The HMSC Newsletter

OREGON STATE UNIVERSITY

August 2002 *Pamela Rogers, Editor*

Vicki Osis Receives President's Award from National Marine Educators Association

Vicki Osis was given the President's Award from the National Marine Educators Association at this year's meeting in New London, Connecticut. Present to honor her were Bill Hanshumaker, Jon Luke, and Jessica Haxel. The President's Award is given by the current NMEA President for outstanding contributions to NMEA and/or marine education. Vicki has established the only program in the nation that offers a summer program of graduate marine science courses that apply to a Master's in Science Education. Mississippi and Delaware have tried, but not succeeded. Her many teacher workshops and training programs, such as her NSF-supported Global Issues training and Coastwatch, a water quality monitoring program that involves 50 middle schools and high schools across the state. Fundamental to her success has been her ability to write and receive grants on a frequent basis.

Vicki originally came to the Marine Science Center as a teacher spending a summer as a research intern under the National Science Foundation. Perhaps because she met her future husband, Laimons, here, she returned to work with Don Giles, the original marine educator in 1971. That makes about 32 years as a pioneer and leader in the field of marine education. She now oversees the graduate teacher summer classes, year-round teacher workshops, K-12 hands-on school group activities, scouting merit badge training, and a series of marine science day camps during the summer. She will leave very large shoes to fill when she retires this coming year.

Collecting with super-scraper on naval base

John Chapman Does Invasive Species Rapid Assessment in Panama

In late May and early June John Chapman joined a team of nine other researchers from Brazil, Mexico, Canada, Panama and the United States in a Pew Charitable Trust funded expedition. Their goal was to examine the native and non-indigenous species diversity of marine and estuarine freshwater invertebrates on both the Caribbean and the Pacific sides of the Panama Canal. The team members are taxonomists from different universities and museums, and each is a specialist in a particular group. John's specialization is small crustaceans. This expedition is part of a larger survey of the eastern Pacific, from Alaska to Panama, that has been going for eight years. They are looking at the patterns of introductions of species into the eastern Pacific. They have found introductions on a massive scale, but many questions remain. In the 1970s Panama was the site where the first study of ballast water transport of non-indigenous species occurred. Scientists are much more aware of introduced species now and it has been an uphill struggle to learn the ramifications of non-indigenous species. John has been involved in this effort for many years.

During this ten-day expedition they spent five days on the Pacific side and four on the Caribbean side, working until they dropped. The setting was beautiful, with howler monkeys and brilliantly colored tropical birds, as well as seemingly armor-plated tiny biting flies. The Pacific side has large tides, but the Caribbean side has only had a one-foot tide range, sharp-edged coral reefs, or a mangove/tropical forest. There were so many varieties of frogs that he didn't see the same kind twice. There were hermit crabs as big as a fist and swarms of puffer fish kept butting into their work area. When on the Caribbean, John realized that although the water was nice and warm, there was no relief from the heat by jumping into it.

Lake Gattun, between the locks

Because this was a rapid assessment team, they used equipment that basically scrapes substratums such as pilings clean. John's super scraper was a big hit. It allowed them to collect specimens in some cases without having to get into the very polluted water. The Smithsonian Institution's Tropical Research lab issued them all identification badges that allowed them to go anywhere in Panama to collect, even unannounced onto military bases. They saw plenty of security guards, police and military sporting sawed-off shotguns and assault weapons, but everyone was very friendly and courteous. Many people spoke English as well as Spanish and several members of the team spoke Spanish as well.

Collecting live North African invertebrates from ship hull in Panama

Patty Burke, New ODFW Program Leader

Patty Burke is the new Oregon Department of Fish and Wildlife Program Leader, taking the reins from Jim Golden, acting program leader, in June. Patty comes to Newport from Minnesota where she held several resource management positions. Most recently she worked with the Mille Lacs Band of the Ojibwe Tribe in their Natural Resource Program. Before that she had been the Water Quality Director for the State of Minnesota and earlier, with the Environmental Quality Board. She has worked with public policy and community resource issues and likes to fix problems.

Originally from Massachusetts, Patty earned her bachelor's from Beloit College in Wisconsin in environmental biology, her master's and doctorate at the University of New Hampshire. Her thesis research was on the effects of oil on estuarine flounder, especially genetic impacts.

She finds the public in Oregon to be more aware and involved and willing to commit time to working with the government on environmental issues.

For fun, Patty likes to kayak, fish, bird, paint, draw and read. She has two dogs and is looking forward to getting to know the birds and wildlife of the West Coast.

NOAA Corps Officer Does Land Duty

Lt. Todd Bridgeman is serving with National Marine Fisheries Service, Northwest, as program manager for the Fishery Resource Analysis and Monitoring Division (FRAMD). He has been on duty for about a year here after rotating off a sea assignment with the NOAA *R/V Gordon Gunter* in the Gulf of Mexico. He did some mini-sub and diving work with Dr. Sylvia Earle's Sustainable Seas Project. Before that he had a three-year land assignment working on hazmat in New Orleans, chasing oil spills. His first sea assignment was two and a half years on board the *R/V Miller Freeman* up in the Bering Sea, so he has gone from cold to hot. He has flown through a small tropical storm on board one of the NOAA hurricane-chasing airplanes, as well as done lots of SCUBA diving, putting instrumentation on ship hulls. At the Center, Todd also serves as a back-up ship captain for the *R/V Elahka*, if Perry York is not available.

This is not unusual for him, as he was raised in Winthrop, Massachusetts, a peninsula near Boston, where he grew up surrounded by the sea and ships on three sides. Later his family moved to Houston, warmer but still on the water, and he chose to go to Texas A&M where he could get a degree in marine science and at the same time get his maritime cadet certification. The graduates from this program are actively recruited by the NOAA Corps because they are trained in science and can also handle the boats. Todd joined the Corps in 1993.

The NOAA Corps traces its roots back to the former U.S. Coast and Geodetic Survey, which

dates back to 1807 and President Thomas Jefferson. The Corps provides a cadre of professionals trained in engineering, earth sciences, oceanography, meteorology, fisheries science, and other related disciplines. The officers serve in assignments within the five major Line offices of NOAA: National Ocean Service, National Weather Service, National Marine Fisheries Service, Oceanic and Atmospheric Research, and National Environmental Satellite, Data and Information Services. Officers operate ships, fly aircraft, lead mobile field parties, manage research projects, conduct diving operations and serve in staff positions throughout NOAA.

He and his wife, Nicole, have recently had their first child, a daughter, Naomi. Although that has slowed down their activities somewhat, they enjoy snowboarding, mountain sports, canoeing and hope to learn to surf. One of their interests is sign language and they are teaching their daughter to sign as well. He says sign language comes in handy when you're trying to communicate across a noisy, crowded room.

Apprentices Work for EPA and their Future

The Apprentices in Science Education (ASE) program, part of the Saturday Academy, provides a full work experience beginning with the job application process, and interview skill training for all student applicants leading to competitive selection. Applicants outnumber the available positions by a ratio of three to one. Successful student applicants are selected by the mentors and go on to work on-site as apprentices with mentor scientists and engineers from businesses, industries, universities, and government agencies. Apprentices work full time for eight weeks during the summer, helping their mentors on real-life projects and learning firsthand about science or engineering as a career. This hands-on work assignment is augmented with two major group learning events called the Midsummer Conference and Summer Symposium.

The heart of the ASE Program is the apprenticeship, in which a student apprentice works with one or more technical professional mentors for eight weeks full-time during the summer. The student apprentice helps his/her mentor, gains pre-professional experience, and experiences a particular career firsthand. Some apprentices work on a project they can bring to closure by summer's end, some contribute eight weeks of work to an ongoing larger project, and some are given smaller projects and tasks that represent the range of work of many applied scientists and engineers.

Reed Ozretich and Bryan Kim

The Environmental Protection Agency has four interns this summer, which is the third summer they have participated in this program. Reed Ozretich is a senior at Corvallis High School and is working with Ted DeWitt on burrowing shrimp. He applied for this program because he wanted to do science in the outdoors and not just the lab. His responsibilities include making castings of shrimp burrows, digging them up very carefully (they can be up to one and a half meters long), drawing and then measuring them. How can there be up to 400 burrows in one square meter? How do the shrimp space themselves? Reed comes by his scientific interest naturally, as both his parents are scientists.

Bryan Kim is a senior from Sunset High in Beaverton and applied to test whether environmental science was the field for him. He is working on the seagrass project, taking field samples and using infrared photography to determine the health of the specimens (this is done by measuring the amount of chlorophyl).

These results are then put into a mapping program. Bruce Boese, his mentor, is working on a methods paper on how to use this infrared photographic system to determine the health or damage to seagrass. As it turns out, Bryan has decided that mechanical engineering is winning out over environmental science.

Tara Stark is a senior at Thurston High in Springfield, and her father is also a scientist, a fisheries biologist. She is interested in both marine biology and chemistry/physics. ASE gives her a chance to explore science both indoors and out. She is working with Janet Lamberson, preparing three sets of an herbarium, but she also has been working on the eel grass project and has done temperature probes, as a Jill-of-all-trades. As with the other apprentices, she will be giving a presentation on her summer project at the end of August at Portland State University.

Sam Chan is a local senior from Toledo High School and is working with Jim Kaldy. He has been involved in the SMILE program in both middle school and high school and enjoys science, calculus and reading. Sam is working on a project to determine the effects of salinity on macroalgae. In his lab he has tanks of algae in freshwater, intermediate salinity water, and seawater. The purpose of this research is to see if upwellings and changes in salinity affect the macroalgae, which also competes with seagrass for some nutrients.

Visitor Center Interns Handle a Variety of Jobs

Visitors to the HMSC Visitor Center are being greeted by four new faces this summer. The four, students from two OUS universities, are working as interns, interpreting exhibits for visitors, leading dock and estuary walks and working on projects that will be beneficial to the Visitor Center.

Chris DeMuth, is a geology major at OSU, with an oceanography minor. Chris is an upper division student, returning to school after a stint in the Marine Corps. He plans to work on an MS in maritime archeology at James Cook University in Australia after completing his BS at OSU, and his long-term goals include working on a PhD in nautical archeology. His project this summer is to develop a prototype for a new Visitor Center exhibit dealing with changes in the coastline over the past 1500 years, including a section on Indian middens.

Ariel Eberle, a junior in biology (marine biology option) with a chemistry minor at OSU, is interested in further study in pharmacology or genetics. Her summer project is to determine the optimum living conditions for *Artemia* so sufficient quantities can be produced to feed the fish in the Visitor Center. Ariel is a scuba diver, but has yet to test the waters of Yaquina Bay.

Working in the Visitor Center with the summer tourist crowd is perfect on-the-job training for Jenelle Jones, an OSU senior in fisheries and

wildlife biology. Her interest is in outreach education or interpretation. Jenelle will be keying out the animals displayed in the Visitor Center, focusing on their habitat, life cycle and how they are being used in research at HMSC. When in Corvallis, Jenelle uses a turkey vulture to give outreach programs for Chintimini Wildlife Rehabilitation Center.

Adam Patton comes from furthest afield, being a junior at Eastern Oregon University with a multimedia major. He is interested in producing educational or entertainmnent CD roms. As his project at HMSC, Adam has developed a multi-media presentation of this summer's OceanQuest cruises. He will be presenting the cruise information to Visitor Center audiences throughout summer and his presentation will eventually be displayed in a kiosk in the Visitor Center.

Catching Up with the Astoria Seafood Lab

Roger Adams, Chemist at the OSU Seafood Lab will resign his position effective September 15, 2002. He has accepted an academic position in the Environmental and Molecular Toxicology Dept at OSU. Roger has been at the Seafood Lab for four years. He has the ability to do many tasks requiring a variety of skills, from freezers to computers to light bulbs to assisting our students in laboratory tasks; they have asked "What will we do when Roger is gone?" We wish him the best on his new job.

Students completing degrees were: Jacek Jaczynski, a Ph.D. student with Dr. Jae Park, who has accepted an academic position with West Virginia University. Jenny Hansen, a M.S. student with Michael Morrissey, is in Alaska working at a fishing lodge.

Dr. Morrissey lectured at a Workshop on Product Development at Santa Maria University in Chile in June.

On July 14-21, Jae Park traveled to Arcopa, Paita, Peru to give surimi lectures and visit a cochineal farm where red color for surimi seafood products is harvested and processed. Jae also gave a surimi seminar to the Institute of Fisheries Technology employees in Lima.

Visiting Professors working with Jae Park this summer are Byong Kim, Professor from the Dept. of Food Science, Kyunghee University in Korea and Yeung J Choi, Assoc Professor from the Dept. of Seafood Technology, Gyeongsang National University in Korea. Dr. Myeong R Choi of Yosu University has been on sabbatical at the OSU Seafood Lab for 18 months working on surimi by-product utilization. He and his family have returned to Korea. Paul Dion is a Post Harvest Handling and Quality Systems Specialist working with Michael Morrissey this summer on on-board handling of tuna.

Nick Tagliavento, Adriana Veloza and Lewis Barnett

Fish Behavior Interns Tackle Projects

NMFS Alaska Fisheries Science Center has two interns and one student worker tackling some interesting projects this summer. Lewis Barnett, a fisheries senior at OSU, is working with Cliff Ryer on feeding and light sensitivity of halibut. They are determining how many prey are consumed at different light and turbidity levels. In addition they are using infrared cameras filming the drag chain on a trawl device to see what the flatfish actually do when the chain contacts them. Some of this work has been done on actual trawl boats, but this is the first time it has been done in a lab on individual species.

In a similar vein, Nick Tagliavento, another fisheries major at OSU, is working on a camera sled that is towed behind a boat. They are comparing the accuracy of three methods of

doing flatfish surveys: first, a diver goes down to check out the survey area, second they use the camera sled, and lastly, because it is the most destructive, a regular trawl net. They are trying to find the most accurate, economical and least destructive way to assess an area.

Adriana Veloza comes to the HMSC from Shannon Point Marine Lab where she has been doing an exchange from East Stroudsberg University in Pennsylvania. She is a senior in environmental science and she is studying the effect of different levels of turbidity and light on the feeding behavior of sablefish and pollock. She is working with Alex DeRobertis on this particular project. This involves putting 100 *Artemia* in a tank, allowing the fish to feed for five minutes, then removing the fish and counting how many they have eaten.

To become an NMFS intern, one must apply to those positions of interest from a list of internships. The interns must make a presentation after their ten weeks of experience. After that, Lewis, Nick and Adriana all have different ideas. After Lewis graduates, he will take some time off and hopes to do some great white shark work in South Africa before he goes to grad school. Adriana is planning on going directly into grad school to work on zooplankton. Nick knows that he wants to be in marine fisheries, but perhaps he will join the Peace Corps before he goes on to grad school.

Come One, Come All to the HMSC Picnic!

If you missed last year, we're doing it again! Water balloons, albacore on the grill, frisbees, hot buttered corn, volleyball, southern style pork - just a few of the offerings at this year's HMSC Annual Picnic. We'll be setting up the grills at Moonshine Park on Saturday, August 10, so plan to join us, 1:00 until whenever. (If you'd like to camp over, bring your gear.)

If you've been there before, you know what Moonshine's like. And if you're a first-timer, wear warm-weather clothes and shoes you can shed - the river is tempting. You might even want to bring your inner tube (and wetsuit). There'll be games for the kids - all ages included. Cheer on your favorite team in the three-legged race, or challenge your boss in the sack race.

Just bring yourself, your family and/or friends, a potluck dish, and chairs or lawn blankets. We'll provide everything else. (And there's no entrance fee for our attendees - just tell John you're with HMSC.)

Directions: Take Route 20 east from Newport. Turn north just past the DairyQueen (near Toledo). Go 7-8 miles to Siletz, turn right on Logsden Road, and travel another 7-8 miles. Go past the Logsden Country Store, cross the bridge, take the first left onto Moonshine Road. Go 4 more miles (stay on the asphalt) to the picnic area.

What's New @Your Library

Online "Decoder Rings" for Journal Abbreviations

Most of us have run into an obscure journal title abbreviation and wondered what on earth the title really was. Here are some tools to help you break the code:
A good overview (nicely organized by a librarian):
http://www.lib.purdue.edu/life/j-abbrev.html
A helpful megasite:
http://www.public.iastate.edu/~CYBERSTACKS/JAS.htm
For medical journals. Use the * wild card - for example, "Cri* Rev*" or something like that...
http://www.ncbi.nlm.nih.gov:80/entrez/jrbrowser.cgi
Here's one for education journals:
http://www.ericfacility.net/extra/pub/sjisearch.cfm

Grant Sources

The library no longer gets a print copy of grant information from the National Science Foundation, but this information is on the web at:
http://www.nsf.gov/home/menus/news.htm
There is a customizable news feature.
Some other grant resources:
Federal Register Online via GPO Access (Database) http://www.access.gpo.gov/su_docs/aces/aces140.html
Community of Science "Funding Opportunities" (Database)
http://fundingopps2.cos.com/
Sponsored Programs Information Network =SPIN (Database)
http://osulibrary.orst.edu/research/guides/spin.htm
TRAM Research Funding Opportunities and Administration
http://tram.east.asu.edu/
The Grantsmanship Center
http://www.tgci.com/
Foundations News and Commentary
http://www.cof.org/foundationnews/index.html

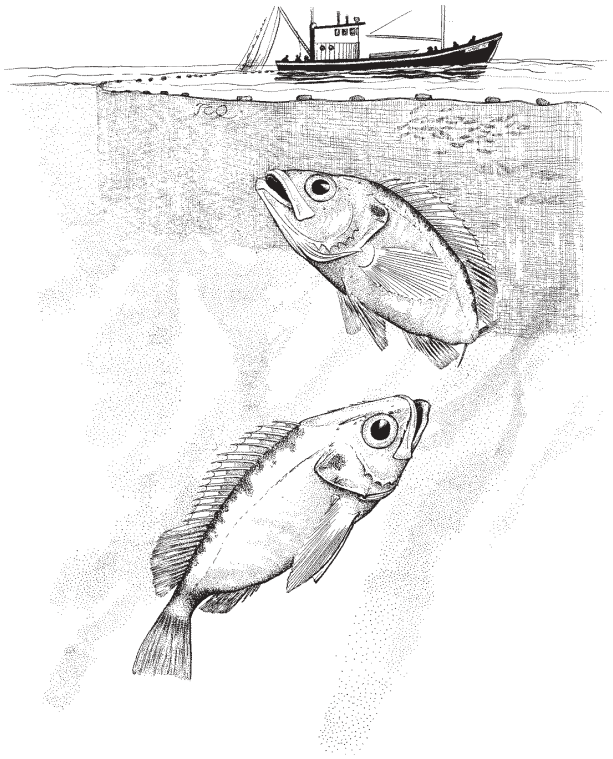
Three of Sampson's Grad Students Complete Degrees

During the past few months, three of David Sampson's graduate students successfully defended their theses. Most recently Yong-Woo Lee, who spent seven years in residence at the HMSC, defended his Fisheries PhD thesis "Oceanographic Effects on the Dynamics of Food Habits and Growth Condition of Some Groundfish Species of the Pacific Northwest." In June, Saud Al-Jufaily, who also lived several years at the HMSC, with his wife and children, defended his Fisheries Ph.D. thesis "Qualitative analysis of sardine and anchovy oscillations and implications for the management of sardine and anchovy fisheries in Oman." Also completing her degree in June was Maria Malavear, a student in the Marine Resource Management program whose internship report was entitled "Modeling the energetics of Steller sea lions (*Eumetopias jubatus*) along the Oregon coast."

Yong's thesis examined the feeding habits and long-term growth condition of several groundfish species off the Pacific Northwest to understand the relationship between variations in the fish's biological and life history components and the ocean environment. Stomach samples of three rockfish species (canary, widow and yellowtail rockfish), which Yong collected in 1998 and 1999, provided quantitative information on the food habits of these species during and directly after the 1997-98 El Niño event. He conducted an assessment of long-term changes in fish growth condition using data from Oregon market samples, in which the fish are generally weighed as aggregations rather than individually. Yong applied non-linear regression methods to these aggregated data to estimate the length-weight parameters and to detect long-term changes in growth condition. He tested the reliability of the estimation method using Monte Carlo simulation experiments. Using Oregon market sample data collected over several decades and the non-linear regression method, Yong developed growth condition indices for five fish species: Dover and petrale sole, and canary, widow and

yellowtail rockfish. He then compared the indices with a suite of environmental variables. In August Yong will return to Korea for a visit with his family and some well-deserved vacation. He is arranging to start work as a post-doc in the fall.

Saud's thesis reviewed the inverse cyclic behavior in the abundance of stocks of anchovies and sardines, which is a striking feature of many marine systems. In addition, he used qualitative loop analysis techniques to analyze the feasible sardine-anchovy model configurations that result in the inverse relationship between sardines and anchovies and to identify model configurations that best represent sardine-anchovy systems. Based on the results of the literature review and the loop analysis and results of interviews with fishers in Oman, Saud developed recommendations for research and management of the Omani fisheries for sardines and anchovies. After completing his final thesis copy, in early July Saud and his family returned to Oman, where Saud returned to his faculty position at Sultan Qaboos University.



Personnel Notes

Rebecca Fuller will be leaving the Newport office of the Oregon Department of Fish and Wildlife for a promotion to Office Coordinator at the Charleston office. Her last day was July 12. There are about 20 employees at the Charleston office and Rebecca will be the only full-time office staff. The best part, she says, is that the office is right on the water. Congratulations, Rebecca!

Carl Demetropoulos defended his Ph.D. thesis on July 15 on the topic "Enhanced production of Pacific dulse (*Palmaria mollis*) for co-culture with abalone in a land-based system." Congratulations, Carl!

Congratulations also to **Barbara Lagerquist** (Marine Mammal Program) and her new husband, Joe Hanson. They were married on July 6 and are a living example of the benefits of exercise: they met while playing Frisbee.