



FISHBYTES

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The FC and the MSC

Editor's Note: Below is a letter from Dr Tony Pitcher, Director of the Fisheries Centre, to the Marine Stewardship Council regarding the Centre's support of the MSC. Watch FishBytes for updates.

17 February 2001

Dear Marine Stewardship Council,

A questionnaire sent out in late 2000 about the future governance of the Marine Stewardship Council has just come to our attention in the Fisheries Centre. The deadline for responses was over a month ago, but we were not sent a copy direct.

It is odd that as a 'founder supporter' of the MSC, and as one of the original invitees to the 'Bagshot' MSC meeting (but dropped from all later meetings), the Fisheries Centre was not approached about this important issue.

In the circumstances, the Fisheries Centre wishes its name removed from the list of MSC supporters (including the list on your Web site). Can you please confirm when you have done this.

The main trigger for this decision is not, in fact, that one of your few truly independent fisheries science supporters has been ignored in such matters as the questionnaire on your future governance, but

that the MSC scoring process lacks transparency. We have been unable, despite several approaches (both sideways and direct), to obtain the actual scorings for the recent MSC evaluation of either Alaskan salmon fisheries or the West Australian rock lobster fishery. We had hoped to obtain these scores to compare the MSC scoring technique with our own method of multidisciplinary fishery evaluation (Rapfish), which has been openly published with the normal scientific peer review.

In addition, the blanket approval of all species, localities and gear types for Alaskan salmon fisheries raises serious questions about the scoring process, and the 'to do' list given alongside MSC approval raises issues about how compliance will be monitored. Moreover, comments by the panel of independent reviewers of each scoring process are not openly published.

I have been reluctant to withdraw the Fisheries Centre's active support because we applaud the concept of consumer-driven ecolabelling as a way of encouraging responsible, sustainable fishing by a profitable fishing industry. But, as Director of a fully independent fisheries research group, with no national, political or industrial agenda, I am obliged to ask you to remove the UBC Fisheries Centre's name from your current list of supporters. Some individual members of the Fisheries Centre may still wish to be associated with the MSC, and the Centre would be prepared to reconsider this decision in the light of any changes that might occur in the MSC process.

In conclusion, there is too much uncertainty and lack of transparency in the current MSC process to dispell fears that the conservation objectives of Marine Stewardship Council approval might be subverted by political and industrial interests.

Sincerely,
Tony J. Pitcher
Director & Professor of Fisheries
Fisheries Centre, University of British Columbia

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Modelling Marine Mammal Energetics: Blubber Never Looked so Good

By Andrea Hunter

I fell in love with the ocean at a very young age. So young, in fact, that I can't remember it happening. I assume my brain hadn't fully developed when the event occurred. I do, however, remember being introduced to Bill Nye the Science Guy on a local cable television channel a few years later. He taught me the ins and outs of beginner science: two balls of different size dropped from height, a wind-up elastic band toy car, and baking soda added to a bottle of water. I was hooked and my future was determined; a mix of science and the ocean. Ever since, the snooze button on the alarm clock of my life has been shut off.

Now, I place my faded copy card in the back pocket of my jeans before I leave for school. Once there, I shuffle my keys, open my office door, smell an aging building, and take four steps to reach my desk. The wheels of my chair squeak across the floor as I pull my chair out from under my desk, and squeak again even louder as I roll it back under with my feet. I turn on my cold computer and try to focus on the tiny words. I am not a typical marine mammal scientist. My desk is my lab, year-round. My project isn't glamorous. I don't chase whales, glue fancy transmitters on seals, or dart animals from helicopters to take blood and tissue samples. I don't live for months in an obscure field camp and I don't spend the day stationed on top of a foggy lookout bluff scanning the ocean with binoculars. There is no risk of injury from research animals not cooperating, nor risk of chemical explosion. If I leave directly from work to meet a friend I don't have to worry about smelling like my research animal. Weather is not a hassle; rain

doesn't ruin my day, but rather it stations me at my computer for longer, lengthening my workday. Luckily, the worst thing that could happen is a paper cut or being forced to present my research after a field biologist presents gratuitously cute pictures of fluffy white harp seal pups.

I am synthesising decades of work on marine mammal energetics into a computer database. I search worldwide for papers and theses that have sat in the bowels of libraries, and in the filing cabinets of professors long retired, that might be lost or thrown away if not catalogued and used. Most papers have been neglected for years, gathering dust and glue-eating silverfish bugs. The data these papers contain on metabolic and feeding rates are the backbone of my thesis. I look for patterns in data. Not paisley, nor plaid, but rather clusters and relationships. I am working towards building a multiple regression equation that will describe the daily energy consumption of all extant species of marine mammals in the world. For any given species, age, weight, activity level, diet, and other variables, the equation will generate a daily energy requirement. Marine mammals have long been considered to be gluttonous consumers (fish vacuums) to offset higher energetic costs of maintaining their warm body temperatures in a cold aquatic environment. Commonplace, for example, are reports of seals at river heads eating all the returning fish, and porpoises becoming entangled in fishing nets as they pillage the day's catch. I do not doubt these reports, but rather the extent to which the animal's stomach must be able to stretch to accommodate all the fish associated with these events. The energy requirements of marine mammals are very

laborious to measure directly; some marine mammals are impossible to keep in captivity, such as a blue whale, or have never been placed in captivity due to small population size or endangered status. Therefore, other approaches, such as mathematical modelling, must be used to estimate their energy requirements. The values calculated using the multiple regression equation can be used to estimate the amount of prey consumed by species of marine mammals under different conditions whose metabolisms have never been determined in the field or in the lab. The estimates can be used in ecosystem models to assess trophic dynamics or to judge the competition between marine mammals and fisheries. The estimates will further allow researchers to address issues such as the need for marine protected areas where marine mammals and fisheries overlap, or to determine whether animal culls are necessary.

As a child I used to stare into the ocean and wonder what was in the darkness and how it lived; now I stare at my computer and try to pull that information out. It's nice to know that there is at least one person who said as a child "I want to be a marine biologist" and actually followed through.

Andrea Hunter is a Master's student at the Marine Mammal Unit, working with Dr Andrew Trites.



Editor's Note: In autumn, 2000, the Fisheries Centre hosted an essay competition for graduate students. This essay, by Andrea Hunter, took second prize in the contest. Dorothee Schreiber's first-place essay was published in the January/February 2001 (volume 7, issue 1) issue of *FishBytes*.

The Fifth Larkin Lecture – The Good, the Bad & The Ugly

Editor's Note: Dr Dayton Lee Alverson presented the Fifth Larkin Lecture on Thursday, February 22, 2001. The abstract of his paper, entitled "The Good, the Bad & The Ugly: Factors Influencing the Scope and Quality of Fisheries Science and Management Decisions", follows. Please visit our website for more on the Larkin Lectures, including the discussion transcript and additional photos.

During the 1900s, a new living resource management paradigm took root in the U.S.; it appears to be spreading to other areas of the world. This paradigm, which incorporates the concepts of the precautionary approach, responsible fishing practices, coupled with uncertainty is currently driving the decisions in fisheries management institutions, as well as in U.S. courts. These management decisions appear more acceptable to the environmental and conservation community. Powerful political forces and scientific uncertainty, factors frequently associated with overfishing, are now the underpinnings of a new fisheries management paradigm. It is not clear that fishery science will play a more important role in the new

management process or that decisions will be rooted in the "best available science." The likely consequences of the shifting management philosophy should result in reduced fishing mortality on many stocks, lower bycatch levels and a decline in capture fisheries. Will our society be



At the reception following the Fifth Larkin Lecture. From left to right: Dr Lee Alverson, Mrs. Larkin, Mrs. Alverson, and the Fisheries Centre's Tony Pitcher.

better off and does the new paradigm have lasting qualities? As many marine fish stocks have collapsed or been overfished, concerns associated with fishery collapses, overfishing and threats to the ocean environment have given rise to the growth and enrichment of the natural sciences.

The paper begins with a short history of global fisheries developments and various events leading to the contemporary view of the status of marine fishery resources and the environment. This is followed by discussion of factors which contributed to significant level of overfishing during the 1960 through 1990 period, including institutional paralysis, uncertainty in science, the rapidity of fishery and technological developments and the inability of national and international fisheries management entities to monitor and enforce fishery regulations.

Dr Alverson is Chairman of the Board and founder of Seattle's Natural Resources Consulting, Inc., and served as director of the National Marine Fisheries Service Northwest and Alaska Fisheries Center from 1970 to 1980. In addition to his career in U.S. fisheries research and management, Dr Alverson is an internationally-recognized expert in world fisheries, and he served for a number of years as member and/or chairman of the Advisory Committee on Marine Resources Research of the Food and Agriculture Organization of the United Nations, the foremost international agency in aiding fisheries of developing countries.



Senegal and the Lost Sardines

By Tony Pitcher

Fishery scientists have heard much from workers like Elinor Ostrom, Lynne Pinkerton, Barb Neis and Rosemary Ommer about the benefits that might accrue from co-management with small, self-organized local fishing communities. But an example from France (Marc Larrat  from ESCOM, Paris), shows that, as suggested by the recent fisheries ethics project that produced the book *Just Fish* (Ommer et al 2000), the principal of adjacency to the exploited resource is paramount.

Ciboure, a small fishing community on the Bay of Biscay, had earned a good living from a flourishing sardine fishery, but was put into crisis when local sardine stocks collapsed in the

1950s. (One of those familiar 'overfishing plus climate shift' collapses common in small pelagics.) The local fishers co-operative funded a research vessel, later taken over by IFREMER, that successfully pioneered a live-bait tuna fishery and a profitable 4-month tuna season was supporting 166 locally-financed vessels by the late 1960s. The importance of local community support was demonstrated when no one averted the bankruptcy of some large new purse seiners based in Bayonne, where there was no tradition of fishing.

Profits from the Ciboure fleet soon funded the construction of large 'sardine clippers' fitted with on-board freezers. But the large catches needed to support these vessels could not be made with the short local tuna

season. So the fishers decided to fish for tuna in Senegal in West Africa (then a French colony), where they still fish profitably today. Many fish are brought back to France for sale, but the resourceful Ciboure fishers also transported a pre-fabricated canning factory to Dakar, where it was assembled by the ship's engineers.

So the loss of sardines in France led to the export of European fishing effort to West Africa, where this and other EU fisheries are almost out of control and have devastated local stocks. EU fisheries are currently under fire for this neocolonial exploitation.

See: Coward, H., Ommer, R. and Pitcher, T.J. (Eds). (2000) Just Fish: the Ethics of Canadian Fisheries. Institute of Social and Economic Research Press, St John's, Newfoundland, Canada, 304pp.



News and Notes

Conference Calls

The **Third International Conference on Ecosystems and Sustainable Development (ECOSUD 2001)** – Alicante, Spain, June 6-8, 2001. Organised by the University of Alicante, Spain, Wessex Institute of Technology, UK and Universitat Jaume I, Spain. Visit www.wessex.ac.uk/conferences/2001/ecosud01/

Putting Fishers' Knowledge to Work – to be hosted by the Fisheries Centre, August 27-30, 2001. An international conference about how fishers' knowledge can improve the management of fisheries. The meeting will be relevant to fishers, fishery managers, marine environmental researchers and social scientists. The theme of the conference revolves around the use of local knowledge and the fishing practices of traditional and commercial / industrial fishers, in the management of marine resources. A concurrent Aboriginal Fisheries Forum, focussing on TEK and local knowledge in BC and international experience, will be co-hosted by the Fisheries Centre, UBC's First Nations House of Learning, and the BC Aboriginal Fisheries Commission. The Organising Committee includes Dr Bob Johannes, Dr Barbara Neis, Prof Tony Pitcher, Nigel Haggan, Chief Simon Lucas and Arnie Narcisse (Chairs, British Columbia Aboriginal Fisheries Commission). Visit the Fisheries Centre's website for more information.

The **Third International Conference on Recreational Fishing** – Darwin, Australia, May 22-24, 2002, to be hosted by Australia's Northern Territory. The Conference is a forum for members of the recreational fishing fraternity including managers, researchers, policy makers, industry representatives and the angling public to discuss issues relevant to the sustainable management of recreational fishing through the new millennium. The theme of the Conference is "Regional Experiences for Global Solutions". For further

information, contact John Harrison – Amateur Fishermen's Association of the Northern Territory (afant@octa4.net.au), or Anne Coleman – Fisheries Division, DPIF (anne.coleman@nt.gov.au). The Fisheries Centre's Tony Pitcher is among the members of the International Steering Committee. To register on the mailing list please contact the conference secretariat: Convention Catalysts International GPO Box 2451 Darwin, Northern Territory, Australia, 0801, phone (08) 8981 1875, international phone, +61 8 8981 1875, fax: (08) 8941 1639, international fax +61 8 8941 1639, email convention.catalysts@norgate.com.au, or visit www.conventioncatalysts.com.au or the Fisheries Centre's website.

Congratulations

Congratulations to **Carl Walters**, who has been selected as one of 10 2001 Pew Marine Conservation Fellows. This programme, funded by the Pew Charitable Trusts and operated in conjunction with the New England Aquarium, provides funding to Fellows to conduct research in marine conservation and sustainability issues. The duration of the Fellowship is three years.

Carl, also a Fellow of the Royal Society of Canada, has also been named a William R. and Lenore Mote Eminent Scholar, a six-month visiting fellowship at Florida State University. Congratulations!

Email Update

Please note that all Fisheries Centre email addresses have changed from fisheries.com to fisheries.ubc.ca and usernames have been standardised. Looking for someone's new address? Check the members' listings on our website.

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Our mailing address is UBC Fisheries Centre, 2204 Main Mall, Vancouver, British Columbia, Canada, V6T 1Z4. Our fax number is (604) 822-8934. All contributions, queries (including reprint requests), subscription requests, and address changes should be sent to Melanie Power, *FishBytes* Editor, at the above address, or by email to FishBytes@fisheries.ubc.ca. Electronic versions of contributions are preferred.

Opinions expressed in this newsletter do not necessarily reflect those of the Fisheries Centre or its members.

Be sure to visit the Fisheries Centre's website, www.fisheries.ubc.ca, and follow the links to *FishBytes*. There, you'll also find details on Fisheries Centre projects, publications, faculty and students, as well as information on upcoming Fisheries Centre events.

