

# FISHBYTES

THE NEWSLETTER OF THE FISHERIES CENTRE – UNIVERSITY OF BRITISH COLUMBIA  
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## End of an era: in more ways than one

by Robyn Forrest

June marked the end of two eras for the Fisheries Centre: we left our long-term home, "The Huts", and we bade farewell to our Director of ten years, Professor Tony Pitcher.

The move from the three post-war 'temporary' huts, which have been home to the Fisheries Centre since its beginnings, to temporary new offices on leafy NW Marine Drive (see p. 3), is to facilitate the construction of the new Aquatic Ecosystems Research Laboratory (*FishBytes* 6-4). The Huts, which were once referred to by a certain Director as resembling an old VD clinic, will be fondly remembered and always remain a part of our history.

Another piece of history ended on June 27, when we said farewell to our Director, Tony Pitcher, who relinquishes his post to take a 12-month sabbatical at the FAO in Rome. Tony came to the newly-formed Fisheries Centre in 1993, to become its first Director and to lead it in its multi-disciplinary research efforts. During his ten years as Director he has been instrumental in building the Centre into an internationally-recognized

institution - ensuring its growth by bringing together a raft of distinguished scholars, as well as fostering a huge number of international partnerships.

Tony was sent-off in style by more than fifty friends and colleagues, who came to his surprise farewell party - although, in the words of Dr Frieda Granot, Dean of the Faculty of Graduate Studies, the event was "not to say goodbye, but to say



Clockwise from top left: 1. Cameron Ainsworth and Eny Buchary present Tony with a poster of more than 100 messages and signatures, faxed and emailed from colleagues around the world; 2. Les Lavkulich (centre) looks on as Tony and Valerie Pitcher unwrap a carved aboriginal paddle, a gift from the Fisheries Centre 'steering committee'; 3. Val's gift to Tony - Vancouver as it would have looked when Captain Vancouver first landed. Photos by S. Heymans

thank you". Tony's vision of an innovative, internationally-renowned research centre, focused on conservation and restoration of global fisheries, was emphasized in many of the speeches of the afternoon. His skill in bringing together the people that matched the vision, to build the strong foundations upon which the Fisheries Centre can continue to grow, will be his legacy as Director. In his parting speech, Tony congratulated the members of the Fisheries Centre on their strong communality of interest and unity in the direction of their research - something captured in the Fisheries Centre's new Mission Statement: *Restoring fisheries, conserving aquatic life, and rebuilding ecosystems: researching the options.* He did, of course, also say "So long and thanks for all the fish"! We wish him every success in Rome and look forward to his return in 2004 ... so it's definitely farewell and not goodbye!

Tony remains a faculty-member of the Fisheries Centre. Daniel Pauly will step in as Acting-Director until the appointment of a new Director.

### In this issue...

Farewell to our Director and The Huts

Tony Pitcher awarded Beverton Medal

More on the Smith Sound cod mortality

Ecofish and indicators

And, as always, lots of News and Notes!



## Tony Pitcher wins Beverton Medal

by Nigel Haggan

In his last days as Director of the Fisheries Centre, Tony Pitcher has been awarded the prestigious Beverton Gold Medal - the ichthyological equivalent of the Victoria Cross - for his contributions to fisheries science. The Medal is awarded annually by the Fisheries Society of the British Isles ([www.le.ac.uk/biology/fsbi/](http://www.le.ac.uk/biology/fsbi/)

[index.html](#)) to one scientist who has made outstanding lifelong contributions to the study of fish biology or fisheries science. Previous winners are R.J Beverton (who won the inaugural award in 1995), E.D. LeCren, E. Houde, J.H.S. Blaxter, J.M. Elliott, R. Lowe-McConnell, H. Bern, and J.E. Thorpe. Tony will collect his medal on the way to his new office at the FAO, Rome, and we hope you will join us in

congratulating him.

Congratulations Tony also for nurturing the Fisheries Centre from a mere sprat into a top predator of the fisheries science ecosystem over the last 10 years! You can at least console yourself that pasta will sustain a high exploitation rate as you work away in Rome over the next 12 months.

Way to go, Tony!

## More on Smith Sound cod mortality

by George Lilly

The March/April 2003 edition of *FishBytes* (Issue 9-2) featured a commentary by W. A. Montevecchi regarding the mass mortality of Atlantic cod in Smith Sound, Trinity Bay, Newfoundland. At the bottom of the article was the following note: "Eds: For a well-argued attack on both the 'seal' and 'coldwater' hypotheses, see [www.fisherycrisis.com/DFO/frozencod.htm](http://www.fisherycrisis.com/DFO/frozencod.htm)." Those who read the website found an hypothesis that may be summarized as follows. Cod have lived in the Newfoundland environment for a long time, and would not suddenly start dying from cold water unless something else was happening. The website points to evidence of a decline in zooplankton biomass in the northwest Atlantic. It is postulated that this decline caused a reduction in the quantity of phytoplankton consumed by their zooplankton predators and a consequent increase in the quantity of phytoplankton sinking to the bottom. The decomposition of this phytoplankton in turn caused oxygen depletion in near-bottom waters where the cod were residing. This oxygen depletion then forced the cod to move upward in the water column, where they encountered cold water and froze.

Limitations of space do not permit a thorough response to this line of argument. It may be noted, however,

that mass mortalities of frozen cod have been reported in the past. In this specific instance, oxygen saturation was found to be high from surface to the bottom. Benthic invertebrates and zooplankton (euphausiids and hyperiid amphipods) that were seen near the bottom in video feed from a remotely operated vehicle showed no signs of distress.

Temperature profiling revealed that the water was very cold (-1.4°C near the surface, -1.7°C in midwater and -1.6°C near the bottom at about 200 m). The fish were super-cooled (i.e. their tissues were at a temperature below their freezing point) and would freeze if they came into contact with a nucleating agent, the most probable of which, given the environment, would be ice crystals. There is a challenge, however, in explaining how the cod, which seemed to be close to the bottom, might come into contact with ice.

The fact that the water temperature was very cold from surface to bottom argues against the concept that the cod had been in warm, near-bottom water, and had been forced into cold over-lying water by some factor such as low oxygen level or seals.

It was estimated that about 863 metric tonnes of cod were picked one-by-one from the surface of Smith Sound over a period of three weeks.

This represents less than 5% of the 20,000 tonnes of cod that had been estimated to be in Smith Sound at the time of an hydroacoustic survey in January, less than three months before the mass mortality started. It appears that most fish survived the event. Those sampled by limited trawling were in excellent condition.

There are numerous additional observations that cannot be mentioned here. All observations related to this event will be compiled, and all hypotheses that have been proposed will be examined in light of those observations. At this time, we do not have an hypothesis that is consistent with all observations, but it is felt that the very cold water lies at the heart of the matter. It is hoped that a report of the incident will be available in the autumn.



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20 June 2003

**Erratum:** In the previous issue, we printed a typographical error in the URL for Debbie MacKenzie's site. The correct URL is [www.fisherycrisis.com/DFO/frozencod.htm](http://www.fisherycrisis.com/DFO/frozencod.htm). We apologize for the error. Eds.

# Ecofish update: sustainability indicators

by *Silvia Opitz*

Readers of the last *FishBytes* (Issue 9-2) will remember my introduction to "Ecofish", a collaborative project aiming to strengthen partnerships among FishBase and *Ecopath* with *Ecosim* (EwE) users in Europe and developing countries. From April 14-16, 2003, we held the first Ecofish workshop on "Sustainability Indicators for Fisheries Management Purposes" in Dakar, Senegal, with the support of Birane Samb of the Centre de Recherches Océanographiques de Dakar-Thiaroye (CRODT).

Giuseppe Bendoricchio (Italy); Sophie des Clers (UK); Rainer Froese (Germany); John K. Pinnegar (UK); Konstantinos I. Stergiou (Greece); Ussif Rashid Sumaila (Nigeria and Fisheries Centre faculty); and Sergi Tudela (Spain) presented their favourite sustainability indicators with reference to the OECD criteria for indicators for environmental performance reviews. Tavis Potts from Australia had been invited as resource



Workshop participants and members of the Centre de Recherches Océanographiques de Dakar-Thiaroye.

person to incorporate the indicators into several 'dashboards' similar to the procedure used by economists and social scientists.

Participants agreed to test their respective indicators by applying them to the Senegalese fishery using data kindly made available by Birane Samb, Djiby Thiam, and Mariama D. Barry from CRODT. A short description of several of these indicators and photos of our visit to the nearby fishing village Kayar are available at [www.ecofish.org](http://www.ecofish.org). Applied examples will be made available at our web page within the next two months.



## Where are we now?

*Our new address:*

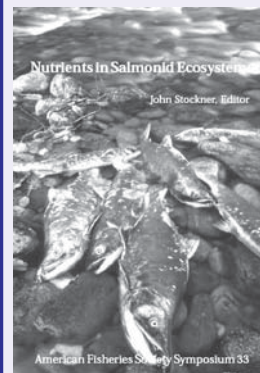
6660 NW Marine Drive, Building 022,  
University of British Columbia,  
Vancouver, BC, V6T 1Z4,  
Canada

Please note that the Marine Mammal Research Unit, the Provincial Fisheries Research Branch and Carl Walters' research group have not moved and remain in their original offices for the time-being.



## Nutrients in Salmonid Ecosystems

Research on impacts and processes of eutrophication have dominated limnological research for several decades, but the implications of nutrient removal (oligotrophication) and the resultant reduction of ecosystem production and biodiversity, as well as effects of this 'loss' on fisheries and food chains, have only recently been reported. This book, the proceedings of the 2001 AFS - Oregon Chapter conference: "Restoring Nutrients to Salmonid Ecosystems", provides an historic



perspective of the on-going 'oligotrophication' of terrestrial and aquatic salmonid ecosystems, caused largely by overfishing and habitat loss and degradation.

The 21 chapters present recent information on the important role of marine-derived nutrients from salmon carcasses in sustaining aquatic carbon production and biodiversity in salmonid ecosystems. Several papers from BC researchers embrace the efficacy of lake and stream fertilization to supplement lost salmon nutrients, and provide evidence of how nutrient enrichment can be used effectively to assist in rebuilding salmonid stocks in the Pacific Northwest and Alaska. The book covers 5 areas of research: (1) Description and management of nutrient regimes; (2) Ecological linkages between nutrients and productivity; (3) Dispersal mechanisms of marine-derived nutrients in freshwater ecosystems; (4) Effects of hatcheries, harvest and other management regimes on nutrients flux; and (5) Incorporation of nutrient management into ecosystem-based salmon restoration.

## News and Notes

### Welcome

**Natalia Chaikina** is an honours student with Daniel Pauly. She is building an Ecopath model of the Okhotsk Sea, with assistance from Tom Okey (see *FishBytes* 9-1). Natalia is from Russia and has been living in Vancouver for more than five years.

Few Fisheries Centre members will have missed the addition of **Andrew Fong** to the front office team. Andrew is working as receptionist and accounting clerk and was instrumental in ensuring that the move to our new premises ran quickly and smoothly.

**Project Seahorse** is growing fast. The past few months have seen the assembly of a powerful operations team, as well as the addition of new researchers both at UBC and abroad. We introduce them below.

**Heidi Shuter** is the new administrative assistant for the Project. A UBC graduate with a B.A. in International Relations, she previously worked on campus as a development officer for the Department of International Relations.

Joining as Operations Director is **Jorma Neuvonen**, a former consultant to the international development sector and forestry industry in Finland. He has a master's degree in forestry and holds an MBA from UBC. Mr. Neuvonen oversees the day-to-day operations of the Project, which now has more than 40 professional staff in seven countries.

His assistant is **Shannon Charney**, a former marketing and policy analyst with a degree in biochemistry from the University of Manitoba and another in industrial relations from Athabasca University.

Communications coordinator **James Hrynshyn** is a graduate of the UBC marine biology program and a former publications manager for the North Pacific Universities Marine Mammal Research Consortium. Since his last appearance at the Fisheries Centre, he worked as a journalist in Yellowknife, NWT.

Research assistant **Melissa Grey** joined the team in May to investigate the impact of non-food fisheries, such as those that target sharks, hagfish and, of course, seahorses. She comes to the Fisheries Centre with a B.Sc. in biology from Acadia University and an M.Sc. in zoology from the University of Guelph.

And the latest addition is **Bob Hunt**, who joins as a research assistant, also working on non-food fisheries. He has spent the past three years working at the Centre for Research on the Ecological Impacts of Coastal Cities, University of Sydney, Australia. He has a BSc from James Cook University, Australia and a Graduate Diploma in Environmental Science from the University of Sydney.

### Where are you reading your *FishBytes*?

We often receive correspondence from scientists - especially those in developing countries - thanking us for keeping them informed of news and upcoming conferences. Most recently we heard from a professor in Oman, who told us that *FishBytes* helps to keep scientists such as herself 'in the loop'. We would love to hear from more of our readers in far-flung locations and are interested to learn of the all the different places reached by *FishBytes*. Where are you reading yours?! Email us at [FishBytes@fisheries.ubc.ca](mailto:FishBytes@fisheries.ubc.ca).

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Our mailing address is UBC Fisheries Centre, 6660 NW Marine Drive, Building 022, Vancouver, British Columbia, Canada, V6T 1Z4. Our fax number is +1 (604) 822-8934. All contributions, reprint requests, subscription requests and address-changes should be sent to Robyn Forrest, *FishBytes* Editor, at the above address, or by email to [FishBytes@fisheries.ubc.ca](mailto:FishBytes@fisheries.ubc.ca). Opinions expressed in this newsletter do not necessarily reflect those of the Fisheries Centre or its members. For back-issues, visit the Fisheries Centre's website, [www.fisheries.ubc.ca](http://www.fisheries.ubc.ca), and follow the Publications link to *FishBytes*.

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