

FISHBYTES

THE NEWSLETTER OF THE FISHERIES CENTRE – UNIVERSITY OF BRITISH COLUMBIA
VOLUME 7 ISSUE 3
MAY/JUNE 2001

Sword Play?

By Marc Griffiths, Steve Lamberth and Tony Pitcher

The recent hit book and film 'The Perfect Storm' graphically shows the hazards of longlining for money-spinning swordfish on the high seas. Many will also have noted the tension portrayed in the skipper over de-billing and freezing the carcasses of these beautiful glistening giants pulled from the ocean. Naturally, the lure of large amounts of money overwhelms his scruples, and, ironically, also sends his ship to her doom. This imperative - cash versus conservation - is a recurrent theme in swordfish fisheries.

A sport fishery in South Africa has been renowned world-wide for large swordfish, which, until 1997, was prohibited from sale. Then an experimental tuna longline fishery started, but swordfish 'bycatch' soon comprised 70% of the landings. At the same time, there was a dramatic reduction in swordfish

catch rate during the annual sport fishery competition. No swordfish at all were caught in the contest during the last two years. Not surprisingly, this has led to a lot of conflict.

South African Deep Sea Angling Association records (1990-98) show a small annual sport catch of around 24 swordfish; about 37% are

caught-and-released. In contrast, the tuna longliners catch an average 800 swordfish per year (418 tonnes p.a., 1997-2000) in South Africa's EEZ. Just under half is caught by foreign vessels, principally 80 Japanese and 23 Taiwanese longliners. All this catch is supposed to be reported in South Africa.

Decommercialization has been strongly advocated both by South African sport fishers and by the international Broadbill Foundation. But, for longliners, swordfish bycatch is unavoidable. Moreover, South African swordfish are also targeted by foreign vessels outside of the EEZ, such as the Asian tuna fleets that scour the southern hemisphere, and European longliners that have moved south following the decimation of North Atlantic swordfish. (See *Fishbytes* Volume 7 Issue 1 (January/February 2001) for an account of the impact of their arrival in Chile. Eds.).

Swordfish in the Atlantic are supposed to be managed by the International Commission for Conservation of Atlantic Tuna (ICCAT). Compliance by member countries is voluntary. Recently, ICCAT had one of its worst failures when the annual swordfish quota for the southern Atlantic (14 620 t) was abandoned. At the November 2000 ICCAT meeting in Morocco, Spain and France refused to agree on shares for new entrants such as South Africa, Namibia and Brazil. So the meeting ended with each country promising to declare their own catch limits. Needless to say, these unilaterally-declared quotas exceeded the original TAC by 50%. And there is no internationally-agreed quota for Indian Ocean swordfish.

Ineffective management agencies and games played by fishers are placing swordfish fisheries in real peril throughout the world. For example, declared swordfish imports

In this issue...

En Garde!

Many Many MOUs

Conservation Award!

Icelandic Cod Crisis

'Halibits'

And, as always, lots of News and Notes!

Continued on page 3 - Swordfish

Good Moues

A 'moue' is a little pout, often accompanied by a shoulder shrug. Its gallic body language for "so what". This is what the average reaction of our members might be on learning that the Fisheries Centre is in the process of signing four new Memoranda of Understanding (MOUs). But wait – before you shrug this off – remember the Fisheries Centre's MOUs are a formal signal of an active research partnership where both sides gain by contributing something the other has not (we all know of other kinds of 'partnership' in Canada!), and without necessarily committing to spending any money. The Centre currently has about a dozen MOUs (you can see the full list in the Fisheries Centre Report – which is imminent!) and in all cases both partners are happy as they see a gain from the arrangement.

One new MOU is with the Department of Oceanography and Fisheries of the University of the Azores at Horta, on the island of Faial, a well-known seasonal stop-off for transatlantic yachtsmen, green turtles and sperm whales (you will see a nice picture taken from the laboratory in the above report). The Azores have a pivotal position on the mid Atlantic ridge (literally so – the African, North American and European Plates all meet here) and the University is an excellent base from which to study seamount ecology; tuna and swordfish fisheries; deep ocean fisheries such as scabbardfish, forkbeard and wreckfish; and marine mammal and turtle interactions with fisheries. The Director, Dr Ricardo Santos is particularly interested in our modelling capabilities and there have been couple of visits in each direction, one sponsored by the Sea Around Us Project. Tony Pitcher gave a keynote address on 'Back to the Future' at the recent Azores Fisheries Week Seminar and, on account of efficient simultaneous translation, got a lot of inter-

ested questions from the local fishermen's organisation. A graduate student, Telmo Morato Gomes, from the Azores is scheduled to join the Fisheries Centre in this fall (see www.horta.uac.pt/index.html)

The second new MOU is with the University of Concepcion in Chile, where Tony Pitcher has been an Honorary Professor since 1988 (www.natura.uedc.cl). The MOU underpins cooperation in the modelling of Antarctic ecosystems, especially krill fisheries and its impact on charismatic marine animals, currently being run by a graduate student in each institution, Jorge Cornejo (UDECE) and Emma Bredesen (UBC). The modelling work is supervised by Dr Tarsicio Antezana in Concepcion with Drs Tony Pitcher and Andrew Trites here in the Fisheries Centre. The short term aim of this work, which is sponsored by a grant from David Saxby and Dr John Spence of Biozyme Ltd., Vancouver, aims to present the results of the modelling to Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) scientists next year (see www.ccamlr.org).

The third new MOU is with the Centre for Fish and Wildlife Research, a new research unit of the Swedish University of Agricultural Sciences, Umeå, Sweden. Last October, Dr Tony Pitcher gave the keynote address at the opening of the new institute and was presented by Director Lars-Ove Ericsson with an interesting gift – an official University of Umeå hunting knife! Given the recent papers in

Science (see www.sciencemag.org/cgi/content/summary/292/5523/1819) that show how ice age human hunters wiped out all the large mammals in the Americas, Australia, New Zealand and Madagascar, we are not sure how appropriate hunting knives are for Centres of Wildlife Research – but this can be taken up with our Swedish colleagues!

Last but not least, United Fishermen and Allied Workers' Union (UFAWU), have signed an MOU with the Fisheries Centre to facilitate partnership in a project focussed on the history of fisheries in BC. The aim is to make archived newspapers, historical

photographs and other items of interest available on the web. The project is the brainchild of John Radosevic, the President of UFAWU, and is run through the Sustainable Fisheries Society (www.sfsfishfirst.org) Many FC members will recall that UFAWU hosted a visit (and BBQ!) for

FC graduate students to the net lofts and museum in Steveston in 1997 (see *FishBytes* volume 3(5) (November/December 1997), and the same year provided a couple of helpers with the Strait of Georgia Back to the Future project. Dr Daniel Pauly's recent paper on Fishing Down Canadian food webs (Pauly *et al.* 2001. *CJAFS* 57(1): 51-62) makes such cooperation all the more necessary as we all search for ways to work together to ensure a healthy sustainable future for Canada's Pacific fisheries.



Having been presented with a traditional Swedish hunting knife, Fisheries Centre Director Tony Pitcher practices his Swedish at a reception in Umeå.



Aquatic Award Winner

Congratulations to **Dr Daniel Pauly**, who last month received the 2001 Murray A. Newman Award for Aquatic Conservation and Research for Excellence in Aquatic Research. Daniel received the award at a banquet at the Vancouver Aquarium on May 8.

The Murray A. Newman Awards for Aquatic Conservation and Research were established in 1995 in recognition of Dr Newman's outstanding contribution toward public awareness of our aquatic world. Dr Newman was the founding director of the Vancouver Aquarium, and led the institution for more than thirty-seven years, until his retirement in 1993. The Murray A. Newman Award recognises individuals or groups who have made significant contributions to either conservation or research in aquatic biology.

Daniel was joined by local school teacher Rod MacVicar, who received the award for Excellence in Aquatic Conservation.



Cod (Again) Acting In A Mysterious Way

By **Tony Pitcher**

Remember all those reports from Iceland about how well they were managing their stocks now that they have ITQs? And how misreporting and discarding was down to about 5%, stock assessments were run with the latest VPA techniques, and all was rosy set, with cod populations rebuilding, for sustainable fishing? Well, last week saw reports that the Icelandic cod has collapsed.

According to the Icelandic government (<http://www.hafro.is/Astand/englsum.pdf>) assessments had predicted a fishable population of 866,000 tonnes but only two thirds of this amount, 577,000 cod could be found in surveys. Worse, estimated spawning cod are down by half from 430,000 tonnes to 219,000 tonnes. The government says "Due to this overestimate .. landings in recent years have been 27-42% of the fishable stock, far exceeding the 25% aimed at ..". Fishing mortality in the year 2000 is now estimated at 0.86

compared to approximately 0.4 if the catch had been [as planned]."

Former Fisheries Centre graduate student Hreidar (remember that Viking helmet!) Valtysson says the competing hypothesis are:

1. Unreported discards (but recent estimates only point to 5-10% discarding).
2. Starving cod turn to cannibalism (the remedy to this – a favourite with the fishing industry - is said to be to fish harder).
3. Fishery independent surveys that for some reason falsely indicated high population sizes used in tuning the VPA.
4. More fishing than recommended in the quota (but only by about 5% in recent years).

This leaves only Norwegian cod in the North Atlantic in anything like a healthy state. Meanwhile, down the hall, Carl is working on one of his devastating analyses to show what went wrong.



Leftover Halibut

FishBytes readers will recall that Dorothee Schreiber's prize-winning essay, "A Sense of Place: British Columbia's Pacific Halibut Fishery" was published in the January/February 2001 issue (Volume 7(1)). We received two letters regarding

Dorothee's essay, one from Chris Sporer of the Pacific Halibut Management Association of British Columbia, and another from reader Dave Doyes. We are pleased that this paper generated discussion regarding the Pacific halibut fishery, and welcome

feedback on our articles. Those wishing to submit replies to *FishBytes* articles are advised to submit for consideration a brief comment (no more than 250 words) to the Editor at the address given on page 4.



Swordfish - Continued from page 1

from South Africa into the USA far exceed the reported catch (it seems some are actually caught in Namibia). In Canada, the Ecology Action Centre (Halifax) reports forced unrecorded discards of adult swordfish (by-catch in a tuna fishery) because they would exceed an ICCAT quota. In Spain, the principal world swordfish market, World Wildlife Fund reports 2/3 of the

swordfish are illegally caught. In the Azores, local swordfish fishers say "the Spanish have been like a plague here" and sport fishing boats offshore often see illegal Taiwanese and Japanese vessels fishing.

Until these issues are put right, surely its time to stop playing the 'cash versus conservation' game. We can

all start by re-considering eating swordfish in restaurants. We can encourage responsible swordfish fishers, both commercial and recreational to act together to turn the tide.

Marc Griffiths and Steve Lamberth are from the Marine and Coastal Management Division, Capetown, South Africa. Tony Pitcher is Director of the Fisheries Centre.



News and Notes

Conference Calls

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. 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. Conference secretariat: Convention Catalysts International GPO Box 2451 Darwin, Northern Territory, Australia, 0801, phone +61 8 8981 1875, fax +61 8 8941 1639, email convention.catalysts@norgate.com.au, or visit www.conventioncatalysts.com.au or the Fisheries Centre's website.

The **Fourth World Fisheries Congress** is to be held in Vancouver in 2004, probably in late April. Previous Congresses were in Athens (#1, 1992), Brisbane (#2, 1996) and Beijing (#3, 2000). Final decisions on the Congress theme and format will be taken at the Phoenix meeting of the American Fisheries Society in August this year, but Dr Tony Pitcher has been confirmed as Programme Chair while Dr

Bruce Ward from the BC Government Fisheries Unit is in charge of local arrangements and Dr Max Stocker from DFO sits on the Steering Committee.

New Members and Visitors

Welcome to **Lyne Morissette**, who has joined Daniel Pauly's research group as a PhD candidate. Lyne holds a BSc in Ecology and Environment from the University of Montréal, and a MSc in Wildlife Management from Université du Québec à Rimouski. In collaboration with Maurice-Lamontagne Institute (science branch of Department of Fisheries and Oceans in Québec), her new research project will involve to analyze the complexity and the stability of ecosystems of the world, and to develop specific models for the Gulf of St. Lawrence.

Welcome to **Jorge Cornejo-Donoso**, who is visiting at the Fisheries Centre from the University of Concepcion in Chile, where he is a masters student in oceanography with Dr Tarsicio Antezana in the "Laboratorio de Ecología Pelágica". Jorge is modelling area 48.1 of the Antarctic, focussing on the ecosystem effects of the krill fishery (see "Good Moues", page 2.) At UBC, Jorge is collaborating with Emma Bredesen of the Marine Mammals Unit, who is modelling Antarctic areas 48.2 and 48.3.

Welcome back to **Sonia Rodriguez**, who has returned to the Fisheries Centre for the summer. Sonia is a PhD student of marine biology at the University of Alicante in Spain. Her doctoral research focusses on the feeding habits of fish of *Posidonia oceanica* meadows. Sonia visited here last fall to study Ecopath with Daniel Pauly and Villy Christensen, and has decided to return for the summer to learn Ecosim and Ecospace and because she says the people here are so wonderful!

FishBytes is the newsletter of the Fisheries Centre at the University of British Columbia, and is published six times per year. Subscriptions are free of charge.

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.

