



FISHERIES CENTRE

[THE UNIVERSITY OF
BRITISH COLUMBIA](#)

[FC Home
Contact Us](#)

[UBC Home
Site Map](#)

[Graduate Studies](#)

[Welcome Message](#)

[Mission](#)

[Events](#)

[Training & Workshops](#)

[Seminar Series](#)

[Larkin Lectures](#)

[Members & Specialities](#)

[Research Units](#)

[Marine Mammal](#)

[BC Fish. Res. Branch](#)

[Gallery](#)

[Aboriginal Fisheries](#)

[Research Projects](#)

[Partners/Networks](#)

[Publications](#)

[Books](#)

[Journals](#)

[FishBytes](#)

[Reports](#)

[News Articles](#)

[Software](#)

[Links](#)

[Graduate Program](#)

[Graduate Students](#)

[Current Students](#)

[Former Students](#)



The University of
British Columbia

FishBytes

Volume 3 Issue 4 September/October 1997

THE NEWSLETTER OF THE FISHERIES CENTRE AT UBC

From the Desk of the Editor...

Autumn is a time of new beginnings and of changes - a time when kids of all ages find themselves back in school, when projects get going, and when we all hunker down for a new season of work.

Fishbytes will be reflecting some of those changes. There are new faces around the UBC Fisheries Centre (of which your humble editor is just one), and new undertakings in the works. In this issue, we will be introducing some of our newest members, with further introductions to follow. Always trying to keep you informed, we'll be presenting in this issue some of the new FC members and projects. And as always, information on upcoming events (both in the near and not-so-near future) and news from the oceans. *Fishbytes*, and updates, can also be found on the FC's web site, <http://www.fisheries.com>.

I would also like to take this time to invite you to contribute to *Fishbytes* - I'm happy to receive contributions such as articles, and appreciate notice of upcoming events which I can include in the *Fishbytes* diary. And I'm also planning to introduce a letters to the editor section - contingent upon your contributions! **Please send any contributions or comments to my email address, melanie@fisheries.com, or mail them to Melanie Power, *Fishbytes* Editor, Fisheries Centre, 2204 Main Mall, UBC, Vancouver, BC, Canada, V6T 1Z4.**

In the meantime, I hope you have all had an enjoyable summer, and I wish you luck in the coming year.

ON THIS ISSUE...

["Back to the Future" in the Strait of Georgia](#)

[The Spatial Distribution of Herring](#)

[Hong Kong Artificial Reefs](#)

[My Busy Summer](#)

[News and Notes](#)

[Fisheries Centre Visitors](#)

[New Fisheries Centre Students and Researchers](#)

[For Your Diary](#)

"Back to the Future" in the Strait of Georgia

By Dave Preikshot

During this Fall term many members of the Centre will be working on a pilot project sponsored by the Peter Wall Institute for Advanced Study called "Back to the Future". Methodology developed in this project promises to become an exciting new way of analysing remedial and mitigating management policies in areas that have suffered stock depletion, overfishing and the loss of biodiversity. We aim to use the latest ecosystem modelling techniques, together with historical and traditional knowledge, to reconstruct what past systems may have been like and to evaluate the economic benefits of alternative restoration strategies. A small team of graduate students and faculty are using traditional and historical knowledge to construct models of the past ecosystem of the Strait of Georgia to compare with the present day. The deliverables from this pilot project will be a report published in December 1997, and submission of two papers in January 1998. If successful, this small project will thus act as a pilot for future submissions to the Peter Wall Institute and elsewhere.

Four graduate students, supervised by Dr Pauly and Dr Pitcher, and assisted by the Back to the Future project team, are assembling and validating models of past ecosystems using historical data and traditional knowledge. The target ecosystem is the Strait of Georgia, where a preliminary Ecopath model of the present system has already been constructed. The intent is to construct two historical models; 100 years

ago (1897) and 'pre-contact' (1397). The team will aim to gather information on the past state of the Strait of Georgia through interviews with key persons from Aboriginal communities and visits to local archives. In addition to test-driving the process of using traditional knowledge in constructing past ecosystems with this method, we will attempt an economic analysis of the present value of harvesting the past systems as a way of evaluating ecosystem reconstruction as a key management goal.

The work team is being assisted by the Ecopath graduate course in the Fisheries Centre run by Dr Pauly in September; part of this project will therefore be a class exercise. Fortnightly progress meetings with the full Back to the Future team are being held throughout the Fall term. In November the First Nations House of Learning's Sty-Wet-Tan Hall is booked for a 2-day workshop to present and discuss the results. Mr N. Haggan, a research associate of the Fisheries Centre and a member of the Back to the Future planning team, who edited a previous Fisheries Centre Report on an Ecopath model of the Strait of Georgia, will facilitate the workshop.

Faculty members from the Fisheries Centre, Biodiversity Centre and elsewhere are involved, and the project forms a component of the partnership with the First Nations House of Learning. The members of the graduate team are interdisciplinary students who have experience with the ecological modelling system to be employed: David Preikshot (lead); Johanne Dalsgaard; Sylvia Salas; and Scott Wallace.

For more information and updates, please see the FC web site, <http://www.fisheries.com>.

For your amusement:

A friend of Dr Pauly has recently sent him the following message:

"I just returned from Kodiak. The Anchorage Daily News Yesterday [Sept. 15] had two large advertisements in it. One was from shore-based fishers who were urging readers to support their claim for a greater allocation of the pollock TAC on the grounds of fairness and because more Americans are involved in the shore-based fisheries; the other was from offshore trawlers, who were urging readers to support their claim to a greater share of the pollock TAC on the grounds of fairness and because more Americans are involved in the offshore fisheries."

The Spatial Distribution of Herring

By Steve Mackinson

A workshop on critical issues in spatial distribution of herring stocks was held at the Fisheries Centre during 15th-16th September and included participants from the DFO on East (Rob Stephenson) and West (Doug Hay, Jake Schweigert and Jim Galloway) coasts in addition to student representatives (from UBC and Norway) and David

Ellis, a private fisheries consultant.

Day one started off with summaries and discussions on the basic knowledge and concepts regarding the make up of herring stocks and their behaviour and ecology. The meta-population theory is a current hypothesis that seems to have been accepted readily since it can account for both the high degree stock discreteness and also their considerable plastic behaviour. Conservation issues and use of traditional ecological knowledge as an information source were addressed in detail by David Ellis. Some specifics of the use of acoustics in distribution and behaviour studies were presented by Jim Galloway of the hydrographics department of DFO.

The workshop discussed a research proposal entitled "The Behavioural Dynamics of Atlantic and Pacific Herring Schools: Management Implications of Spatial Structure". There seems to be wealth of information already available from acoustic surveys by fishing vessels on both coasts that could be central in new research. New information on herring distributions outside the spawning season on the west coast and at recruitment time on the east coast would be required before the existing spatial models, based on fundamental ecological theory, could be validated.

Hong Kong Artificial Reefs

By Reg Watson

The Fisheries Centre is in the process of undertaking its second Hong Kong project. In the first part, Dr Tony Courtney and Dr Tony Pitcher completed stock assessments for Hong Kong's multispecies, multigear fisheries. Dr Courtney also developed an Ecopath model of the Hong Kong area with help from Dr Daniel Pauly. Simulations of various management scenarios, and their impact on the ecosystems were studied using Dr Carl Walters' EcoSim. I will continue this work and update these models with more recent parameter estimates, looking at the advantages and impacts of using artificial reefs and marine reserves on the fish stock and ecology of Hong Kong. *(Please see the FC's web site for more details.)*

My Busy Summer

By Daniel Pauly

Some, upon my return in early September, asked me if I had a happy vacation in the Philippines. Here is what I did since April:

- 1) Participated in New Orleans at a workshop modelling of the Gulf of Mexico (April 2-4); then chapter to a book on the topic, following arrival in Manila, Philippines. This paper, co-authored by Laura Vidal and others explains our strategy, and that of her MS thesis, for constructing an integrated metamodel of the Gulf (she should be asked for further info);
- 2) Spent 3 mid-April days in Hong Kong with Tony Pitcher and Tony Courtney reporting to the Agriculture and Fisheries Department on our progress evaluating Hong Kong's fisheries resources. Then spent the rest of April developing new graphic and analytic routines for FishBase 97, to be issued in October (contact Rainer Froese, r.froese@cgnet.com for details); notably
- 3) Came up with this idea of combining the time series of FAO fisheries catches included in FishBase with 220 estimates of trophic levels (from 50 Ecopath models) to estimate the mean trophic level of fisheries catches from 1950 to 1994. These exhibit a clear, steadily declining trend, showing that we are truly fishing down marine food webs. A paper on this, co-authored by the Danish brigade (Villy Christensen, Johanne Dalsgaard) and others, is presently under review;
- 4) In May I finished work on the blueprint of *Biology, fisheries and culture of Tropical Groupers and Snappers* edited by Francisco Arreguin-Sanchez, John Munro, Miriam Balgos and yours truly (write to iclarm.@cgnet.com for further info); also Geronimo Silvestre and I completed the editing of another ICLARM book, on the status of coastal fisheries resources in tropical Asia;
- 5) In June, I completed with Rainer Froese the volume documenting FishBase 97. Also, I wrote and submitted a paper on the *Tropicalization of Beverton and Holt*, co-authored a review of the impacts of tilapia introductions throughout the world, and completed a paper on the growth and mortality of basking and whale sharks, presented on my behalf at a meeting on sharks in Kota Kinabalu, Sabah, Malaysia (which Ramon Bonfil also attended: ask him for a report); Ramon is presently doing an anonymous review of that paper. Also, I prepared my part of the draft of a joint paper with Stuart Pimm, on modelling Prince William Sound, Alaska, to be presented in Anchorage, in early October;
- 6) Then came July, a beautiful month to be in France, e.g., in Montpellier, where I worked on another book, to be published by ORSTOM, NOAA and ICLARM, and presenting the results on a project we ran in the last 4 years, devoted to comparing the responses of resources in upwelling systems to local and global changes. While in Montpellier, I received 10 author's copies of another book, titled *Méthodes pour l'évaluation des ressources halieutiques* Cepadues Editions, Toulouse, 288 p.;
- 7) To relax, I visited my mother in a little village for a few days (one paper), one of my sisters living in Paris (no paper), and a friend working in Brussels for the European Commission: two brief articles (on FishBase and Ecopath, respectively), for the EC Fisheries Cooperation Bulletin, which she edits;
- 8) Then on to Hirtshals, Denmark, to finish, with Villy Christensen, the paper mentioned in item (3), and to re-visit the Museum in Skagen (Danish impressionists), then back to Paris and Manila. End of July;
- 9) August: this is the last month, hence no time to waste: one little paper is written for Naga, The ICLARM Quarterly, documenting a small GIS software on the marine resources of Brunei Darussalam. Also, I helped Dr. K. Ruddle design the modules which, in FishBase 98, will accommodate his databases on fermented fish, and on

traditional fisheries management Then it is time to prepare for a two-day meeting on managing the fisheries of Indonesia, organized by the Singapore-based Canada-ASEAN Centre. However, 2 days before the flight to Jakarta, I busted the big toe on my left foot. On August 13, I was thus wheeled into the meeting (at the same time, internal gossip at the Fisheries Centre had me in an intensive care unit). The meeting was a surprise: I heard for the first time ever Indonesian fisheries scientists question their political master as to the wisdom of expanding the industrial fishing fleets!

10) Upon my return, got three shipping companies to bid for the shipment of my books to Vancouver, as I was vacating my office at ICLARM. This was sad, and I arranged for the packing itself to be done after I left, which I did on August 29;

11) But not for Vancouver. Rather I participated at a Cephalopod Workshop in Cape Town, to which I was asked to contribute a fish perspective. As cephalopodists tend to believe that none of what we know applies to their group, this made for interesting debates.

Now I am back in Vancouver, and people ask me if I had a good vacation. Some vacation!

News and Notes:

Steveston Tour

Several Fisheries Centre members participated in a tour of the Steveston Fish Docks on September 25, hosted by Duncan Stacey and John Kapp. The tour served as an introduction to BC fishing gear and vessels, and involved tours of net lofts, a boat tour of Cannery Channel, and a salmon barbeque. More to follow in the next issue, along with photos!

Fisheries Centre Party

On Sunday, September 14, Fisheries Centre members stared down impending rains and gathered together at the Centre for a welcome party hosted by Tony and Val Pitcher. Appropriately enough, the entree of choice was barbequed chinook salmon (caught by Tony), along with many other choice goodies. Through bits of rain, members enjoyed boccia outside the Centre. And although a social event, conversations inevitably turned to aspects of members' work!

Internship Opportunity

Research Cooperation Programme between Canada and Latin America - Internships for Canadian Graduate Students. Address for further information: Mr. Patrick Hyndman, International Relations Division, AUCC, 600 - 350 Albert Street, Ottawa, K1R 1B1. Further information is also available on the following WWW site address: <http://www.aucc.ca/english/international/program/indexe.htm>

Fisheries Centre Visitors

Dr Luis E. Calderon Aguilera has come to the Fisheries Centre for one year as a Visiting Scientist. He is a faculty member of the Department of Ecology, CICESE (Centre of Scientific Research and Graduate Studies of Ensenada, Mexico), where he researches in ecology, fisheries and management of marine resources and environmental impact assessment. At the Fisheries Centre he will be collaborating with Daniel Pauly to build a model of trophic interactions in the North Gulf of California.

Leif Nøttestad has been visiting the Fisheries Centre since mid-July. Leif is a PhD student at the University of Bergen in Norway, and with the acoustics group at the Institute for Marine Research, with whom the FC has a Memorandum of Understanding. He works primarily on herring using individual-based modelling and field work. At UBC, Leif has recently presented a seminar on herring school dynamics and their interaction with whales.

Dr Reg Watson is a fisheries scientist and computer modeller at the Fisheries Department of Western Australia, where he leads that state's prawn and scallop research. Born and raised in Canada, Reg has a PhD in parasitology from Brisbane's Queensland University. Reg will be working as the Post Doctorate on the Fisheries Centre's new Hong Kong project. (*For more information on the Hong Kong Project, please see the article on page 2 of this issue.*)

New Fisheries Centre Students and Researchers

Alasdair Beattie has just begun a Masters program through RMES. He obtained his BSc from the University of Victoria in 1993 in biology, with co-op work experience including several stints with DFO on a variety of interesting projects. For the last two years he has worked as a fishery observer on the west coast trawl, shrimp, blackcod and salmon fisheries. He is hoping to develop a research program involving two species of rockfish fished heavily in the west coast trawl fishery, but which are poorly understood.

Paul Higgins has worked in the fisheries world for about 17 years, at SFU, DFO, in private consulting, and most recently as a research biologist at B.C. Hydro. In 1991 he received a Masters in Resource Management from SFU, focusing on fish stock assessment. At UBC, Paul's research will focus on how to apply adaptive

environmental assessment theory to a significant practical problem in B.C. (how to set instream flow releases from dams).

Steve Martell, a BSc Marine Biology graduate of UBC, is registered in the MSc program in Zoology, working under Carl Walters on lingcod population dynamics in Howe Sound. Specifically, Steve is looking at the use of Marine Protected Areas as a conservation or fisheries management tool for conserving lingcod populations. Most of his research involves underwater surveys of lingcod populations using SCUBA.

Nathaniel Newlands received his BSc in Mathematics and Physics from the University of Guelph, but during his undergraduate summers he worked in the Department of Zoology on various projects involving fish populations. Nathaniel recently completed his MSc degree at the University of Calgary in Theoretical Astrophysics. At the Fisheries Centre, Nathaniel is working toward a PhD concerned with developing a mathematical model to describe the spatial variation/collapse of fish shoals, under Tony Pitcher.

Ceddy Nash has a BSc from Guelph, an MSc from Calgary and a BEd from UBC. His past research has been diverse, ranging from studying the dendrochronology and survival of Canada's oldest trees, to examining lightning-caused forest fires in boreal forests. As a researcher, Ceddy is now working to develop a framework from which to build collaborations between DFO and the Fisheries Centre on shellfish biology and stock assessment.

Edward Nsiku graduated from the University of Malawi in 1985, where he majored in biology and chemistry. He has been working for the Government Fisheries Department since 1986 as Fisheries Officer, overseeing fisheries management, research and development in different districts. Edward studied fisheries management at the post-graduate diploma level at Humberstone University in the 1987/88 academic year, and later attended the Norwegian Fishery Science College for one term of study in fisheries planning and management. At UBC, Edward has begun the MSc in RMES for the 1997/98 Winter Session, where he will focus on fisheries in the framework of management and economics.

Melanie Power received a BA in Political Science from the University of Waterloo in 1995, and in 1996 an MSc in Marine Policy from The London School of Economics and Political Science in England. She then undertook the Master of Public Administration Programme at Queen's University, graduating in 1997. At UBC, Melanie hopes to combine her interdisciplinary interests into a PhD focusing on fisheries policy, and she will also be working with the SSHRC Ethics committee.

Bernie Walrut is pursuing a PhD through RMES, on the topic "Domestication &

Property in Teleost Fish in its Application to Aquaculture with some attention to Sea Ranching". He is hoping to examine the English Common Law to see whether it can accommodate the continued proprietorship of fish once released into a common resource such as the sea and aspects of the economic viability of such a proposal. Bernie is from Adelaide in South Australia, and graduated from the Adelaide Law School in 1974 with an LLB. He was is a Barrister and Solicitor of the Supreme Court of South Australia and a Solicitor of the Supreme Court of Queensland. Bernie has also recently completed a Master of Aquaculture at Deakin University in Victoria.

For Your Diary:

A call for preliminary registration and abstracts for "Crossing Boundaries", the Seventh Common Property Conference of the International Association for the Study of Common Property in Vancouver, British Columbia, Canada 10-14 June 1998. More information can be found at <http://www.sfu.ca/~iascp98/>, or email iascp@sfu.ca. Please note that there was a deadline of September 30, 1997, for abstracts and preliminary registration, so contact the conference organisers as soon as possible.

"Fishery Stock Assessment Models for the 21st Century" - in Anchorage, Alaska, October 8-11, 1997. Watch for a report in the next issue of *Fisbytes*.

The SSHRC-sponsored Ethics Project, "An Ethical Analysis of Fisheries: Canadians and Fish Stocks East and West" will be meeting throughout the fall term. The first workshop will be held in Victoria, October 2-4, and a second in St. John's November 6-9. A follow-up meeting of presentations will be held at the UBC First Nations House of Learning on November 14.

November 21-22, a special workshop will be held at the First Nations House of Learning as part of the Straight of Georgia: Back to the Future Project. An interim public presentation is scheduled for October 24 at the Centre. (*Please see article on page 1 of this issue.*)

Advanced Notice for a national conference on the Benefits of Recreational Fisheries, June 1-4, 1999. Watch the website for details.



Copyright © 1996: UBC Fisheries Centre
All rights reserved for their respective owners

Send mail to the [webmaster](#) with questions or comments about this web site. Copyright © 1999-2002