.

Two Timothy R. Parsons awards will be presented at the Canadian Meteorological and Oceanographic Society (CMOS) Congress in June 2005 in Vancouver. Dr. Timothy R. Parsons will receive the first award and the second award will go to the first recipient, who will de determined in the upcoming months by the selection committee. Awards will be presented in subsequent years provided the selection committee has identified a worthy recipient.

Nomination instructions

- The Timothy R. Parsons Medal is:
  - awarded to residents of Canada for distinguished accomplishments in multidisciplinary facets of ocean sciences.
  - awarded for excellence during the lifetime of the recipient or for a recent outstanding achievement, both being equally eligible. No posthumous nominations are considered.
  - awarded annually when, in the opinion of the Timothy R. Parsons Medal Committee, there is a meritorious candidate.
- Nominations for the award may be made by any resident of Canada. Letters of support from co-nominators are welcomed but are not necessary.

- The nominations should be received no later than **February 28, 2005.**

- Each nomination should be supported by a concise, comprehensive statement indicating the merits and contributions made by the nominee to multidisciplinary ocean science. The statement should be supported by references to significant ideas, publications, teaching activities and program leadership. The supporting information should include a summary of the accomplishments of the individual and a statement indicating how these accomplishments were connected with the progress of multidisciplinary ocean science.

- All communications should be addressed to:

  Timothy R. Parsons Medal Committee
  Ghislaine Laporte
  Executive Assistant
  Office of the ADM Science
  Stn. 15E190 – 200 Kent Street
  Ottawa, Ontario, K1A 0E6
  Tel: (613) 990-5136, FAX: (613) 990-5113
  LaporteG@dfo-mpo.gc.ca

La médaille Timothy R. Parsons

Le ministère des Pêches et des Océans (MPO) a créé un nouveau prix afin de souligner l'excellence dans le domaine de l'océanographie canadienne. La médaille Timothy R. Parsons

sera remise à des Canadiens qui se sont distingués dans un domaine lié à l'océanographie multidisciplinaire, afin de reconnaître l'ensemble de leur carrière et/ou une réalisation exceptionnelle récente.

La médaille a été nommée en l'honneur de Dr. Timothy Parsons, qui a mené une carrière extraordinaire en océanographie, aussi bien au Canada qu'à l'étranger. Le Dr. Parsons est présentement professeur émérite à l'Université de la Colombie-Britannique et chercheur honoraire à l'Institut des sciences de la mer de Sidney, en Colombie-Britannique. Au cours de sa carrière, il a mis au point une nouvelle approche écosystémique intégrant des données océanographiques pour la gestion des pêches. Le Dr. Parsons se distingue par son souci de parvenir à une compréhension globale de l'écologie; il a entre autres contribué à la compréhension des liens qui existent entre les organismes pélagiques dans la chaîne alimentaire océanique. Il a contribué de manière importante au développement de l'océanographie biologique et il a élaboré plusieurs méthodes d'analyse en laboratoire qui sont couramment utilisées dans ce domaine. Le but qu'a toujours poursuivi M. Parsons était de mettre en œuvre une nouvelle méthode de gestion des pêches fondée sur l'évaluation des relations dynamiques entre les poissons et leur environnement physique, chimique et biologique.

Dans la plupart des pays du monde, la recherche en océanographie et la recherche sur les pêches sont financées séparément. Le Dr. Parsons s'est toujours préoccupé à assurer le lien étroit entre les sciences halieutiques et l'océanographie; il a démontré à maintes reprises comment l'environnement toujours changeant des océans influence les pêches. Le Dr. Parsons est également le fondateur de la revue *Fisheries Oceanography*.

Le Dr. Parsons a travaillé à la promotion d'une approche globale de l'évaluation des impacts des activités humaines sur l'environnement en s'appuyant sur son expérience en océanographie biologique. Il a entre autres contribué à l'étude des impacts de la construction du haut barrage d'Assouan et d'importants déversements de pétrole et a conseillé l'industrie à de nombreuses reprises. Le 27 avril 2001, le Dr. Parsons a reçu le 17^{e} Japan Prize, remis par l'empereur du Japon.

Deux médailles Timothy R. Parsons seront décernées lors du prochain congrès de la Société canadienne de météorologie et d'océanographie (SCMO) à Vancouver en juin 2005. La première médaille sera présentée au Dr. Parsons et la deuxième médaille sera présentée au premier récipiendaire qui sera choisi au cours des prochains mois par le comité se sélection. La médaille sera par la suite remise à chaque année, à condition que le comité de sélection ait identifié un récipiendaire méritoire.

Mise en candidature

- La médaille Timothy R. Parsons :
  - Peut être décernée à des résidents du Canada pour souligner des réalisations remarquables dans un domaine lié à l'océanographie multidisciplinaire.
  - est remise pour souligner la carrière extraordinaire ou une réalisation récente exceptionnelle. Les mises en candidature à titre posthume ne seront pas acceptées.

- Sera décernée seulement si, selon l'avis du Comité de sélection de la médaille Timothy R. Parsons, il existe un candidat méritoire.

- La mise en candidature doit être faite par un résident du Canada. Les lettres d'appui de la part de collègues seront acceptées mais elles ne sont pas nécessaires.

- Les mises en candidatures doivent être reçues au plus tard le **28 février 2005.**

- Il importe que chaque mise en candidature soit appuyée par une déclaration concise et exhaustive indiquant le bien-fondé de la contribution apportée par la personne proposée. La déclaration doit faire référence des activités d'enseignement, à des idées importantes, à des activités démontrant le leadership et une liste des publications. L'information d'appui doit comprendre le résumé des réalisations de la personne et une déclaration montrant comment ses réalisations ont contribué à l'avancement de l'océanographie multidisciplinaire.

- Il convient d'adresser toute communication à :

  Comité de la médaille Timothy R. Parsons
  Ghislaine Laporte
  Adjointe Exécutive
  Bureau de la SMA, Science
  Stn. 15E190 – 200 Kent Street
  Ottawa, Ontario, K1A 0E6
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CANADIAN OCEAN SCIENCE NEWSLETTER
LE BULLETIN CANADIEN DES SCIENCES DE L'OCÉAN

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Newsletter #13 will be distributed on February 16, 2005. Please send contributions to dick.stoddart@sympatico.ca
Bulletin #13 sera distribué le 16 février 2005. Veuillez faire parvenir vos contributions à dick.stoddart@sympatico.ca

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