

FISHBYTES

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What is nature?

by Mimi E. Lam¹

Published in 1944, the book *What is Life?* by Erwin Schrödinger, a Nobel Laureate in Physics, led a parade of physicists to study biology. In 1605-1606, William Shakespeare penned in *Macbeth*, Act II. Scene II:

... the innocent sleep
Sleep that knits up the ravel'd sleeve of care,
The death of each day's life, sore labor's bath,
Balm of hurt minds, great nature's second course,
Chief nourisher in life's feast

At the Ecological Society of America and Society for Ecological Restoration joint meeting in San Jose, CA, 6 - 10 August 2007, my own sense of life was ravelled in the related chimera: *What is Nature?* The answer I knit is that life and nature, both, are gifts to be shared, freely, without

need for definition or valuation. Let me share with you how I came to weave this dream of a modern "life's feast."

Bathed in the meeting's Traditional Ecological Knowledge events, I was jolted by the symposium: *Ecosystem services in decision-making: Stepping into reality*. Slick presentations on market valuations of ecosystem

services, e.g., water and nutrient cycling and waste assimilation, attacked my sensibilities with their potential to exacerbate socio-economic inequities. Deafening were the pernicious implications to the poor, underprivileged, and marginalized, as basic life support systems, e.g., water and air, are being valued and marketed by the rich.

The presentations began with valuations: *Ecosystem services: The promise and peril of the approach*; *The Natural Capital Project: A framework for ecosystem services in decision-making*; *Standardized measurement of ecosystem services: Integrated economic and ecological statistics for welfare accounting and adaptive management*; and *Mapping and valuing ecosystem services: What do we know? What do we need to know?*

But after the break, they turned to markets: *The edge of markets: Ecosystem services and meeting the needs of the poor*; *Existing ecosystem service markets: How accessible are they, who's using them, and are they improving environmental conditions?*; *Ecosystem investment: Expanding the pool of conservation finance*; *Lessons from the field: What we know about implementation of ecosystem service projects and payment for ecosystem services in the real world*.

A symposium that started as an adagio, introducing ecosystem services as an approach of promise and peril, ended in a crescendo of "markets", "investment", "finance" and "payment"!

Some ecologists working with economists may be inclined to measure, price, and parcel nature's services, but what ecological value remains? A value afforded only to the rich, denied to the poor and other species without money? Do we want to incur a cost by living or exact a price on life? Instead, by celebrating the diversity of life and seeking relational pathways, within its intrinsic biological and cultural richness, we may incur learning costs, but ultimately, reap net benefits.

After the symposium, I met a Native American colleague, who shared my concerns. With the FC's Nigel

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Haggan, she and other indigenous scholars had spoken in the Special Session: *Bridging western science and indigenous traditional ecological knowledge ethically: What works and what doesn't*. We pledged to speak, without delay, with economists we knew to share an indigenous, i.e., innate perspective on nature, without a price tag.

Upon returning to Vancouver, I breathed in the free west coast air, looked to the mountains and ocean, and visited FC fisheries economist

Rashid Sumaila. We are currently collaborating with economists in the Department of Fisheries and Oceans Canada, Policy Branch, to design a socio-economics framework that values fishery resources in society and nature, not just the economy and polity. We are also assessing impacts on BC fishing communities of their decisions.

So this is my life: valuing relationships to nature and people, not things tradeable on the market. My dream is to create meaningful connections of intrinsic value within this ecology, as a principle of life and

work.² To realize this, I need to openly embrace and value life's complexity and dynamic nature, without charge. What is your life? *Tuum est*: "It is yours," says UBC's motto. Let us make it ours and knit this dream together, sharing life's and nature's gifts – freely.

**Footnotes**

1. Mimi E. Lam, Secretary (2006-2008), Traditional Ecological Knowledge Section, Ecological Society of America (ESA), gave an oral presentation at the ESA meeting, titled: "Relating to our ecosystems: People and places"

2. To read more, see the Winds of Change Autumn 2007 article, *Fostering Connections*, by Cassandra Brooks

AERL receives two artworks by Cameron Ian MacLeod (1958 - 1983)

The Aquatic Ecosystems Research laboratory has been presented with two artworks by the late artist Cameron Ian MacLeod. These two untitled fish forms in charcoal and graphite on paper (38"x52" 1980 and 57"x47" 1980-81) reflect the influence of time spent in the Queen Charlotte Islands. The works were generously donated to the University of British Columbia, in memory of Cameron MacLeod, by his mother Ms Celeste Shannte (pictured below).

Talented and prolific young

artist Cameron Ian MacLeod completed a BA (Hons. Fine Arts) at UBC in 1980. He received a number of scholarships and awards for his art, and produced the main body of his work between 1975 and his untimely death in 1983. In 1987, Jack Shadbolt recalled Cameron MacLeod as a promising young artist and a singular talent. In 2004, the previous Diane Farris Gallery held an exhibition, "Beyond Presences", featuring his life work. The works have been installed in AERL room 120.



Ms Celeste Shannte and Daniel Pauly with the two charcoal and graphite artworks by Ms Shannte's son, Cameron Ian MacLeod. Photo by Angus Bungay.

Beth Fulton wins major Australian science prize

Please join us in congratulating Dr Beth Fulton, senior research scientist at Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO), who has been awarded the prestigious 2007 Science Minister's Prize for Life Scientist of the Year. The award recognises her outstanding achievements in marine ecosystem modelling and her impact on understanding and managing the impacts of fishing. Among other achievements, she is developer of Atlantis, a biogeochemical whole ecosystem model currently being used to provide strategic advice for management of one of Australia's largest fisheries. Atlantis, first given its name by the Fisheries Centre's Villy Christensen, has now been applied to 15 marine ecosystems globally. Dr Fulton is currently collaborating with Tony Pitcher and Fisheries Centre PhD student Robyn Forrest, comparing the predictions of Atlantis with those of Ecosim for an Australian ecosystem (see *FishBytes* issue 13-4). She gave a seminar at the Fisheries Centre on this and other work on October 31, 2007.

For more information about the award see www.csiro.au/news/pmprizefulton.html.

Journal ease

by Tony Pitcher

One of the key differences between newspapers and newsletters is that the former report only bad news and hence, human nature being what it is, have scads more readers (or at least, skimmers). Newsletters, on the other hand, tend to report good news and are read by relatively few, very carefully. Yet another type of 'newsletter' - scientific journals - are read by vanishingly few people, but are such an integral part of science that they are scrutinised so closely that their importance may be judged by actual counts of how many times published articles are cited by others.

Fish and Fisheries (*FaF*, your local scientific journal) has no fewer than four pieces of good news to report in this issue of the *FishBytes* newsletter. First, for the second year running since it was listed by ISI, and by a wide margin, *FaF* has come top in its field in the annual world citation ratings (ISI 2006: 1/41,

rating 4.26; 2005: 1/41, rating 4.97).

Second, the *FaF* journal is now available free online in the developing world. Access is through the AGORA¹ Initiative with the Food and Agriculture Organization of the United Nations (FAO), and the OARE² Initiative (Online Access to Research in the Environment) with the United Nations Environment Programme (UNEP).

Third, a new Editorial Board member at *FaF* augments our multidisciplinary scope. Dr Rashid Sumaila has been appointed to advise on, and encourage, submissions in the area of fisheries economics.

Fourth, but by no means least, *Fish and Fisheries* is pleased to announce the appointment of a new Editor to cover the fast-moving field of molecular biology and ecology in fish. Professor Gary Carvalho, from the University of Wales, Bangor, UK, joins the two existing Editors, Tony Pitcher

and Paul Hart, to provide a regular outlet for synoptic and synthetic contributions in the molecular and genomic field. To help kickstart this exciting initiative, a Special Issue is being planned for late 2008, an eminent Guest Editor is being approached, and another new Editorial Board member has been selected, Dr Lorenz Hauser from UW Seattle.

Hey – there is yet more news - on the publisher's website (Blackwells)³, you can now find lists of the 20 most cited papers and the 20 most downloaded papers: scrutinize closely to see if your paper is among them!

Footnotes

1. www.aginternetwork.org/en/
2. www.oaresciences.org/en/
3. www.blackwellpublishing.com/journal.asp?ref=1467-2960&site=1

Fishprinting workshop: the Japanese art of gyotaku

by Mimi E. Lam

On 23 August 2007, Mr Mineo Ryuka Yamamoto, International Fish Print Studio, Japan (www.gyotaku.ca), gave a fishprinting (gyotaku) seminar and workshop to eighteen enthusiastic student and community participants. Gyotaku originated in the 1850s when the Japanese Emperor held angling competitions to keep samurai fit in peacetime. Mineo and I are collaborating to research the evolution of gyotaku from historical catch records to modern art form. After the workshop, Mineo hosted Sarika Cullis-Suzuki and me for an exquisite meal at Tojo's Restaurant, where his original dolphin prints hangs. If you missed this unique opportunity, Mineo will visit us again on 18 September 2008. He will give a seminar with invited guests Mr Hidekazu Tojo, restaurateur, and Dr David Suzuki, environmentalist, with demonstration and workshop. Registration will be required. Event registration details will be posted in July 2008 online: www.fisheries.ubc.ca.



Above: Mineo Yamamoto (front right) and participants with their finished prints after the gyotaku workshop.



Left: Mimi E. Lam making a slipper lobster print.

Photos by Mineo Yamamoto

News and Notes

Congratulations

Dr Kevern Cochrane has been promoted to Chief of the Fisheries Department at the UN Food and Agriculture Organisation (FAO). Dr Cochrane was a member of the Fisheries Centre's International Advisory Council (1993-2003) and Green Visiting Professor in Residence at Green College (www.greencollege.ubc.ca; see *FishBytes* 8-2), January-April, 2002. Kevern was also the Fisheries Centre's Third Larkin Lecturer in March, 1999 (see *FishBytes* 5-2).

The **Coasts Under Stress** project (PI: Rosemary Ommer) has been awarded the University of Victoria's 2007 Craigdarroch Award for Societal Contribution. The project, co-led by the University of Victoria, has provided a foundation of research upon which real solutions are being built. More than 70 team members, including several from the UBC Fisheries Centre, contributed in the areas of traditional aquaculture, food security, resource management, fisheries and community health. See www.coastsunderstress.ca for more about the project.

Welcome

Project Seahorse has a new team member, **Eve Robinson**, who has joined as a research assistant. Eve recently completed a graduate degree at The University of Texas at Austin, where she studied planktonic biophysical interactions over coral reefs in Belize. She has previously worked as a writer, a marine educator, and a researcher in Canada and Australia.

Ella Bowles has started an MSc in Zoology with Andrew Trites. She is developing a real-time polymerase chain reaction (PCR) assay to quantify prey species in Steller sea lion scat. Previously she worked at the Ontario Cancer Institute in Toronto profiling retinoblastoma tumor development subsequent to *RB1* (*retinoblastoma gene*) loss. She has also worked at the Alaska SeaLife Center and at the Vancouver Aquarium.

Lucas Brotz is a new MSc Oceanography student with Daniel Pauly. He holds a BSc in Astrophysics from UBC. Turning his attention from outerspace to innerspace, Lucas will be examining trends in global jellyfish populations.

Brooke Campbell is an RMES Master's student with Daniel Pauly and the *Sea Around Us* project. Following the completion of her BSc in Natural Resources Conservation at UBC, she was a field research assistant with the UBC Marine Mammal Unit and then with the *Sea Around Us* Project, collecting data and building a GIS database of global marine aquaculture production. Her thesis will investigate global marine shrimp catch and aquaculture production in estuaries.

Tabitha Hui has started an MSc in Zoology with Andrew Trites, where she will be assessing the potential for competition between Steller sea lions and commercial fisheries. Previously she has studied resource partitioning and interspecific territoriality in flame, scarlet and dusky robins; the spread of sugar gliders in Tasmania (at the University of Tasmania), and the relationships between ballast water and the incidence of marine invasive species.

Mandy Wong has started an MSc in Zoology with Andrew Trites. She began working with the Marine Mammal Research Unit in 2000 as a research technician with the captive Steller sea lion program at the Vancouver Aquarium. She has also worked there as a predator/prey research technician, examining the diet of Steller sea lions in southeast Alaska. She has lived in Hawaii studying the diet of Hawaiian monk seals. Her graduate work will examine the diet of Hawaiian monk seals at French Frigate Shoals from 2001 to 2007 and the effect of El Niño Southern Oscillation events on diet using scat sample analysis.

Beth Young is a new MSc student in Zoology, under the supervision of Dave Rosen and Andrew Trites. She will be exploring whether heart rate can be used to predict energy expenditure in Steller sea lions. Prior to coming to UBC, Beth completed her undergraduate degree at Occidental College in Los Angeles and spent several months studying prairie dog behaviour in Colorado.

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, Aquatic Ecosystems Research Laboratory, 2202 Main Mall, Vancouver, British Columbia, Canada, V6T 1Z4. Our fax number is +1 (604) 822-8934. All queries, 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. 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, and follow the Publications link to *FishBytes*.

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