

SFOS News

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Naidu and Kelley survey Bering for gravel



Photo by John Kelley

Dr. Naidu with seismic reflection instrumentation on Lake Washington

Dr. Sathy Naidu and Dr. John Kelley will participate in a new project to survey the Bering Sea in the vicinity of Shishmaref for gravel. This project is supported through a contract (\$297K) from USDO/I/MMS to Dr. Sukumar Bandopadhyay, Dean and project P.I., SME. The objective of the cruise will be to locate easily accessible sources of gravel in the seabed to be dredged and used to relocate the village of Shishmaref. The survey will consist of a seismic reflection survey in the near coastal areas near Shishmaref aboard the Alpha Helix from September 16–19, 2002. The survey will be conducted in

association with Innerspace Team, Inc., Seattle. Seafloor sediment sampling will be conducted with a vibrator and other bottom sampling devices, which were used to successfully carry out tests in Lake Washington. Participants in the cruise will be Dr. John Kelley and Dr. Sathy Naidu (Co-P.I.), Rajive Ganguli (Co. P.I.), Dr. Steve Jewett and graduate student Martha Orlovsky from the University of Alaska Fairbanks, Crayton Fenn and Richard Sylvester from Innerspace, and MMS representatives: Dr. Roger Amato and Dr. John Larson.

Hocutt, Castellini take on new challenges

By Vera Alexander

Sometimes there is a bittersweet element to change. While recognizing that change can be stimulating and new "blood" can revitalize, there also is a sense of loss. This is certainly true in the recent changes in the School of Fisheries and Ocean Sciences Administration. Associate Dean Al Tyler and Institute of Marine Science Director Don Schell have moved on to a new phase in their lives, Al to Salt Spring Island in British Columbia and Don to a life split between Australia and Fairbanks.

An exciting part of this is the opportunity to welcome Dr. Charles Hocutt into the position of Associate Dean. In recruiting him into our ranks, I reflected that surely if he was able to get a number of African nations to work harmoniously, he can handle us.

After only a few weeks, I am convinced that indeed he can, and that we are moving into a new phase of developing the school, moving towards a truly excellent oceans and fisheries unit. We are encouraged in this by the Provost, Chancellor, and President the University of Alaska Fairbanks (UAF), and the potential is enormous.

We are also blessed by having Mike Castellini as the new Director of the Institute of Marine Sciences. Mike will be taking on a strong leadership position, expanding the job in a phased mode. His role will ultimately be much more like a regular Institute Director on the UAF campus. At the same time, the Directors are expected to serve as an executive body with respect to the entire school, rather than just serving their own unit. Mike's experience at UAF, and his work as Science Director

and even interim Executive Director at the Alaska SeaLife Center has shown his capacity for negotiation, leadership, and strength.

In This Issue

Kelley, Naidu	1
Hocutt, Castellini	1
Chautauqua	2
Norcross GEM	2
Mercury in fish	3
NOAA OE	3
Oshoro Maru	3
Publications	3
Norcross Aldo Leopold	4
Seafood Conference	4
People	5
The whopper	5
Proposal workshop	6

Thirty-three faculty take part in Chatauqua

By John Kelley

Dr. John Kelley (Institute of Marine Science) and Dr. Gil Yanow (JPL/CalTech) conducted a course on *Energy in Alaska* in association with British Petroleum Exploration (Alaska). The course is for science and engineering faculty from non-research universities and consisted of lectures by Dr. Kelley, Dr. Yanow, and BP engineering staff at BP headquarters in Anchorage and Prudhoe Bay. Thirty-three participants flew to Prudhoe Bay on a BP charter and landed at the Kuparuk site. They toured the oil drill and production sites with Dr. Kelley and BP staff who



Photo by John Kelley

Chatauqua course participants at BP Endicott production facility at Prudhoe Bay.

lectured on environmental features. A visit was made to the production

facility at Endicott, a man-made gravel island in the Beaufort Sea.

Norcross involved as GEM gets started

The Gulf of Alaska Ecosystem Monitoring and Research Program (GEM) released a call for FY03 Phase II proposals on 15 July 2002. GEM is administered by the Exxon Valdez Oil Spill Trustee Council and supported with funds from an endowment for long-term monitoring and ecosystem-based research. The GEM Program has been under development for three years. The development process included several public meetings in which many UAF scientists, including a substantial representation from SFOS, took part. Aside from that process, a National Research Council Committee through the Polar Research Board reviewed the GEM Plan and GEM Program. Three present or former IMS professors served on the committee, Brenda Norcross, John Goering (now Emeritus), and Tom Royer (Emeritus IMS, and Slover Professor at Old Dominion University). The NRC Review of GEM Committee met five times in two years. The business of a sixth meeting was handled via email and teleconference because it had been scheduled for 19- 20 September 2001. The committee has completed its interim and final reports that can be accessed through the Polar Research Board website:

<http://www7.nationalacademies.org>.

On 12 May 2002 the newly formed Science and Technical Advisory Committee (STAC) met for the first time. The meeting was held in Homer, AK in conjunction with the outgoing cadre of peer review consultants, some of whom had been involved in the EVOS process for over eight years. There are seven members of the STAC: Phil Mundy, Co-chair & non-voting member (EVOS Science Director). Warren Wooster (UW), Bill Seitz (AK Science Center/USGS), Ron O'Dor (Census of Marine Life), Charlie Miller (OSU), Stephen Braund (consultant), and Brenda Norcross, Co-chair (IMS/SFOS).

The initial charge to the STAC is to begin the process of developing a functioning science plan from the GEM foundation. Norcross will be in Seattle in mid-August when the STAC will begin outlining this process. As this is envisioned as a 100-year plan, this will, of course, be an iterative process that

will involve many Alaskans over time. Details of GEM can be found at the EVOS website:

<http://www.oilspill.state.ak.us/>.

A call for nominees for subcommittees is posted on that website. SFOS members should consider volunteering to serve on the GEM Habitats, Lingering Oil Effects or the Data Management and Information Transfer subcommittee. Nominations are due 3 September 2002 and will be reviewed by the STAC and recommended for TC approval in November.

For Phase II of FY 03, the TC is seeking proposals for (1) synthesis of EVOS projects from 1989 to present and (2) baseline research on diversity and distribution of marine organisms in the intertidal and subtidal habitat. Proposals are due 4 September 2002. The full text of the RFP can be found at <http://www.oilspill.state.ak.us/pdf/admin/03phase2invitation.pdf>



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Levels of mercury in Alaskan fish examined

The following is the abstract from the paper **Comparison of Mercury and Methylmercury in Northern Pike and Arctic Grayling from Western Alaska Rivers**, by Stephen C. Jewett^{1*}, Xiaoming Zhang², A. Sathy Naidu¹, John J. Kelley¹, Doug Dasher¹, and Lawrence K. Duffy² that will soon appear (in press) in the international journal *Chemosphere*.

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Abstract

In western Alaska, mercury (Hg) could be a potential health risk to people whose diet is primarily fish-

based. In 2000, total Hg (THg) and methylmercury (MeHg) were examined in northern pike (*Esox lucius*) and Arctic grayling (*Thymallus arcticus*) from two watersheds in western Alaska, the Yukon and Kuskokwim Rivers. Whitefish (*Coregonus* sp.) were also examined from the Kuskokwim River. Pike from the Yukon and Kuskokwim Rivers had mean concentrations of THg in muscle of 1.506 and 0.628 mg/kg wet weight, respectively. The mean concentrations of THg in grayling muscle from these rivers were 0.264 and 0.078 mg/kg, respectively. Whitefish had a mean THg concentration in muscle of 0.032 mg/kg. MeHg, in pike and grayling constituted nearly 100% of the THg concentrations; the proportion was less in whitefish. A significant positive

correlation between Hg levels and fish length was also found. Generally, there were no changes in Hg concentrations in pike or grayling over the last several years. Only pike from the Yukon River had THg concentrations that exceeded the United States Food and Drug Administration action level for human consumption of edible fish (1 mg/kg). Human hazard index for pike was ³ 1 for both adults and children, indicating a potential for toxic concern, especially among children. Further studies are needed to determine the environmental and human health impacts associated with these Hg concentrations in western Alaska, especially in the context of potentially increased consumption of resident fishes when anadromous salmon catches are reduced.

NOAA Ocean Exploration Cruise exposes undergraduate intern to the elements

A proposal submitted by **Drs. John Kelley** and **Sathy Naidu** to the National Oceanic and Atmospheric Administration for an ocean exploration initiative made it possible for an undergraduate intern to participate in a Gulf of Alaska (GOA) cruise aboard the R/V *Atlantis* from Woods Hole Oceanographic Institution.

Student intern **Benjamin Warlick** participated in the second leg of the Atlantic cruise which departed from Kodiak. He participated in various activities aboard the vessel and collected crab samples from the GOA seamounts for investigations on carbon

and nitrogen isotopes by Naidu and Kelley. Benjamin Warlick is also doing an independent study course with Drs. Kelley and Naidu during the summer and will work in the Marine Geology lab during the fall and spring semesters.

Oshoro Maru conducting research in Alaskan waters

The Hokkaido University Training Vessel *Oshoro Maru* is once again conducting research in Alaskan waters, with several School of Fisheries and Ocean Sciences participants on board. This vessel, or rather, this series of vessels, has provided one of the finest long-time series of data for the Gulf of Alaska and Bering Sea. Each year, specific transects are repeated as a part of the cruise track; this has been going on for several decades.

The vessel visited Seward over the weekend, arriving early on Friday, July

26th. There was a reception onboard on Friday evening. A joint Mini-Symposium at the Seward Marine Center was held Sunday, July 28th by Co-Chairs Terry Whittle (University of Alaska Fairbanks) and Sei-Ichi Saito (Hokkaido University), assisted by John Bowers of Hokkaido University. The theme was Marine Ecological Studies in the Bering Sea and eastern North Pacific.

Immediately following the symposium, the Seward Marine Center hosted a barbecue, accompanied by the exciting and inevitable softball game.

Publications

Bluhm B.A., K. Beyer, and B. Niehoff. (2002) Brain structure and histological features of lipofuscin in two Antarctic Caridea (Decapoda). *Crustaceana*. **75(1)**: 61–76.

Nielsen, T.G., E.F. Møller, S. Satapoomin, M. Ringuette, and R.R. Hopcroft. 2002. Egg hatching rate of the cyclopoid copepod *Oithona similis* in arctic and temperate waters. *Mar. Ecol. Prog. Ser.* **236**: 301–306.

Garza, D. 2001. Alaska Natives assessing the health of their environment. *International Journal of Circumpolar Health*. **60**: 479–486

Norcross an Aldo Leopold Leadership Fellow

In Spring 2001, Brenda Norcross, Professor of Fisheries Oceanography (Institute of Marine Science), was selected as an Aldo Leopold Leadership Fellow. The Aldo Leopold Leadership Program (ALLP) is for environmental scientists who want to be more effective communicators of scientific information. The program is conducted on behalf of the Ecological Society of America and is funded by a grant from the David and Lucille Packard Foundation. Three cohorts of twenty environmental scientists were chosen from a nationwide pool and provided with specific training in communication in each of three years, Cohort I – 1999, Cohort II – 2000, and Cohort III – 2001.

ALLP training objectives include expert instruction and consultation, hands-on communication projects, and peer networking. Norcross spent a week in Tucson, AZ in June 2001 receiving training in three key areas. The first involved several sessions geared toward providing leadership within the scientific community. The

second focus was written and verbal communication with the media. The third focal area of the summer 2001 session was interacting with business and corporate sectors.

Norcross and the other members of Cohort III had a second week of training in Washington, D.C. in September 2001. The main focus of that session was learning to provide scientific input into the policy process. This training included mock testimony in a hearing room on Capitol Hill. The second objective of the September training was learning to work with non-governmental organizations. Unfortunately, this session, which began 7 September and was slated to continue through 14 September, was cut short by the national disaster in New York. "Washington was a very eerie place that week," Norcross noted. "Our hotel was seven blocks north of the White House." While an attempt was made to continue with some training following 9/11, it was not very successful. However, it did take Brenda

until 19 September to get plane connections back to Fairbanks.

Fortunately, Cohort III was given a chance to continue that training in Tucson 11–16 July 2002. Billed as the ALLP Fellows Reunion for advanced training, members of all three cohorts returned to Tucson, where it was 105° F. Because the training of each of the cohorts had been somewhat different, concurrent sessions were held and the fellows chose their topics. Norcross actively participated in a session to design a curriculum for graduate and undergraduate students that includes some of the techniques talk to the ALLP Fellows. She also re-learned to clearly convey a message, verbally and in writing. Norcross is interested in writing science for popular media and was involved in workshops on this topic. Brenda reports that these training sessions have been some of the most intensely productive, interesting, and embarrassing of her career. How would you like to practice "on-camera" interviews in front of your peers!

Second International Seafood Byproduct Conference to be held November 10–13

If you are involved in any type of seafood processing; byproduct utilization and economics; waste utilization research and management; products, equipment, marketing transportation, and services aimed at seafood byproduct use and development; animal feed industries; aquaculture; or government regulations, you probably will want to mark your calendars for November 10–13, 2001. That's when the 2nd International Seafood Byproduct Conference will be held in Anchorage.

This conference has been announced due to the need to address the changes, since 1990, in the supply, quality specifications, uses, markets, and transportation of Alaskan seafood.

The program will consist of invited and contributed presentations on the following topics as they relate to seafood byproducts:

- World Market Overview
- Regulatory Environment/Safety
- Products I – Animal Feeds
- Products II – Plant Fertilizers



- Alternative Energy/Other Industrial Uses
- Products III – Human Food, Supplements, and Pharmaceuticals
- Available and Innovative Technologies
- Methods and Logistics of Product Transport
- Problem Solving – Alaska Model
- Industry Priorities/Future Research and Product Needs.

If there is enough interest, there will be display areas for industry products and services.

A comprehensive proceedings volume will be published after the

conference by the University of Alaska Sea Grant.

The conference will be held at the Hotel Captain Cook in Anchorage, Alaska. Detailed information on the program, facilities, and registration are available on the conference Web site at: www.uaf.edu/seagrant/Conferences/byproduct.html or contact: Donald Kramer at the Sea Grant Advisory Program – (907) 274-9691 or email afdek@uaa.alaska.edu.

(The content of this article was taken from Sea Grant's Announcement/Call for Papers brochure.)

Did you know . . .

Ninety percent of all volcanic activity occurs in the oceans. In 1993, scientists located the largest known concentration of active volcanoes on the sea floor in the South Pacific. This area, the size of New York state, hosts 1,133 volcanic cones and sea mounts. Two or three could erupt at any moment.

People



Terry Quinn

Terry Quinn has been designated a member of the first class of "National Associates" of the National Academy of Science. This honor was recently established to recognize extraordinary service to the academy and is a lifetime appointment. Terry has served on the Ocean Studies Board and four committees (two as chair), and has provided reviews and advice.

New face in business office



Lawrence Gray

The whopper fish that didn't get away

Dana Hanselman and **Andrew Matala**, two UAF fisheries students, wrestled in a 110-pound halibut out of Auke Bay in early April in what can best be described as a "true Alaskan experience."

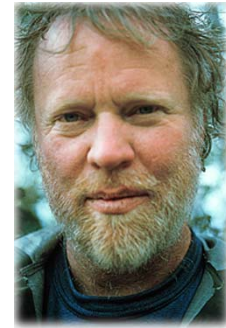
Using a 16-foot skiff that they paid \$500 for three years ago, the two set off with rods, 20-pound test line, and lures that were still carrying the salt from last year's fishing expeditions.

They had just cracked a couple of

Rick Steiner traveled to the village of Mekoryuk on Nunivak Island at the request of the Coastal Villages Region Fund (the Yukon Kuskokwim CDQ group) to conduct a halibut handling workshop for local village halibut fishermen and to investigate potential causes of the recent chalky halibut problem. The market for Nunivak halibut had asked us for assistance in understanding and reducing the abnormally high incidence of chalkiness in halibut flesh, which is known to be caused by low pH due to lactic acid build up from capture stress, among other complicating factors. After the visit to Nunivak and discussions with local fishermen, collecting sea temperatures and pH readings on recently landed halibut, and use of meteorological information for the eastern Bering Sea, it was determined that the probable cause for the recent high incidence of chalkiness in shipments of Nunivak halibut was likely a combination of heavy feeding by halibut on capelin, short soak-times for the longline gear (leading to high capture-stress at the time of landing), abnormally high air and water temperatures, and long run and delivery times to deliver fish to Mekoryuk from the south end of Nunivak. Several corrections were suggested, and the situation is being monitored.

In July **Steiner** traveled to Baku, Azerbaijan on the Caspian Sea as a guest of the "Public Forum for the Sake of Azerbaijan," the "League for Labor Rights Defense," and the "Open Society Institute," to be one of six primary presenters at their "Oil Funds: Establishment, Experiences, and Development" conference on July 18.

The conference brought together oil



Richard Steiner

and gas companies, government officials, and NGOs from around the Caspian Sea to discuss the fair and rational collection and utilization of revenues from the huge oil and gas fields presently being developed around the Caspian Basin. Steiner's presentation centered on the need for informed public participation in oil and gas development in the region, the establishment of Regional Citizen Advisory Councils based on an expanded version of the Alaska model we developed, and the development of a new paradigm for petroleum development in the 21st century.

On way to Azerbaijan, Steiner stopped in London at the invitation of the British Parliamentary Office of Science and Technology for a meeting with their staff and members of the United Kingdom's Parliament on our recent proposal to establish an Outer Space Environment Commission at the United Nations to review any and all proposed scientific and/or commercial activities proposed off Earth, and our proposal to designate the Moon as a protected UNESCO World Heritage Site, reserved for scientific and non-extractive purposes. There is significant interest in the Parliament in these proposals.

beers to toast their boat, the Salmon Slayer, when the fish hit. Figuring that they had the first king of the year, they were unable to see the fish in the murky water. When it finally came up twenty minutes later the large fish took them by surprise.

Realizing that they hadn't brought their gaff hook Matala took the only thing they had, a 12-inch billy club and tried to subdue the fish with it by hitting it on the head. This only caused

the fish to dive, though, and after hitting it twice more with the same results Hanselman tried to brain it with his Leatherman tool. It took three subsequent brainings before they finally stunned the fish enough to noose its tail with a strap and pull it aboard. It measured five feet long and rounded up to 110 pounds.

Returning to their Old Milwaukee's, they savored their Alaskan experience, and their successful fishing trip.

Hirons selected to be an NSF workshop participant

Amy Hirons was selected by the National Science Foundation to be an attendee at their Antarctic Proposal Workshop August 26–27, 2002. This workshop is being held to encourage proposals from new investigators.

The staff of the Office of Polar Programs (OPP) will discuss:

- Antarctic opportunities in research and education
- Operational support of antarctic research
- Proposal preparation and review
- NSF policies and programs

The workshop will include presentations and opportunities to meet with NSF antarctic program managers. Scientists from any discipline were encouraged to come and learn about

the funding opportunities available through the United States Antarctic Program which is funded by the OPP.

The proposal workshop is limited to only those researchers who have not received research grants from the OPP but who are eligible or will be eligible to apply for an NSF research grant by the June 2, 2003 proposal deadline. Ph.D. candidates within one year of graduation, postdoctoral fellows, and new faculty were particularly encouraged to apply.

Hirons will be among fifty participants who will be provided with airline tickets for attendance. An additional fifty participants will be accommodated without travel support.

Editor's Corner: Got News?

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