



# SFOS NEWS

Institute of Marine Science • Marine Advisory Program • Fishery Industrial Technology Center • Coastal Marine Institute  
Alaska Sea Grant College Program • North Pacific Marine Research Program • Fisheries Division • Global Undersea Research Unit

Vol. 3 Issue 3 March 2000

## Harmon and Mau awarded scholarships

Heather Harmon and Tamara Mau were awarded the Francis "Bud" Fay Memorial Scholarship at the University of Alaska Fairbanks for the 1999-2000 academic year. Each received \$500.

Both Harmon and Mau are graduate students in the Marine Science and Limnology Graduate Program.

## RaLonde testifies and gets tapped

Marine Advisory Program aquaculture specialist Ray RaLonde testified at Alaska Department of Natural Resource hearings on land use conflicts. RaLonde said clam and geoduck farming would have minimal impact on the environment.



Professor Ray RaLonde

If the aquaculture farmers do get their permits, they would benefit from Alaska  
[See geoducks, Page 3](#)

### In This Issue

Harmon and Mau Awards .....	1
RaLonde Testifies .....	1
Sea-Ice Conference .....	1
Juneau Wins AOSB .....	1
Funding .....	2
Publications .....	2
Garza Wins Award .....	3
Swiney Has Best Paper .....	3
Sea-Ice Workshop .....	3
Knowlton Wins Scholarship .....	3
Seminars .....	3
Announcements .....	4
Reminder Binder .....	4
In the News .....	5
Grad Students Attend Mtg .....	5
SFOS Tid-Bits .....	6
People Moves .....	6
Sea Grant .....	6

## Sea-Ice Conference

Dr. Vera Alexander and John Kelley participated in the 15th International Symposium on Sea Ice and the Okhotsk Sea, February 6-10, in Mombetsu, Hokkaido, Japan. Alexander, Kelley and other faculty members from the University of Alaska Fairbanks helped inaugurate the first conference and have participated in nearly all of them since.

The conference was first conceived by the faculty of the Hokkaido University Sea Ice Research Laboratory (SIRL) in memory of Professor Tabata. Professor Tabata pioneered the use of radar to study the drift ice of the Okhotsk Sea and made many visits to Fairbanks and Barrow.



Dr. Vera Alexander played piano with the prestigious Koto players (behind Dr. Alexander) at the opening ceremony.

His dream was to make Mombetsu an international "Sea Ice City." This dream has been largely achieved judging from the  
[See Sea-Ice Conference, Page 3](#)

## Juneau wins Alaska Ocean Sciences Bowl

For the second year in a row, Juneau's "Tsunami" team emerged victorious overall, but not without a fight from the five high school students from the remote Native village of White Mountain, Alaska, whose research project solution was termed "brilliant" by science judge Susan Inglis.

Inglis is a former Canadian fisheries policy analyst who is now director of the Alaska SeaLife Center research programs. The research project was based on the following: *Salmon support important subsistence, sport, and commercial fisheries. Both nature and human activities impact salmon in many ways, i.e., weather, hatcheries, oil spills, forestry practices, fishing, and habitat destruction. Discuss the future of salmon populations and fisheries in Alaska. Prepare a long-term management plan for the salmon resources closest to you, considering both scientific and socioeconomic factors.*

This is essentially the same problem scientists and fisheries managers have been



The Tsunami's from Juneau-Douglas High School won the Alaska Ocean Sciences Bowl for the second year in a row.

tackling, i.e., how do you break the boom and bust cycles typical of salmon runs?

White Mountain's solution was cryogenics--freeze the fertilized eggs of salmon during years of large runs and use them during years of small runs.

[See Competition, Page 2](#)

# Funding -- February 2000

PI	Title and Agency	Awarded Amount
Dearborn & Sugai	M/170-01 Administration - NOAA/ASG	\$ 109,770
Dearborn	M/180-01 Rapid Response - NOAA/ASG	\$ 54,493
Dearborn	M/190-01 Regional Program Dev - NOAA/ASG	\$ 24,177
Kramer & RaLonde	A/151-01 AK Marine Adv Prog - NOAA/ASG	\$ 432,244
Byers	A/161-01 Info Services - NOAA/ASG	\$ 169,783
Finney	R/31-05 AK Sockeye Salmon - NOAA/ASG	\$ 44,634
Gharrett & Smoker	R/31-06 Salmon Biodiversity - NOAA/ASG	\$ 98,109
Adkison	R/31-07 Setting Escapement Goals - NOAA/ASG	\$ 24,542
Crapo	R/51-01 Salmon Fisheries - NOAA/ASG	\$ 59,585
Crapo	R/51-02 Maint Slm Quality Aboard - NOAA/ASG	\$ 75,096
Criddle - Utah State Univ	R/33-01 Estimates of Bycatch Precis - NOAA/ASG	\$ 47,504
Quinn	R/101-01 Walleye Pollock Depletion - NOAA/ASG	\$ 21,460
Plumley	R/95-01 PSP Saxitoxin Gene ID - NOAA/ASG	\$ 58,102
Dearborn	E/142-01 Sea Grant Traineeships - NOAA/ASG	\$ 127,501
Foster & Heine	Deep Water Macroalgae Dist & Abund - NOAA/WC&PURC	\$ 18,449
Torres & McManus	Fluid Discharge Along San Clemente - NOAA/WC&PURC	\$ 74,875
Goldfinger & Huftile	Investigate Offshore Active Faults - NOAA/WC&PURC	\$ 112,811
Levin & Gieskes	Methane Seep Associated Patterns - NOAA/WC&PURC	\$ 84,286
Lonsdale & Castillo	Geology of Davidson Spreading Ctr. - NOAA/WC&PURC	\$ 47,966
Zierenberg	Hydrothermal Fluid Temp Change-UCD - NOAA/WC&PURC	\$ 55,092
Zierenberg & Lilley	Hydrothermal Fluid Temp Change-UW - NOAA/WC&PURC	\$ 58,054
Duncan, Fisk, & Trehu	Gorda Escarpment Evolution - NOAA/WC&PURC	\$ 57,643
Gieskes & Rathburn	Modern & Ancient Methane Release - NOAA/WC&PURC	\$ 19,581
Tivey & Sarrazin	Eval Spatio-Temporal Distribution - NOAA/WC&PURC	\$ 45,540
Tissot	Fisheries Habitat Studies - NOAA/WC&PURC	\$ 45,060
Springer	Jellyfish Impact of Food Webs - NOAA/WC&PURC	\$ 204,565
Quinn	Age-Structured CU River King Return - ADF&G Sport Fish Div	\$ 15,537
Kelley	Bowhead Whaling (SFOS) - USDOJ CMI	\$ 55,149
Wang	3D Ocean State Simulations 00389 - ADF&G Habitat & Restoration	\$ 117,100
Norcross	Herring Research Coordination 00374 - ADF&G Habitat & Restoration	\$ 33,200
Jewett	Assessment of P450 Activity 00379 - ADF&G Habitat & Restoration	\$ 27,112
Atkinson	ASLC Science Director - Atkinson - SAAMS	\$ 75,091
		<b>\$ 2,494,111</b>

## Competition



Members of the White Mountain team won one-year tuition waivers to the University of Alaska Southeast for placing second overall.

In all, 41 students from high schools across the state competed in a science knowledge quiz, research presentation and art show. The winner represents Alaska in the National Ocean Sciences Bowl (NOSB) finals in Washington, D.C., April 14-17.

Juneau's win got them a free year of tuition at the University of Alaska Fairbanks, and travel to Washington, D.C. to compete against 19 other regional teams for the national title.

White Mountain's second place won them one-year tuition waivers to the University of Alaska Southeast. White  
Page 2 SFOS News

Mountain's high school only has 18 students

Chugiak and Anchorage East High School took third and fourth place, respectively.

The NOSB is sponsored by the Consortium for Oceanographic Research and Education (CORE) in partnership with the National Marine Educators Association (NMEA). The Alaska competition is sponsored by SFOS with additional support from the Alaska Sea Grant College Program. For more information, visit: [www.uaf.edu/seagrant/nosb/index.html](http://www.uaf.edu/seagrant/nosb/index.html)



Members of the Seward "Resurrection" team placed third in the knowledge quiz.

## Publications

Stokesbury, KDE; Foy, RJ; Norcross, BL (1999): Spatial and Temporal Variability in the Diet of Juvenile Pacific Herring (*Clupea pallasii*) in Prince William Sound, Alaska. *Environ. Biol. of Fish.* 56, 409-418.

Storch, V; Kempendorf, C; Higgins, R; Shirley, T; Jamison, B (1999): *Priapulida*, pp 1-19 (Jamison, B., ed.) *Reproductive Biology of Invertebrates, Volume IX, Part B, Progress in Male Gamete Ultrastructure and Phylogeny.* Oxford & IBH Publishing Co.

Dean, TA; Haldorson, L; Laur, DR; Jewett, SC; Blanchard, A (2000): The Distribution of Nearshore Fishes in Kelp and Eelgrass Communities in Prince William Sound, Alaska: Associations with Vegetation and Physical Habitat Characteristics. *Environmental Biology of Fishes* 57:271-0287.



## Geoducks

Science and Technology Foundation (ASTF) funded research RaLonde and graduate student, John Pugh, did this summer on littleneck clams and geoducks. Because of his expertise in this area, RaLonde has been tapped to help ASTF revise their grant application procedures.

## Dr. Garza Wins Award

Dr. Dolly Garza was presented with the first Sister Goodwin Award for "Tlingit Moon/Tide Book," at the Sheraton Anchorage Hotel on January 30. The award is sponsored by the Before Columbus Foundation as part of the American Book Award program.



Dr. Dolly Garza

Sister Goodwin, aka Elizabeth Hope, was the wife of Anchorage educator, Andrew Hope. An Inupiaq educator and writer, Hope died in October 1997.

## Swiney Has Best Paper

Kathy Swiney, Fall '99 JCSFOS graduate now employed in Kodiak, was listed in the *Journal of Crustacean Biology*, February 2000 issue, as receiving an honorable mention for **Best Student Paper Award** at the Crustacean Society summer meeting.



Participants in the Sea-ice Workshop discussed the affects of climate change on the environment and the coastal communities that rely on natural resources.

## Sea Ice Workshop

Scientists and representatives from coastal Native communities met in Girdwood last month for a Sea Ice workshop sponsored in part by SFOS's North Pacific Marine Research (NPMR) program. The topic of the workshop was the effects of climate change on Sea Ice and the related effects on the coastal communities that rely on natural resources. The University was represented by Dean Vera Alexander,

Brendan Kelly, Alan Springer, Gunter Weller, Ruth Post, and Dave Partee. The small but diverse gathering included people from the Smithsonian, the Marine Mammal Commission, the Alaska Department of Fish and Game, as well as elders from Nome, Barrow, St. Lawrence Island, and other coastal locations.

Concentrating on two areas, the physical effects of climate change on sea ice, and the effects marine mammals, the scientists and community participants exchanged information and observations during the three-day workshop. The group also discussed ways in which a better partnership can be forged between scientific researchers and Native communities who have the most intimate knowledge of the areas being affected by climate change.

More information on this workshop will be available later on the NPMR web site (linked through the SFOS web site.)

## Knowlton wins scholarship

Ann Knowlton, Ph.D. candidate, was awarded the Howard Feder and David Shaw Graduate Student Support Scholarship for this year.

## Sea-Ice Conference



Dr. Kelley gave several presentations at the Conference.

number of international participants. A parallel conference was co-hosted by the Sea Ice conference organizing committee—*The 2nd Ice Scour and Arctic Marine Pipelines Workshop*. The workshop attracted investigators and government officials from several countries including MMS representatives from Anchorage who were interested in the major oil exploration and development activities around Sakhalin Island, Russia.

Drs. Kelley and Alexander were invited to make presentations at the Symposium's opening session (Kelley: *Evidence of Climate Change in Glacier Ice and Seabed Sediments*; Alexander: *The Influence of Changes in Seasonal Sea Ice Cover on the Spring Bloom in the Southeast Bering Sea*). Other papers presented by Kelley were: Kelley and Naidu—*Effects of Sea Ice*

and Storm Surge On Arctic Coasts; V. Krapivin, J. Kelley and K. Shirasawa—*A New Technology for the Collection and Synthesis of Environmental Data for the Okhotsk Sea*. Alexander also presented: *The Changing Arctic Ocean—Biological Implications and Interactions*.

Dr. Alexander, an accomplished pianist, was asked to play with Koto players at the opening ceremony. Alexander played the Japanese folk song "Sakura," following with a solo piece by Chopin. She was also asked to make a short presentation on the Bering Sea to the Children's Conference which is directed by Mayor Kunio Akai and Professor Massaki Aota, Director of the Sea Ice Research Laboratory. Mayor George Ahmaogak (North Slope Borough) and his wife also participated.

Mombetsu (latitude of approx. Eugene, OR) is dominated by coastal drift ice in the Okhotsk Sea. The city recently replaced an old research tower in the sea with a new causeway and new tower which contains a research section, visitor center, and aquarium at the seabed level with ports to view the underside of the ice. Nearby is a large stone wall with a map of the northern seas and the inscription of Mombetsu's sister cities: Newport, OR, Sakhalinsk, Sakhalin Island, RU and Fairbanks, AK.

# Seminars

## Wednesday, March 08

Dr. Uma Bhatt  
To Be Announced

## Wednesday, March 15

No Seminar; Spring Break

## Wednesday, March 22

IMS Seminar  
To Be Announced

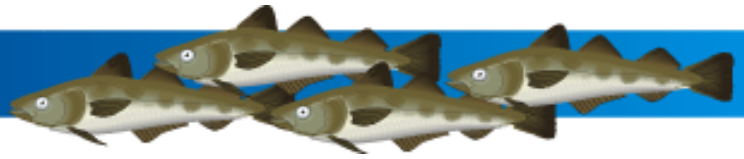
## Wednesday, March 29

IMS Seminar  
To Be Announced

*Unless otherwise noted, all seminars will be held between 3:30 PM-4:30 PM in the Elvey Auditorium, Elvey Building (Geophysical Institute).*

For more information and the most up-to-date list for seminars, visit <http://www.ims.uaf.edu:8000/> and select **Seminars** under *Handy Links*, or call Dr. Dave Musgrave at 474-7837

# Announcements



## Pacific Fisheries Technologists meeting

The annual meeting of the Pacific Fisheries Technologists (PFT) will be held March 26-29 in Ketchikan. MAP Director and PFT president, Don Kramer, is conference Chair. Chuck Crapo, Seafood Specialist, will chair the program committee for the meeting.



*Don Kramer, MAP Director and PFT President*



*Chuck Crapo, MAP Seafood Specialist*

Topics include processing, seafood marketing, by-products, biochemistry, regulations, seafood safety, HACCP, aquaculture, value-added products, packaging, and waste disposal.

For more information, contact Don Kramer at 907-274-9691 or [afdek@uaa.alaska.edu](mailto:afdek@uaa.alaska.edu). For more details on the meeting, visit: [seafood.ucdavis.edu/events.pft.htm](http://seafood.ucdavis.edu/events.pft.htm).

## Eppley Foundation Research Grants

The Eppley Foundation for Research offers \$25,000 research initiation grants to individuals designed to assist the researcher do sufficient work to apply for greater sums from federal or other sources. Only post-doctoral work in physical and biological sciences is supported. Deadline is May 1, 2000. For more information, contact: **The Eppley Foundation for Research, Inc., 260 Madison Avenue, New York, NY 10016.**

## Atlantic Salmon Federal (ASF) Fellowships and Internships

March 15th is the deadline for the Olin Fellowship, and April 15 the deadline for the Crabtree and Norma Talbot Mais Memorial internships. The fellowship is worth up to \$3,000 while each internship is worth up to \$5,000. Only legal residents of

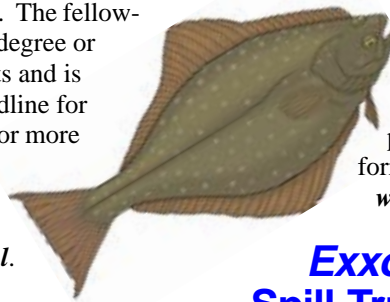
the United States or Canada need apply.

For more information and contacts, visit: [www.asf.ca](http://www.asf.ca) or Al Geist at Academic Services: [algeist@sfos.uaf.edu](mailto:algeist@sfos.uaf.edu).

## American Fisheries Society-Sea Grant Fellowship

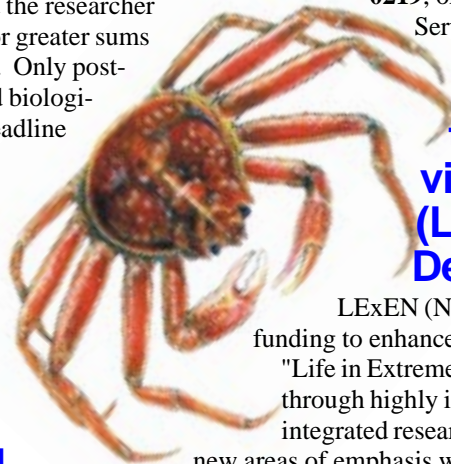
The American Fisheries Society and National Sea Grant College Program are offering an 18-month fellowship structured to provide a broad range of professional and educational experiences. The fellowship is open to all M.S. degree or current graduate students and is valued at \$45,000. Deadline for applying is August 1. For more information, visit:

[www.mid-atlantic.seagrant.org/Jobs/afs\\_sg\\_fellow.html](http://www.mid-atlantic.seagrant.org/Jobs/afs_sg_fellow.html).



## Summer Job Opportunities with U.S. Fish and Wildlife Service

The Fairbanks Fisheries Resource Office of the U.S. Fish and Wildlife Service will be filling summer biological technician positions (GS4-7) to assist with fisheries projects in interior Alaska along the Yukon River. For more information, contact the Fairbanks Fisheries Resource Office at **456-0219**, or the Fairbanks Job Service Office.



## Life in Extreme Environments (LEEN) Deadline

LEEN (NSF) provides funding to enhance knowledge about "Life in Extreme Environments" through highly interdisciplinary, integrated research activities. Two new areas of emphasis were added in 1999: a particular focus is placed upon the development of methods and capabilities to facilitate LEEN research, and a new effort in cooperation with the National Aeronautic and Space Administration (NASA) to begin long-term studies over decadal time scales at representative examples of significant

extreme environments. Deadline for this year's competition is April 10. For more information, visit:

[www.nsf.gov/home/crssprgm/lexen/start.htm](http://www.nsf.gov/home/crssprgm/lexen/start.htm)

## Alaska Science and Technology Foundation (ASTF) grants due

The large grant deadline for ASTF's June meeting is April 4, while the deadline for small grants is May 11. This June meeting will be held at the Alaska SeaLife Center in Seward, June 15-16.

For more information, grant proposal instructions and forms, visit:

[www.astf.org](http://www.astf.org)

## Exxon Valdez Oil Spill Trustee Council (EVOS) Proposal/Project Report Deadline

April 14 is the deadling for EVOS proposals and project reports. This is a transition year for proposals as the Trustee Council moves to the Gulf Ecosystem Monitoring (GEM) program. For more information, contact Academic Services, or visit the EVOS web site at:

[www.oilspill.state.ak.us](http://www.oilspill.state.ak.us)

### REMINDER BINDER

**Remember: All proposals must go through the signature process prior to being submitted.**

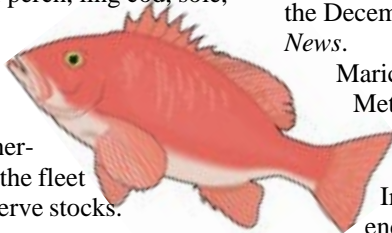
In order to ensure that your proposal does not miss deadlines, we encourage you to submit it to Academic Services at least two weeks prior to the submission deadline. This will give us time to go through the proposal and correct any problems we may find. Our goal is to present researchers as professionally as possible to the funding agencies. We cannot do this when we have to rush through last minute proposals.

# In the News

## Pacific bottomfish not reproducing fast enough

West coast bottom fishermen are falling on hard times due to over harvesting.

According to the February 15 *National Fisherman*, stocks of perch, ling cod, sole, and red snapper are not reproducing fast enough to replace those that have been harvested. Some fishermen propose cutting the fleet by 50 percent to preserve stocks.



## \$250 million for Pacific salmon

President Clinton's last budget sets aside \$250 million to help revive Pacific Northwest salmon. If approved, about \$100 million will be divided between Washington, Oregon, California and Alaska.

## What happened to the sea urchin industry?

In 1995, research indicated enough biomass for a commercial sea urchin industry and 450 Alaskan divers jumped in, said Charlie Ess in the *National Fisherman*. Last year, only about 24 divers are still actively working and they left nearly 1 million pounds in the water.

## Atlantic salmon cry uncle

When young Atlantic salmon squabble, the looser says uncle by darkening its skin and eye ring. The winner then eases off, reports Kirstine O'Connor and her colleagues from the University of Glasgow in the December 11, 1999 issue of *Science News*.

Mariculturists, says coauthor Neil B. Metcalfe, can use this information to detect early warning signs of extra aggression in certain tanks. Ironically, in none of the test encounters, did the fish actually harm each other.

## National Research Council (NRC) agrees with both sides

The NRC concluded that the earth's surface has warmed dramatically over the past two decades, but that the lowermost atmosphere has changed very little over the same period. According to *Science News* (Vol. 157, 01/22/00), the results seem to confirm the opinions of both skeptics and proponents of global warming.

"We really have our work cut out for us now, as we recognize that there really is a difference between the behavior of the temperature at the two levels that we don't fully understand," said panel chairperson

## Graduate students attend North Pacific Fisheries Management Council meeting to get real-life education

A dozen graduate students from two GPMSL seminar classes (Marine Policy, Instructor Sue Hills; Fisheries Oceanography, special topic: Marine mammal and fisheries interactions, Instructors Brenda Norcross and Sue Hills) attended one day of the North Pacific Fisheries Management Council meeting, December 8, in Anchorage.

It was a full day as they were introduced to members of the Council, Advisory Panel and Science and Statistical Committee, attended a luncheon panel discussion on the steller sea lion and pollock fishery issue, a reception at the new offices of the At-Sea Processors Association, and a presentation on the Short-tailed Albatross and seabird bycatch in longline fisheries.

"Coming at the end of the semester's in-depth discussions, this was a unique opportunity for the students to experience the reality of the political, economic, and social complexities that surround problems that had perhaps been 'only academic' to them previously," said Dr. Hills.

The Council and Dean Alexander split the cost of airfares and the luncheon for the student's experience.

"While I benefitted from many aspects of the Fisheries Oceanography seminar and the Policy seminar, having the opportunity to attend a day of the North Pacific Fisheries Management Council meeting in Anchorage was the most valuable part of the courses for me," said Sherri Dressel.

"I am a Ph.D. student in Fisheries Oceanography, planning to work in biometrics with the state or federal government or as a consultant. The applied nature of the Fisheries Oceanography and Policy seminars was particularly helpful for me, as I expect to deal with the issues we discussed in my daily work after I graduate. The culmination of the courses was attending the North Pacific Fisheries Management Council meeting to see first hand how the council worked and how decisions on policy and harvest quotas are set for the commercial fishery.

"Professors and government employees have explained how the North Pacific Management Council is constructed and how decisions are made, but it was not something that could be described. You need to see it in action to truly get an idea of how Council decisions are made."

## Foy, Norcross, Holladay and Hills go cruising

Drs. Sue Hills and Brenda Norcross joined Bob Foy and Brenda Holladay on a North Pacific Marine Research funded pilot cruise last November on the F/V *Peggy Jo*. The Kodiak-based vessel is

owned by Doug Hoedel and captained by Brian Beaver.

The purpose of the cruise was to calibrate acoustic equipment, test gear and sampling methods for their research program

*Availability and use of prey by Steller sea lions in the Kodiak area*, and to enable the team to refine plans for the main cruises in March and June.

The cruise was characterized by Dr. Hills as incredibly windy and stormy, but also extremely informative with a lot of sharing of information between the researchers and the crew and captain of the vessel.

In addition to talking about fish distributions, sediments and currents, the researchers passed along information on how to do statistical surveys.



Bob Foy (left) and Dr. Brenda Norcross show off their success at sampling during NPMR funded pilot cruise last November. (Photo by Dr. Sue Hills.)

School of Fisheries and Ocean Sciences  
Academic Services  
University of Alaska Fairbanks  
Fairbanks, AK 99775-7220



## Editor's Corner: Got News?

Newsletter production begins the last week of each month. We are always eager for material and photographs.

*Al Geist*  
Academic Services, SFOS/UAF  
*algeist@sfos.uaf.edu (907-474-6735)*  
Fax: 907-474-7204



is produced by the

School of Fisheries and Ocean Sciences  
Academic Services  
University of Alaska Fairbanks  
Fairbanks, AK 99775-7220

## SFOS Tid-Bits

Sea Grant's **Kurt Byers and his partner** attended a four-day swing dance workshop in Monterey, CA in January.

Kurt is the founder and president of the UAF Good Time Swing Dance Club. If you are interested in learning how to swing dance and having a good time, send Kurt a message at [fnkmb1@uaf.edu](mailto:fnkmb1@uaf.edu).

**Dr. Don Button** gave a presentation at the Thermal Biology Institute, Montana State University, on March 6th. His topic was *Oligotrophic Environments* for NASA's astrobiology program workshop on extreme environments.

**Ray RaLonde** and **Rick Steiner**, MAP Advisory Agents, both gave presentations at the "showcase" events portion of the February meeting of the University of Alaska Board or Regents.

**Dr. Howard Feder** is missing a book titled *Ecology of Marine Benthos* by B.C. Coull and published by the University of South Carolina Press. If you know where

it is, please contact him at 474-7066, or [feder@ims.uaf.edu](mailto:feder@ims.uaf.edu).

## People Moves

**Russell Hopcroft** will be joining the Institute of Marine Science around June 1 as an Assistant Professor of Marine Science. Hopcroft formerly worked for the University of Massachusetts, Dartmouth.

## Alaska Sea Grant Program

The Alaska Sea Grant College Program announces the publication of "*Ecosystem Approaches for Fisheries Management*," a collection of scientific papers from the 1998 Wakefield Fisheries Symposium.

*Bibliography of Research on Snow Crab (Chionoecetes opilio)*, edited by Dr. A. J. Paul, is now available in an online searchable PDF file at:

[www.uaf.edu/seagrant/pubvid/pubs/AK-SG-00.01.pdf](http://www.uaf.edu/seagrant/pubvid/pubs/AK-SG-00.01.pdf)

A full-color version of our newsletter is now available at: [www.sfos.uaf.edu:8000/](http://www.sfos.uaf.edu:8000/)  
In order to view this version, you will need a copy of Adobe Acrobat Reader (available free from Adobe): [www.adobe.com/products/acrobat/readstep.html](http://www.adobe.com/products/acrobat/readstep.html).