



# *The HMSC Newsletter*



**OREGON STATE  
UNIVERSITY**

*March 2003*

*Pamela Rogers, Editor*



Class being held in HMSC west wing

## **OCCC's Aquarium Science 100 – Becoming an Aquarist**

by Bruce Koike

This winter quarter, the Oregon Coast Community College offered the course, *Introduction to Aquarium Science* for the first time. As the lead instructor, I was struck by the irony of teaching this course at the Hatfield Marine Science Center. A mere seventeen (17) years ago, I sat in the same room (Room 30) as a graduate student enrolled in two OSU fisheries courses (Willie Breese's Molluscan Aquaculture and Bill McNeil's Fish Culture courses). Now it was my turn to instruct a group of individuals, most of whom I did not know. Though this group of 14 students came from diverse backgrounds and had various motivations for taking the class, the common thread of enthusiasm for this subject has been felt each time we meet.

The class gathered once a week for 3.5 "fast" hours. The format of each session included a lecture and a laboratory portion. Meetings were peppered with student-directed activities including presentations, "group-learn" activities, aquarium set-up and water quality testing. I sense, though, that the highlight of this course has been the hands-on activity of setting-up, monitoring and maintaining a fish population.

Brendan Clack and Dr. Chris Langdon generously provided cultured clownfish for the class. Umur and Ebru Onal, two of Dr. Langdon's former students, cultured these particular fish.

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Thanks Umur and Ebru! A total of seven aquariums (including a freshwater display) were established and are being cared for by the students. Each tank is observed daily and receives daily water quality testing and fish feeding. The water quality check includes: pH, salinity and temperature monitoring, and ammonia, nitrite and nitrate testing. Accurate testing must be coupled with recording results, observations and any alterations done to each aquarium. The data is recorded on the water quality data sheet that was originally designed and finalized through student consensus. The first "Observation" made on this data form was in reference to the clownfish... "They're so cute..." and I agree!



Student aquarium with clownfish

Risk management was also a discussion topic as it relates to working around aquariums and water. An important element of managing the inherent risk is to be aware of the activities around you. Communicating with others about what you are about to do and to seek assistance from others are valuable ways to reduce risk. The shocking truth of wet hands and electrical plugs, and the slippery nature of wet floors were topics that were discussed, though not experienced firsthand by class attendees. By sensitizing the individual to the dangers of working around glass, water, electricity and chemicals, we can develop a safer work environment for each person in the work place.

I have not been the sole instructor in this course. David Beran, a former senior aquarist at the Oregon Coast Aquarium (OCA), has enhanced the learning atmosphere by sharing his perspectives and experiences in the aquatic

animal husbandry profession. David is completing his Master's degree in Science Education at Oregon State University. Students have also contributed towards teaching each other through oral presentations about a commercially cultured animal. Tilapia, crawfish, scallops, oysters, and *koi* were among the species selected by students as their presentation topics.

This course is conducted in two areas at the HMSC. The lecture portion takes place in Room 30, while the laboratory section is held in the West Wing where surplus and quarantined animals for the Visitor Center are held. Water quality analysis is conducted in the Animal Health Laboratory, located in the same area. OCCC is fortunate to have the HMSC facilities available.

What is making this all possible? A look in the rearview mirror provides the answer. For the last dozen years, public aquariums were faced with the increasingly difficult chore of finding workers who possessed the necessary skills to work at their facilities. Through a National Science Foundation (NSF) funded survey of the aquatic animal husbandry industry, strong letters of support and institutional commitment, funding was awarded in May 2002. The three-year NSF grant allows for the development and implementation of a degree program in Aquarium Science. The program will develop individuals to conduct aquatic animal husbandry activities at public aquariums, fish hatcheries, ornamental fish businesses and other aquatic animal facilities.

The program has garnered support from: the Regional Investment Board (\$80,000), Lincoln County Economic Alliance Foundation (\$10,000), aquarium product manufacturers, SYSCO Food Services of Portland (5 laptop computers) and a financial pledge from Esherick Homsey Dodge and Davis (EHDD) in support of an Aquarium Science internship scholarship. EHDD is an architecture and interior design firm that designed the Monterey Bay Aquarium and the Florida Aquarium in Tampa. A major supporter of the program is the community at large. As evidence of this

support, the Oyster Cloister event has contributed over \$15,000 each of the last two celebrations. This support extends not only to ticket holders, but also to the hosting facilities (HMSC and the OCA) and to the business community who donate significant resources to make this event successful .

Beyond this quarter, the HMSC will continue to play a vital role in the Aquarium Science degree program. As the Aquarium Science program develops, research and educational programs at the HMSC can provide valuable learning opportunities for our students. Program students are required to take two Practicum courses. The intent of these courses is to allow students to learn in the work environment as well as from other professionals. The student will “volunteer” approximately six hours per week during the 11-week term. I envision that such programs as the public wing aquarium, Molluscan Broodstock Program, as well as other research-focused projects, would be well suited for student involvement.



Testing water quality

The first cohort of students will begin their studies this coming fall. The program will be limited to 25 students, all of whom are required to apply for admission. To review the program in detail, find out who our industry partners are, or to download an application, please refer to [www.occc.cc.or.us/aquarium](http://www.occc.cc.or.us/aquarium) or contact Bruce Koike at [bkoike@occc.cc.or.us](mailto:bkoike@occc.cc.or.us)



### ***Dead Whales Tell No Tales – But the Author Will!***

A marine biologist working at a marine center on the Oregon coast dies under suspicious circumstances. His graduate student drowns at sea. Suspects include a former girlfriend, a Japanese fisheries minister, an Eskimo whaling commissioner and several radical environmentalists. And a Gray whale has beached herself on a local beach, adding an intriguing twist to the mystery.

On Saturday, March 29 from 2 p.m. to 4 p.m. in the HMSC Hennings Auditorium, Gleneden Beach author Ron Lovell will hold a reading and book signing for his second published novel, *Dead Whales Tell No Tales*. A short reception will follow the book signing during which the public can meet the author.

“This mystery takes place in a facility remarkably like the Oregon State University Hatfield Marine Science Center,” says Terri Nogler, Visitor Center staff. “So it seems appropriate that the premier of the book take place at the Center, especially during Whale Watch Week.”

This is the second murder mystery that Lovell, an emeritus professor of journalism and English at Oregon State University, has located on the Oregon Coast. Part of the story in his first book, *Murder at Yaquina Head*, takes place in the lighthouse at Yaquina Head Outstanding Natural Area.

After a successful career in magazine journalism for Business Week, Medical World News and McGraw-Hill World News, Ron Lovell taught journalism at Oregon State University for 24 years. He is the author of 13 journalism and photography textbooks and has published numerous magazine articles. The book will be available for purchase from the HMSC Bookstore.

## Soup Kitchen Continues into March

Due to popular demand, the HMSC Soup Kitchen will continue for at least the first two Tuesdays in March. The Soup Kitchen is a cooperative effort of folks from all around the HMSC to raise money for the Lincoln County Food Share. Every Tuesday we provide a piping hot bowl of homemade soup for \$1, plus a wide array of baked goodies. Every penny goes to Food Share.

If you would like to participate as a soup or goodie chef, please sign up in the Director's office or call Pam Rogers (7-0212) [pam.rogers@oregonstate.edu](mailto:pam.rogers@oregonstate.edu). We have raised over \$300 so far in the first three weeks and look forward to reaching at least \$500 before we are through.

Thanks to our chefs so far: Terri Nogler, Jesica Haxel, Carol Cole, Lynne Wright, Tracy Shaw, Dave Mellinger, Linda Brodeur, Leah Feinberg and Jessica Waddell. There's even been a demand for an HMSC cookbook to share their tasty recipes!

See you at high noon Tuesday in the main building mail room. Bring your own bowl or cup or other container (we've seen some real original ones) and an appetite!

**HMSC Blood Drive  
Thursday, March 13  
10:00am – 3:45pm**

**Mobile Unit – next to Education Building**

Did you know that there is a 97% chance that someone you know will need blood sometime during his or her life? If you are 17 or older, weigh at least 105 pounds and are in good general health, you can donate blood. We need blood donors.

We also need volunteers to help with canteen and registration duties. We can even use cookies, crackers and juice. To sign up for a time, please contact your unit recruiter or Pam Rogers in the Director's office (7-0212) [pam.rogers@oregonstate.edu](mailto:pam.rogers@oregonstate.edu).



David Stick in the lab

## From High Steel to High Tech

David Stick is a new graduate student working with Chris Langdon and Michael Banks and brings to the Molluscan Broodstock Program expertise in quantitative genetics and breeding methodologies. Raised on a 3,000-acre farm in Ohio, David originally thought he wanted to be a veterinarian but found he preferred working with healthy, not sick, animals. His advisor suggested moving into genetics and breeding and he found he really enjoyed the work. Earning his B.S. in Agricultural Science and his M.S. in Animal Science at Ohio State University, he received the Graduate Student of the Year award for his work with insulin-like growth factor, binding proteins and feed efficiency in two lines of cattle.

David has worked in both animal science and steel construction in the past. He found that being a steelworker pays much more than working with animals, though it helps not to be afraid of heights. He was very glad of the OSHA requirements for harnesses for steelworkers after he was bumped off a 40-foot building, coming to a smooth stop before the ground—thanks to the harness.

Molecular genetics is a major interest now, but David prefers the quantitative approach which works best for traits that have hundreds of loci on genes, such as survivability and growth rates, instead of one loci, such as eye color. Quantitative genetics uses mathematical models to predict offspring. Right now he is genotyping 1000 oysters (for each spawn)—all

the potential breeders, rather than solely the actual breeders. This is to overcome the problem of genetic contamination, where sperm or eggs stick to the screens and utensils between different family batches. The Molluscan Broodstock Program is aiming for a 5% error rate, or chance that the oysters did not come from the family they are advertised to be from.

For fun David enjoys camping, canoeing, hiking and watching ice hockey. He goes home to Rainer, Oregon, every week, where his wife is an elementary teacher.



**David Sampson New Head of English Resource Center**

In July, David Sampson will be moving to Portsmouth, England, to begin work as the Director of the Centre for the Economics and Management of Aquatic Resources (CEMARE). (<http://www.port.ac.uk/departments/economics/cemare/>)

CEMARE is a small research group in the Department of Economics within the School of Business at the University of Portsmouth. Before joining the OSU faculty in August 1990 he worked at CEMARE for two years as a Research Associate. His wife and he enjoyed living in Portsmouth. His daughter was born a few miles from the CEMARE office and his wife has close family within an hour's train ride.

David says, "While I am greatly pleased at this opportunity to return to England and work again at CEMARE, I have mixed emotions about leaving the Hatfield Marine Science Center, OSU and Oregon. During the twelve plus years that I have been at OSU I have

thoroughly enjoyed being a faculty member with the Marine Experiment Station, the HMSC and the Department of Fisheries and Wildlife, and working with the ODFW Marine Resources program has always been a rewarding challenge. It has been my honor and pleasure to work with such fine, dedicated groups. I will greatly miss the many colleagues and students who have befriended me. I wish you all the very best in all your endeavors."

### **Osis Retirement Prompts Sea Grant Changes**

With Vicki Osis' retirement as of March 1, Sea Grant has revised their educational programming. The new core of the Youth Program will be the School Group Program, OSU accredited courses, the Home School Program, Summer Day Camps, and the Boy Scout/Girl Scout/Isaac Newton Magnet School Program. They will no longer actively pursue Job Shadows, Science Fair, Outreach, the Campfire Program, and Teacher Workshops. The Coastnet/Rivernet grant and the Schooner Creek grant have both ended.

Jesica Haxel, Marine Education Specialist, will take on Vicki's administrative duties for the Youth Programs. She will also monitor and schedule the marine educators (Linda Brodeur, Athena Crichton and Fawn Custer). Vicki will work on a nine-month half-time basis, focusing on coordinating the National Association of Marine Educators Conference to be held at the Center in August, completing the marine mammal curriculum, conducting the OSU accredited courses and seeking new partnership opportunities.

Office assignments have also changed. The Ed 15 marine education office will be given to Tony D'Andrea, a new COAS researcher. Jesica will move out of Ed 7 and move into Vicki's old office with Maureen. Vicki will be moving upstairs to the old marine educators office (202) off the Old Library. The displaced educators will be moving into what used to be Vicki's storage room (900-251). The Physical Plant staff have painted and fixed it up for three or four workstations.

## Two New Americorps Workers Assist USFWS

The US Fish and Wildlife Service seems to have a knack for picking outstanding Americorps workers and the two current workers are no exception.



Marianne teaches GPS

Mariana Lincoln has been here since September also and works in GIS. One of her projects is taking a data set of all seabird colonies and putting them on maps for the Oregon Seabird Colony Catalog. Her work will be a template for all USFWS coastal refuges. She particularly wanted to work at this refuge because of the GIS responsibilities. She was the GIS lab TA at University of Massachusetts (Boston) and hopes to use her GIS skills in her future career as a storm chaser and doing remote sensing weather mapping. She, like Ashley, found this position by going on the Texas A&M website for short-term wildlife position announcements. Mariana enjoys beachcombing, yoga and hiking in her spare time.



Ashley teaches about trash

Ashley Dayer is an Education and Outreach Specialist working with Dawn Grafe. She works with numerous programs, such as Earth Stewards, Shorebird Sister Schools, Junior Duck Stamp Contest, Watchable Wildlife and the Refuge Centennial. With the Shorebird Sister Schools, she goes to Yaquina View Elementary once a month for an hour and a half and teaches fourth and fifth graders. They have two field trips with the Yaquina Birders assisting, and report their findings with schools around the world. Watchable Wildlife is for adults and aims to show how to enjoy wildlife without wrecking their habitat. Most recently Ashley did this slide presentation at the Astoria Maritime Museum.

Ashley was raised in Buffalo, New York, and graduated from Harvard with a B.S. in Environmental Science and Public Policy. She also worked with sea otters in California and marine mammals at Duke Marine Lab. Her major interest is in the human dimension of effective wildlife conservation and she plans to go to graduate school at Colorado State in Fort Collins this fall. Ashley has been here since September and will finish in mid-July. For fun she hikes, watches birds and helps the local 4-H club show dogs.



### What's New @ Your Library

*Featured Databases:*

**\*\* INSPEC\*\***

What is INSPEC?

INSPEC is the world's largest bibliographic database in the field of physics, electrical engineering and electronics, computers and control engineering and information technology. INSPEC has 7,000,000 abstract records and 330,000 new abstracts, 4,000 journals and 2,000 conference proceedings added each year. Each record contains an English-language title and descriptive abstract, together with full bibliographic details, which include the journal title, author's name and affiliation and the language of the original document. Coverage is from 1969 to the present.

What kind of questions can be answered through INSPEC?

- \* Where can I locate articles on computational physics?
- \* Where can I find articles on radioactive waste processing?
- \* Where can I find information on computer-aided engineering?
- \* What recent articles have been published on designing integrated circuits?

Why would someone in marine science be interested?

- \* Where can I find recent research on satellite telemetry?
- \* How do I find out more about bioacoustics?

How do I get to INSPEC?

INSPEC is available through the IOP Axiom interface. The URL is <<http://axiom.iop.org/S/OSU/search>>. To access this database from off-campus, follow the instructions at <<http://osulibrary.orst.edu/offcampus/remote.htm>> for using the library's proxy server.

*\*\*Food Science and Technology Abstracts (FSTA)\*\**

What is Food Science and Technology Abstracts?

Food Science and Technology Abstracts (FSTA) is produced by the International Food Information Service (IFIS). FSTA contains over 500,000 references; annual updates add approximately 18,000 references per year. It covers all areas of food science, food technology, and human nutrition, including basic food science, biotechnology, toxicology, packaging, and engineering. 1800 publications in over 40 languages are scanned regularly, including journals, reviews, standards, legislation, patents, books, theses, and conference proceedings. Abstracts with complete bibliographic details are produced from these original sources. Sources of all the materials abstracted are listed together with instructions for full text document delivery. Available search aids include a Thesaurus and lists of journals covered regularly. Coverage is from 1990 to the present.

What kind of questions can be answered through Food Science and Technology Abstracts?

- Where can I find articles on the nutritional aspects of vegetarian diets?
- Where can I find articles on the flavor chemistry of dairy products?
- Where can I find articles on amines in wines?

Why would someone in marine science be interested?

- \* What is the effect of freezing on seafood quality?
- \* What techniques are used to measure gel strength in surimi?

How do I get to Food Science and Technology Abstracts?

Food Science and Technology Abstracts is available through the library's subscription with SilverPlatter. The URL is <http://osulibrary.orst.edu/research/databases/spaccess.htm>. To access this database from off-campus, follow the instructions at <http://osulibrary.orst.edu/offcampus/remote.htm> for using the library's proxy server.

#### *Electronic Journals in the Library*

OSU Libraries supports the research of faculty in several disciplines with library collections in two geographic locations, the Valley Library in Corvallis and the Guin Library in Newport. Increasing subscription costs, a shrinking budget and the availability of electronic access led us to review the periodical collections at both libraries. The librarians at Valley and Guin Libraries identified duplicated titles and are recommending that only one print copy of these journals be retained. In making these recommendations, an attempt was made to define a more distinct marine focus to the Guin Library and maintain its strong aquaculture and fisheries collections. Where a print copy is recommended for cancellation, we anticipate providing rapid access to articles through electronic subscriptions or web-based document delivery.

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This means that we will be cutting about 20 print subscriptions at the Guin Library in favor of electronic access. We will rely on requesting from Valley for another 10 titles; electronic access to these are currently too expensive or pending. Several of these are ones that are used somewhat frequently, but are not crucial. An equal number are being cut at the Valley Library with the print being kept at the Guin Library.

If you want to review the file, it's available at <http://osulibrary.orst.edu/guin/Valley-Guin.xls> or I can send you a copy. Send me your comments: [janet.webster@oregonstate.edu](mailto:janet.webster@oregonstate.edu) While it's hard to cut journals, it's time we made more of a transition to electronic formats, given budgets and better access.



Darnitskiy, Terekhova and Boehlert

### Boehlert Hosts Russian Visitors

George Boehlert was host to two Russian scientists who are collaborating on a joint Russian-American volume on seamounts. Vladimir Darnitskiy and Evgenia Terekhova are scientists in Vladivostok. The book will merge Russian and Western research on underwater mountains in the world's oceans. Darnitskiy is chief staff scientist with the Laboratory of Fisheries Oceanography at the Pacific Scientific Research Fisheries Center and Terekhova is chair of the foreign languages department of the Russian Academy of Sciences.



### Personnel Notes

Wedding bells were ringing for two HMSC couples recently. **Daniel Gomez-Uchida**, a doctoral student with Michael Banks, went all the way to Portugal to marry his Portuguese bride, Celia Alexandra Lima, in Cascais. The two met in England at the University of Hull, when Daniel was a grad student there. Daniel himself is from Chile, so this is really an international romance. Celia will be arriving in March and the two will live in the Guin House.

Congratulations also to **Daniel and Kari Lewer**, who were married on February 15. Daniel is a research assistant for Bruce Mate.

**Lisa Bridges** has resigned her position as the administrative assistant for the Marine Mammal Program and moved with her husband to the Seattle area. Good luck in your new home! **Tamara McGuire** is coming on board with the Program as the marine mammal stranding coordinator.

**Christi Sheridan** will also be leaving the HMSC where she has served as the administrative assistant to Jay Rasmussen in the Sea Grant office. She goes to find a healthier climate for her husband. We will miss you, Christi!