



HMSC Currents

Newsletter of the Hatfield Marine Science Center Community - Newport OR

SeaFest Draws a Crowd... Again



Near perfect weather greeted the estimated 4,500 visitors who turned out for SeaFest on June 19, the HMSC's third annual open house. Families with children ambled the open space between the Visitor Center and the Barry Fisher building, which was lined with artists booths, a live music stage, food vendors, tents featuring exhibitors' displays, and other attractions.

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Summer is Prime Season for Interns at HMSC



With funding from the National Science Foundation, eight undergraduates from across the country were selected to participate in the Research Experience for Undergraduates (REU) program at HMSC this summer. The program aims to recruit particularly bright students from diverse backgrounds and orient them toward graduate school and ultimately careers in marine science.

Summer '04 REU Interns (l to r): Kalin Lee, Katri Laukkanen, Rachel Ruppel, Jessica Ramsey, Walter Hannah, Leslie Soule, Brian Yellen, Lynn Goodman, Betsy Glaesemann

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Earthquake Off Oregon Coast Felt at HMSC, Prompts Review of Safety Procedures

A 4.9 magnitude earthquake, centered 33 miles due west of Yachats on the ocean floor, was felt at HMSC and throughout Lincoln County on the morning of July 12th. Although it caused no damage or injuries, the quake served as a reminder of the importance of



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New Sea Grant Marine Educator to Focus on "Free-choice learning"



HMSC welcomes Shawn Rowe, the new marine education and learning specialist with the OSU's Extension Sea Grant program. Shawn arrived in June and fills the position vacated by the retirement of Vicki Osis, but with a different focus.

Shawn received his doctorate in 2002 from Washington University in St. Louis, where his research concentrated on

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Research Programs News

Coastwide Salmonid Genetic Meeting Held at HMSC

The Hatfield Marine Science Center recently played host to the Coastwide Salmonid Genetics Meeting, June 16th -18th. HMSC's Fisheries Genetics Lab that is under the direction of Dr Michael Banks hosted the conference.

The bi-annual meeting that has been gathering scientists together for over 20 years was attended by about 100 scientists from all over the west coast and a representative from the National Salmon Resources Center in Japan. Historically these meetings have been a great venue for the discussion of the role of genetics in salmon research. Topics of the two day conference included: Stock Structure, Functional Genomics, Parentage & Hatchery/ Wild Comparisons, Genetic Applications in Management, Sex Determination in Salmonids and Mixed Stock Analysis. In all, there were 36 oral presentations and 14 posters presented. Dr. Banks was very happy with the turnout as well as the quality of the research discussed.



Dr. Banks discusses his research with Dr Jennifer Nielson of the USGS Alaska Science Center during a break in the action.

Dr. Banks' lab conducts research on several salmon and rockfish species as well as coelacanths. His interests are in genetic characterization of natural populations, fishery subjects and aquacultural species. He focuses chiefly on methods for resolving hybridized, admixed, or recently diverged populations, and statistical methods for determining component estimates for mixtures of such populations in various contexts. Dr. Banks is particularly interested in evaluating the information content that can be gained from alternate genetic marker types and resolving links between genetic loci and life history variance expressed among species.

Gayle Hansen's Research Helps Explain Red Tide in Yaquina Bay

Warm weather and full sunshine on a late April weekend brought on a spectacular red tide at the headwaters of Yaquina Bay from Riverbend to Toledo. Dark wine-red streaks began appearing in the water around April 30 and were prominent throughout the weekend. But, not to worry -- this red tide is completely non-toxic and has become an annual late spring event in Yaquina Bay.

The red water is caused by a population explosion of *Myrionecta rubra* (= *Mesodinium rubrum*), a small (20 x 15 µm) red ciliate protozoan (see the pictures) that can increase in density to over a million cells per liter. The tiny *Myrionecta* cells are very active, jumping around in the water column much like fleas. They have a daily cycle where they migrate to the surface in the daytime causing the water to redden and then disappear at night by migrating down to the bottom often as much as 20 meters. The species is not unique to this area. It is widespread in estuaries throughout the world.



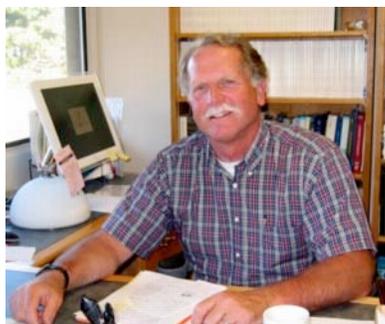
Research Programs News (cont'd)

Myrionecta are unusual ciliates in that they are photosynthetic unlike most other protozoans. Studies have shown that they engulf small single-celled algae known as cryptophytes and capture their red-pigmented chloroplasts. Rather than digesting the chloroplasts, the ciliates keep them intact and functioning within their cell bodies, enabling them to act like algae, photosynthesizing and absorbing nutrients directly from the water column. Hence, while at the surface during the daytime, *Myrionecta* produces oxygen through photosynthesis, and, while on the bottom at night, it absorbs oxygen for respiration. When large blooms such as these crash, a major hazard can occur. As the cells decay, massive bacterial blooms can develop that completely deplete oxygen from the water column. If this occurs, the impacts are severe. In areas with salmon aquaculture, fish can suffocate. On the east coast, lobsters have been known to crawl completely out of the water and die in order to avoid the low oxygen content of the water.

The impacts on bivalves, such as the oysters grown at Oregon Oyster, are minor. The oysters simply filter out the non-toxic ciliate as an abundant food source and then appear to be unaffected as the blooms decay. Occasionally, when the *Myrionecta* blooms are particularly severe, the tissue of the oysters turns pink, but since no toxin is involved, they are perfectly healthy for human consumption.

Gayle Hansen, Marine Botanist, HMSC, (Assoc. Prof. (Sr. Research), OSU)

From the Director's Desk



The first half of 2004 was a busy period for many involved in strategic planning for the future of HMSC. The planning team included 14 people from HMSC (both OSU and agencies), different colleges in Corvallis, and the local Newport community. Starting with a 2-day workshop at HMSC in January, the group met 4 more times over the course of the winter and spring, articulating and refining HMSC's mission and vision, its strengths and challenges, and the strategic issues that form the basis for the goals. We held a series of meetings with "constituent groups" – HMSC and agency staff, the local communities, and colleges at OSU –convened to gather comments on the plan content for revision to the final version that was presented to the OSU Provost on May 28th. If you didn't get a chance to read the strategic plan, the final version is

on the web: <http://ftp.hmsc.oregonstate.edu/ftp/StratPlan/HMSCStrat52804.pdf>

I often find it surprising how little people from our community know about the HMSC. This was reinforced earlier this year, when I made a presentation at the conference "Lincoln County's Economic Development: Planning for our Future," and described the economic benefits that HMSC brings to Newport and Lincoln County. In May, we hosted an "economic summit" with Lincoln County, bringing OSU President Ed Ray and deans of several colleges to Newport to meet with community leaders and discuss potential interactions. Some of the recommendations generated during that meeting highlight activities at HMSC, but also go further to show ways that the broader OSU can become involved to benefit Lincoln County.

HMSC's summer internship programs are in full swing. We were awarded a new NSF REU (Research Experience for Undergraduates) grant, which increased the numbers and diversity of interns gaining valuable educational and career experiences at the HMSC. The students selected to participate arrived last month and have been working with faculty mentors on research projects (see article in this issue). Results of their projects will be presented on August 12, and all HMSC will be invited to the presentations. Our internship program also benefited from the Rogue Brewery, which donated over \$600 to next year's internship programs.

Finally, I want to congratulate all those involved in a very successful SeaFest last month, but to particularly thank Ken Hall, Linda Brodeur, Matteo Costamagna, Sara Heimlich, Carol Cole, Judy Mullen, Craig Toll, and Jon Luke for the excellent job of organization in pulling off the best one yet. -GB

Academic Programs & Internships

REU Interns - continued from page 1

OSU faculty researchers and scientists from partner agencies at HMSC are serving as mentors for the students, helping them develop research projects, practice scientific methods, gain laboratory and field experience and learn new skills. By the end of the 10-week program, all of the research interns will produce a scientific paper and make a presentation explaining the results of their research.

Interns selected for the REU program are provided with housing on-site, a weekly stipend, and round-trip transportation costs from their home institution. Students arrived in June from as far away as Providence, Rhode Island, and as nearby as Corvallis. For some, it is their first time in the Pacific Northwest.

Get to know our summer interns by attending a brown bag lunch (Wednesdays, 12 noon in the staff lounge), or come see their final presentations on Aug. 12 in the Guin Library seminar room. Here is a brief rundown of their research projects:

Betsy Glaesemann is a senior majoring in marine biology at Texas A&M University in Galveston. Her research project entails collecting and analyzing sediment preferences of English sole in an effort to better understand essential habitats for these fish. Betsy's faculty mentor is Cliff Ryer [NOAA-AFSC]

Lynn Goodman is a senior biology major at Shawnee State University. She is examining the distribution and feeding ecology of juvenile salmon in relation to the Juan de Fuca Eddy off northern Washington and may also look at the genetic structure and parasites of these fishes. Her faculty mentor is Ric Brodeur [NOAA NMFS].

Walter Hannah is a junior engineering major at Ithaca College. He is working on a project to develop the system control software for a deep-ocean hydrophone float that can provide real-time detection of seafloor geophysical phenomena in the remote ocean basins. His faculty mentor is Robert Dziak [OSU-CIMRS].

Katri Laukannen is a senior majoring in environmental science at Pacific University. She is working on a project to measure the effect of burrowing shrimp population density on oxygen flux across the sediment-water interface. This project is a component of research to understand the importance of benthic invertebrate communities to carbon and nutrient cycling and to food web dynamics in Pacific Northwest estuaries. Her faculty

mentors are Anthony D'Andrea [OSU-COAS] and Ted DeWitt [U.S. EPA].

Kalin Lee is a junior majoring in biology at Oregon State University. He is examining the relationship between patterns of growth in long-lived rockfishes and trees in the coast range to examine linkages between terrestrial and marine ecosystems. His faculty mentor is George Boehlert.

Rachel Ruppell is a junior environmental science major at Syracuse University. She is applying her knowledge of GIS and spatial statistics to help define the pelagic habitat of juvenile salmonids in the coastal waters off Washington and Oregon, based on sampling of salmon and oceanographic variables in continental shelf waters over the past six years (1998-2003). Her faculty mentor is William Peterson [OSU-CIMRS].

Leslie Soule is a junior majoring in biochemistry at Willamette University. She is evaluating production and consumption rates of hydrogen sulfide in microbial fuel cells fueled by marine plankton. This work will be part of a larger project designed to evaluate alternative power sources for ocean instrumentation. Her faculty mentor is Clare Reimers [OSU-CIMRS].

Jessica Ramsey is a senior majoring in biology at Salem College in Winston-Salem, NC. She is analyzing the growth and survival strategies of juvenile flatfishes, working to determine the critical light thresholds for visual foraging in juvenile northern rock sole. Her faculty mentors are Tom Hurst and Cliff Ryer [NOAA-AFSC].

Brian Yellen is a junior majoring in geology and biology at Brown University. He is examining the optimal culture requirements for larval rearing of several species of tropical fish that are in high demand for the hobby industry. These species are currently harvested from the wild using ecologically unsound practices. His faculty mentor is Chris Langdon [OSU-COMES].



Research...



...can be fun!

Academic Programs & Internships



Kat Adams is from Toledo, Oregon and a sophomore majoring in Elementary Educations & Biology at Linfield College. Her mentor this summer is Bill Hanshumaker. She will be helping interpret data acquired about burrowing shrimp in Yaquina bay. Kat will help create a model that educates people about the shrimp and other animals that live in the burrows they make.

Peter Blum will be a senior at OSU next fall majoring in Environmental Science, with an option in Oceanography. While at HMSC Peter will work with seismometers and interpret the data that is generated, helping create an interactive model for use in the visitor center to observe and learn from.



Emily Cornwell is a sophomore majoring in Biology and Spanish at Kalamazoo College in Michigan. Emily is working on a research project at HMSC this summer studying the effects of residency on the social structures of clownfish. With Peter Noah and Dr. Tim Miller-Morgan are as her mentors, Emily is looking forward to gaining valuable experience in aquarium and aquatic veterinary science.



Ashley Emerson hails from Kansas but goes to Mount Holyoke College, where she is a senior majoring in biology. She is working on a research project for Bill Peterson examining fish larvae, sorting samples collected from coastal waters and determining which species are present. The research seeks clues on the effects of climate change.

Return of Marine Biology Spring Term Course

Twenty-one OSU students spent the Spring term at HMSC, gaining field and lab experience during a 16-credit marine biology course. The course is popular among biology, environmental science and zoology majors, but was not offered in Spring '03 due to budget cuts, forcing some students to wait an extra year for the experience.

The course is team taught by researchers and faculty from both HMSC and the Corvallis campus. Gayle Hansen taught marine botany (algae) during the first two weeks of the course, followed by John Chapman, who taught marine invertebrate zoology. Marine ecology, physiology, conservation, and fish biology are also covered.

The course (BI 450/550) will be offered again in Spring '05.



First row kneeling: Erika Sander, Jasmine Fry, Brittaney Bearson, Beth Card, Kalli Welch; **Second row standing:** Maria Kavanaugh, Marissa Matsler, Sara Pursel, Leslie Ahlgren, Ellie Norris, Rachel Swenson; **Back row:** Frances Weeks, Kalin Lee, Sarah Messinger, Carissa Hall, Jason Thomas, Jessica Paulson, Sherine Bridges, Carrie Bartel, Skye Moret-Ferguson, Matthew Durham, Tristan Cross

Library News

Where in the World is Janet? (News from our favorite globetrotting librarian...)

For those of you who may be wondering if I will ever resurface and what am I doing, I thought it was time to update you. I started my sabbatical in January by working with others in the OSU Libraries investigating the concept of an institutional repository for OSU. We submitted our report in early March. Since mid March, I have been working in the Fisheries Department at the Food and Agriculture Organization of the United Nations in Rome. This work is also part of my sabbatical. Jean Collins, the FAO Fisheries Librarian, and I are exploring ways to enhance access to the information needed to support implementation of the Code of Conduct for Responsible Fisheries.

That's a mouthful! It means that we are describing the types of information needed for fisheries management work as it goes beyond pure science. Then, we are working with colleagues at fisheries institutes in Malawi, Mauritania, India and Thailand to document what kinds of information they have access to as well as what they produce.

Finally, we are proposing strategies for enhancing the access to both local information and the mainstream. Some of these strategies involved digitization while others are improved communications at a local level. The end product will be a FAO Fisheries Circular that we will have completed by the next meeting of the FAO Committee on Fisheries in early 2005.



As part of the project work, FAO funded my travel to Lilongwe, Malawi and it was fascinating. It was my first to Africa and very interesting to be working rather than just touring. (For a love/hate description of Malawi, read Paul Theroux's chapters on the country in *Dark Star Safari*.) I worked with colleagues at Bunda College of Agriculture's Library for five days exploring their use of information and how we could get better access through digitizing unique Malawi material. I learned much. The college has a great aquaculture facility with beautiful fish ponds and a very good lab. I didn't see much of the country, but every day did the drive with my colleague from Lilongwe to Bunda, about 30 km. We passed many commuters on foot, bicycle and mini-bus. Bicycles would be loaded with stacks of firewood, pigs and goats bound for the market, sugar cane and more. It's a poor country but people are industrious. The harvest has been good this year so the maize bins were full. The college librarian discussed his harvest and showed me part of it. He had more than his family would use so will share it with relatives. Interesting community. The Saturday I was leaving, my colleague drove me to Lake Malawi (about 1.5 hours) for lunch. It's huge and beautiful. Definitely a unique trip though long. My route was Rome/Amsterdam/Nairobi/Lilongwe (24 hours going down and 18 hours coming back.) Weather was lovely as it's winter there and in the 60s and low 70s during the day and cool at night.

My four months in Rome is drawing to an end. It's been an adventure both in living and working. I've had an apartment in central Rome so my commute is a 15 minute walk past the Coliseum, the Palatine Hill and the Circus Maximus. FAO is housed in a large, ugly 1930s marble office block with vast corridors and lots of offices. Working in a UN organization has given me a new perspective on international relationships and issues. It's also been interesting to be an US citizen in Italy; the war in Iraq not supported but Americans welcomed.

I would encourage all who have the opportunity to work internationally to do so. It has broadened my perspectives and informed my work as a librarian. Plus Rome is an experience unto itself. It's getting hot now, so the idea of getting back to the cool Oregon coast is quite enticing. I will be returning in a week and then completing work throughout the summer. I will back in the Guin Library on September 1.

Thanks to the OSU Libraries for support of my sabbatical and the FAO Fisheries Department for welcoming me as a visiting expert.

Ciao.
-Janet

Library News (cont'd) - New Faces at the Library

Many of you have noticed some new faces working at Guin Library lately. Several librarians from Valley Library have agreed to lend a hand at Guin Library while Janet Webster is on sabbatical through August. Our goal is to continue to provide the same high level of service which you have always received with Janet present. Please feel free to field your questions and comments to those who are now sitting in Janet's chair.

One new face belongs to Sue Goodson, who has been working at Guin Library each Wednesday to oversee most of the regular library work. Sue is OSU's Library Subject Specialist for several departments, including: Environmental Sciences, Environmental and Molecular Toxicology, Food Science Technology, and Rangeland Resources. She is familiar with Guin Library's collection and policies and will gladly facilitate getting answers for any of your questions. You can email her at: susan.goodson@oregonstate.edu, or send your questions to Guin Library's email at: hmsc.library@oregonstate.edu

Other visiting librarians from Valley Library have been steadily appearing in Janet's office each Friday and will continue to do so. Since January, the following librarians have shown up to provide service: Margaret Mellinger, Bonnie Avery, Cheryl Middleton, Jeanne Davidson, Bonnie Parks, Laurel Kristick, Richenda Wilkinson, Jane Nichols, and Anne Christie. The Librarian at COCC in Bend, Maureen Kelly, also made the trek to Guin Library to lend her assistance. Heather Pennington-Lehman, graduate student from UW's Information School, has volunteered on several days as well. Please make good use of our visitors since they have all gone out of their way to be here to offer you their knowledge and expertise.



Sue Goodson, filling in for Janet Webster at Guin Library on Wednesdays



Richenda Wilkinson has enjoyed helping out in the Guin Library

HMSC Welcomes Shawn Rowe - continued from page 1

how people learn in groups in informal environments such as museum settings. Such "free-choice learning" will be the focus of Shawn's activities at HMSC, where some 150,000 people come to the Visitor Center annually to increase their understanding and appreciation of the marine world.

"The Sea Grant marine education program works to improve science literacy and advance the science and art of education," said Extension Sea Grant program leader Jay Rasmussen. HMSC provides a "prime laboratory in which to advance that science and art of informal education," he said.

Shawn's personal experience with museums and science centers includes projects at the St. Louis Science Center, Missouri History Museum, and in the Ukraine. One of his particular interests is in developing "culturally appropriate activities" for people who don't usually go to museums.

Shawn believes that if such people feel comfortable and included when they go to science centers, over time they might more readily pursue further education in science fields.

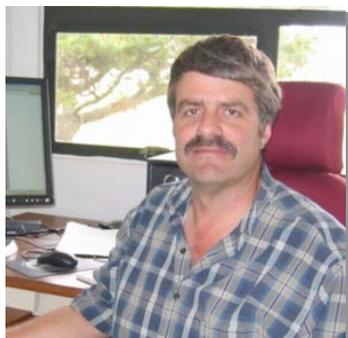
Before coming to Oregon, Shawn was a postdoctoral research scholar and fellow in science education at the Center for Inquiry in Science Teaching and Learning at Washington University. He received his master's from Florida State University and his bachelor's degree from Georgia State University. For six years he taught in community colleges in Florida and Georgia.

Shawn's wife, Olga Rowe, is a sociologist who has conducted research on group and individual identity and also taught at universities in Ukraine and community colleges in St. Louis. She expects to be continuing her research interests in Oregon, as well.

Personnel Notes

Monita Cheever joined HMSC as the new Director's Assistant in February. Monita and her husband, Jeff moved back to Oregon after living in Western Canada since 1982. While in Canada she and her husband ran a mobile dental clinic that provided dental treatment to isolated reserves. She ran her own ski school, competed on the Canadian National Dressage team, and was a senior consultant for an IT firm. Now her spare time is spent learning the game of golf, fly-fishing and jogging on the beach with their yellow lab, Ditto.





Brett Dumbauld joins Mark Camara at USDA’s Agricultural Research Service here at HMSC. Brett was hired as an ecologist to work on problems experienced by the aquaculture industry in west coast estuaries. His first area of focus is a long-standing problem that oyster aquaculturists have faced with two species of burrowing thalassinid shrimp that cause oysters to be smothered by sediment and die. Oyster growers in Washington state have applied a pesticide directly to the tideflats there to kill these shrimp since the early 60’s. The practice has always been viewed with concern and recently the growers have signed an out-of-court settlement to discontinue the practice by the year 2012. Further use of this pesticide (carbaryl) was prevented by the courts in Oregon in the early 1980’s and growers in both states are pressed to find alternative ways to control the shrimp.

Brett comes to the program with considerable background having completed his Ph.D at the University of Washington studying these shrimp, the effects of carbaryl on other estuarine organisms, and continuing to work with the industry to establish an integrated pest management program in Washington in his former position with the Washington State Department of Fish and Wildlife. The aquaculture industry is under increasing demands to justify their use of estuaries in part due to concerns over endangered west coast salmon stocks and also due to heightened interest in essential fish habitat (EFH) provided for other species and protection of this habitat under the Magnuson Stevens Act. Brett will continue to study how aquaculture practices influence estuarine habitat and processes including use of these habitats by juvenile salmon and other species. Brett has an office in the east wing at HMSC and laboratory space in the EPA facility here. He sees great connections with the HMSC research community and hopes to make a valuable contribution.



Julie Howard is the “new” administrative assistant to Extension Sea Grant Director Jay Rasmussen. Julie comes to HMSC after working for 23 years as a secretary with the U. S. Postal Service. She provided administrative support to five different executive positions in her years with the USPS in the Eugene and Portland offices. In 2002, Julie relocated to the Oregon coast and worked out of the Yachats and Siletz Post Offices.

Julie has a double BA in English/Journalism (U of O); and is in the "thesis process" on her Masters at Marylhurst University (Interdisciplinary Studies). Besides her primary love for the natural beauty of the Oregon Coast, Julie enjoys creative and personal writing, books, movies, laughter, authenticity, the spirit of open-minded inquiry, and activities that further personal growth and development.

Nadine Stillwell joined the HMSC Visitor Center in May as the new Education Program Assistant, which was vacated by



Kaety Hilderbrand. Kaety left the Visitor Center in April after accepting a job as the youth volunteer coordinator at the Oregon Coast Aquarium. Nadine moved to Newport last fall after working at Fort Stevens State Park for 6 years,

four of the years she was the Interpretive Park Ranger. Fort Stevens is the largest campground in Oregon State Parks and has over 1,000,000 visitor annually. Nadine is also a certified interpreter from the National Association for Interpretation and will soon be certified as an interpretive trainer. Nadine is a great addition and came just in time for the busy school group and summer tourist seasons.

...and a fond Farewell to Ian Fleming



“Hey, who is supposed to be doing the lifting here?!”
 Best wishes to Ian Fleming, who left in June for eastern Canada, where he will be working as the new Director of the Ocean Sciences Centre at Memorial University of Newfoundland in St. John’s. HMSC will miss you!

Social Committee News

If you haven't been in the Staff Room lately, take a minute to check out the changes.

A sliding glass door has been installed and the ramp required for ADA compliance is now in place, providing easy access to the courtyard, new outdoor patio and picnic tables.

The new kitchen counters, cabinets and appliances provide plenty of space for

food preparation; indoor carpeting is next. As for the furniture, the gray round tables are temporary, to be replaced by more permanent tables in the near future. The sofa, however, is a keeper. Generously donated by Jan Auyong, it's as comfortable as it looks.

So stop in, look around, think about what you want to see in here, and start saving your spare change – the social committee will soon be looking for

your ideas, and funding sources, to make this room work for you.

Mark your calendars – the Annual HMSC Picnic will be held on the second Saturday in September, at Moonshine Park. For those who want to plan ahead, we have area "A" reserved from Saturday noon until Sunday noon – campers are welcome. See Carol Cole for details.

HMSC Happenings



HMSC Makes a Splash at Rogue Ales' Pint Fest

HMSC teamed up with the Oregon Coast Aquarium to give blood and raise money for the American Red Cross at a July 15 event sponsored by Rogue Ales at Brewers on the Bay. George Boehlert, Scott Heppell, and the Rogue's general manager Conrad Deskus took turns sitting in the dunk tank cage, taunting people to try and sink them with a mean pitch. The event raised 102 pints of blood for the Red Cross, and over 40 of those were donated by HMSC faculty, staff and students. Way to go!



SeaFest Draws a Crowd ...continued from page 1

The day started at 10 a.m. with a crowd of several hundred people gathered outside the Visitor Center entrance for the opening ceremony. HMSC Director George Boehlert welcomed the crowd and introduced OSU President Ed Ray, who lauded Senator Mark O. Hatfield's many years of leadership in promoting ocean science research and higher education for Oregon. Senator Hatfield then took the podium and offered a warm gesture of thanks to the sign language interpreter, before addressing the crowd and expressing his appreciation for the research and education work of the center.



Senator Mark O. Hatfield addresses the crowd at the opening ceremony for SeaFest 2004.



Children line up to get "eaten" by a giant Chinook salmon. (Photo courtesy of T. Dilman)

A 29-foot long Chinook salmon named "Claudia", shared lawn space with the Oregon Dungeness Crab Commission's huge inflatable "Crab Louie" a luring visitors over towards the Barry Fisher building and the dozens of scientific exhibits inside the "Science Zone". Hands-on exhibits highlighting current research conducted at HMSC engaged kids with microscopes and magnifying glasses for inspecting live organisms and preserved specimens.



The Barry Fisher building garage housed some of the most popular exhibits in the "Science Zone".

With the HMSC parking lots filled nearly to capacity by 11:30 a.m., arriving vehicles were directed to overflow parking at the Oregon Coast Aquarium, where a shuttle bus would pick up passengers and bring them to the front entrance. According to volunteers directing traffic, most cars had three or more passengers, and many were large families. This observation, echoed by exhibitors and volunteers conducting exit surveys, indicates that families were a big part of the crowd at SeaFest. Not surprisingly, hands-on activities and learning games for kids were the most commonly cited responses to the exit survey question "what did you like best?"



SeaFest Draws a Crowd ...continued from page 10

Among other popular attractions at SeaFest were: live animal displays and other Visitor Center exhibits, back wing tours, the estuary walk, research vessels at the dock, and the search and rescue demonstration in Yaquina Bay, performed by the U.S. Coast Guard.

The HMSC is grateful to the many volunteers and community organizations who participated and helped make SeaFest 2004 such a success.



SeaFest attendees enjoyed unobstructed views of the U.S. Coast Guard's search and rescue demonstration exercise in Yaquina Bay.



Visitors line up to tour the R/V Robert Gordon Sproul, a Scripps Institution of Oceanography vessel in port during SeaFest.



Researchers from the College of Oceanic & Atmospheric Sciences explain the use of oceanographic research equipment on display.

Upcoming Events

HMSC to Participate in Lincoln County Relay for Life Aug. 6 - 7

All of us know someone whose life has been affected by cancer, and every year the Lincoln County Relay for Life raises thousands of dollars towards the goal of eliminating this terrible disease. This is a great community event bringing hundreds of participants together for a fun-filled 24-hour event at Newport High School in the fight against cancer.

Be a part of the HMSC team by signing up for a time slot to walk around the track and helping raise money towards a cure. Information packets and a sign-up sheet are in Monita Cheever's office (Rm 101, HMSC Director's reception, across from mailroom). For more information, contact Ken Hall at 867-0234 or email: ken.hall@oregonstate.edu



Seminars

Wed. July 28th, 3:30pm
Guin Library Seminar Room
"Scientific Research: Value Free or Ethical Vocation?"

Dr. Courtney Campbell,
Director, Program for Ethics, Science, and the Environment, Oregon State University

Wed. Aug. 18th, 7:30pm
Hennings Auditorium
"Beachcombing for Science"

Dr. Curtis C. Ebbesmeyer
Oceanographic researcher and founder of Beachcombers' and Oceanographers' International Association (Lecture co-sponsored by Friends of HMSC and CoastWatch)

Earthquake off Oregon Coast Prompts Safety Review - continued from page 1

earthquake preparedness. The quake was felt differently by many people, and not at all by some, resulting in a range of reactions from near panic to oblivion.

The HMSC safety committee met on July 21 to discuss lessons learned from this most recent occurrence and what could be done to better prepare for the next earthquake. The meeting was attended by Don Bodenmiller, Steve Ferraro, Dave Johnson, Sean Matson, Lori Parker, and Randy Walker. They agreed that there is some confusion about the proper course of action during and after an earthquake. There needs to be an understanding of procedures to follow and drills often enough to make the procedures easy to follow even if folks are in a state of shock, or panic. All agencies at HMSC should adopt the same procedures as much as practical, so there will be little confusion over what to do regardless of what agency's building a person is in.

The Safety Committee agreed to coordinate with the HMSC Management Committee to schedule a drill at the earliest possible date. The consensus of opinion of the Safety Committee is, employees should be given the procedures for earthquake and Tsunami events prior to the drill and a complete drill including evacuation should be carried out.



General procedures, during an earthquake:

- 1. Do not rush out doors. Stay inside since most injuries occur from falling glass, plaster, bricks, debris and electrical lines as people are leaving the building.***
- 2. Cover your head with your arms and stand against an inside wall or doorway, or take cover under a desk, table, or bench in case ceiling or office furniture should fall.***
- 3. Stay away from all glass surfaces including windows, mirrors, etc.***
- 4. Do not attempt to restrain falling objects unless they endanger your life.***
- 5. If you are outdoors, remain there. Move into the open. Do not stand under overhangs on the outside of buildings. Move away from power lines, trees and stay in open areas away from all structures.***
- 6. Immediately after the ground stops shaking, head for a Tsunami high ground area. The evacuation area for HMSC is the area around the base of the South side of the bridge and the hill on the other side of 101 near the Old Cemetery on Abalone Street. It must be assumed that a tsunami will follow an earthquake until given the all-clear signal. Remain in the evacuation area until given the all clear. If you are unable to make it to high ground, the place to go is the second story of the Barry Fisher Building. This building was built to seismic zone 4 standards and is the safest place to be onsite after an earthquake and during a tsunami. The area by the bridge to evacuate to is outlined in the OSU Emergency Procedures Manual. The Barry Fisher Building is not marked in the manual. If you feel this is the place you would go in an emergency, please familiarize yourself with the building location.***

HMSC Currents is the newsletter of the Hatfield Marine Science Center community, published 4-6 times a year. Please submit any news items, photographs, personnel updates, brief research articles, or announcements of interest to: Ken Hall (ken.hall@oregonstate.edu) or Monita Cheever (monita.cheever@oregonstate.edu) at any time. A link to this newsletter (and previous issues) in PDF format can be found on the HMSC general information webpage: <http://hmsc.oregonstate.edu/info.html>