

Currents

December, 2009

Alumni Newsletter of the Oregon Institute of Marine Biology
<http://www.uoregon.edu/~oimb/>

Prosperity and Productivity in the Shanks Lab

The laboratory of Professor Alan Shanks has been humming with productivity this year. Alan's lab uses many undergraduate interns, and it currently supports 3 Ph.D. students and 3 M.S. students working on a variety of projects including snail and chiton ecology, behavior of territorial limpets, the dispersal of larvae in nearshore waters, and the brooding behavior of sea spiders. Alan's work is supported by a variety of funding sources, including two large grants from the National Science Foundation,



grants from the Oregon Dungeness Crab Commission, and an environmental impact grant from Jordan Cove Natural Gas. His work on the recruitment biology of Dungeness Crabs is particularly noteworthy because of its important implications for Oregon's most valuable commercial fishery. Many years ago, Alan and his students invented an inexpensive light trap (above right) that attracts the megalops stage of crabs. By counting the number of megalopae captured, he has been able to predict future catches of crabs with a fair degree of accuracy. His work contributes to the sustainability of this important fishery. Alan's recent papers reviewing larval dispersal distances of west-coast invertebrates and fishes have been used extensively in discussions of marine reserve design.

Open House for K-12 Students and Families



OIMB graduate students in the GK-12 program hold an annual open house in which the community is invited to see what's going on at OIMB. Each graduate student sets up a hands-on lab exercise or display highlighting his or her particular field of work. This year's event on April 28 saw a record attendance of more than 500 enthusiastic elementary school kids and their parents. As in previous years, Northwest Natural Gas Corporation provided delicious grilled hot dogs and drinks for everyone in attendance.

OIMB Welcomes New University President and New Dean



Both the new president of the University of Oregon and the new dean of Arts and Sciences visited OIMB this year, each spending a night in on-campus accommodations and learning about the breadth and depth of OIMB programs and facilities. President Richard LaRiviere and his wife Jan (left) visited on July 29-30. They greeted staff and toured the facilities, then joined a large contingent of political, business and education leaders from the local community for lunch in the OIMB dining hall. All leaders were given an opportunity to express to the president their individual perspectives on how OIMB and the University of Oregon contribute to the community. President LaRiviere then addressed the group, providing his vision on the role of the University in the state and beyond. President LaRiviere

has extensive experience in business and academia, with his major scholarly interests being the languages and cultures of India.



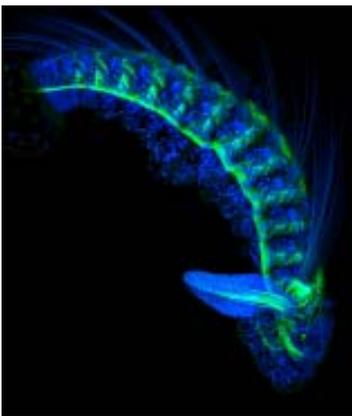
Dean Scott Coltrane visited OIMB on May 15 with his wife Jan and daughter. Dean Coltrane, a sociologist by training, leads the College of Arts and Sciences, the largest academic unit in the University. During their visit, the Coltranes joined ecology students from the Biology Department in Eugene and faculty from OIMB on a field trip to Cape Arago (above, examining a starfish; Professor Richard Emlet is on the right, lecturing the dean!).

Charleston Marine Life Center Underway

Fund raising and site preparations are underway for the Charleston Marine Life Center, a 5000 sq. foot museum and aquarium on the OIMB campus. Plans are under review in Salem and major construction should begin soon. Much of the existing concrete on the site has been removed or resculpted, and the old open-air display pavilion constructed by the Rotary Club in 1989 has been moved to another site, where it now functions as a carport for OIMB vans and trucks. Nearly a half million dollars has now been raised for the project, but about \$150,000 is still needed.

OIMB in ODFW

Dr. Caren Braby, who taught Marine Molecular Biology at OIMB as a visiting instructor in 2006-2007, has recently been appointed as head of the Marine Resources Division of the Oregon Department of Fish and Wildlife. Alix LaFerriere, who completed a M.S. degree in the Shanks lab in 2007, has been hired as the Marine Reserve Research Project Coordinator in the same organization. Although OIMB has not taken an official position on Oregon marine reserves, several faculty have been active participants in the discussion. Alan Shanks, Jan Hodder and Steve Rumrill are members of the local committee evaluating the feasibility of a reserve off Cape Arago and Craig Young serves on a committee, STAC, that advises state agencies on the science of marine reserves and other marine issues.



COSEE Faculty Workshop

In July, OIMB hosted the first of a series of week-long residential summer workshops for community college faculty developed by the COSEE Pacific Partnership program based at OIMB, one of 12 Centers for Ocean Science Education Excellence funded by NSF. Our program, a collaboration among several member labs of the Western Association of Marine Laboratories, aims to integrate current marine science research and content into community college curricula by connecting faculty with marine laboratory scientists. During the workshop, participants learned about a different habitat or topic each day and discussed environmental issues associated with the various topics. Topics included the open ocean, deep sea, estuaries, rocky shores, physical oceanography, dead zones, Dungeness crab fishery, island and seamount ecology, bacteria, bioluminescence, invasive species and ocean acidification. The instructors included OIMB faculty Craig Young, Alan Shanks (left), Jan Hodder and Cynthia Trowbridge as well as visiting faculty members Jim Carlton (Williams College), Chuck Wimpee (University of Wisconsin, Milwaukee), and Burke Hales (Oregon State University).



Visitors from Egypt

Walaa and Enas Shaban, husband and wife biologists from Al Azhar University in Egypt, are visiting OIMB this year while Walaa completes his M.S. work on the cultivation of caprellid amphipods for aquaculture. He is working in the Emllet lab. They are shown here with their children, Salma and Ahmed.

Biology as Art

OIMB faculty members Svetlana Maslakova and George von Dassow, a husband and wife team of marine biologists, recently assembled an exhibit of captivating images at the Coos Art Museum in Coos Bay, OR. On display from February through April 2009, the exhibit entitled: "**Blow up: Artistic Microscopy**" featured confocal, scanning electron, and polarized microscopy images of marine invertebrate embryos and larvae, muscles and stylets of ribbon worms, and crystals. The gala opening event (upper left) featured catering from the Oregon Coast Culinary Institute and was attended by a large eclectic crowd of art admirers and scientist well-wishers. A slide show of George and Svetlana's pictures may be viewed in the online version of the Autumn 2009 Oregon Quarterly Magazine: http://www.oregonquarterly.com/autumn2009/web_extra_3.php

Moving on...

Three graduate students completed masters degrees during 2009:

Katie Bennett (M.S., Shanks Lab) began her masters research on chiton ecology, but became interested in the embryology of deep-sea cidaroid sea urchins during last year's deep-sea biology course in the Bahamas. She successfully reared the larvae of *Cidaris blakei* through metamorphosis (a process that took more than 6 months) and confirmed the absence of a hyalin layer in shallow and deep-sea cidaroid urchins. Following her defense, Katie celebrated by visiting the Stazione Zoologica in Naples Italy, the oldest extant marine laboratory in the world.



Heather Austin (M.S., Young Lab) completed a two-year study on the effects of salinity on the sea anemone *Metridium senile*. In an extensive series of field transplants and laboratory experiments, Heather showed that the penetration of this species into the South Slough estuary differs between the wet and dry season and that *Metridium* has a surprising ability to partially regulate its internal osmolality and magnesium ion concentration, parameters that increase salinity tolerance.



Erin Morgan (M.S., Emllet Lab) completed a non-thesis masters degree on eelgrass ecology. She is now enrolled in a professional certificate program in wetlands restoration at the University of Washington.



OIMB Students Recognized by Agencies and Societies

Several OIMB graduate students have received support through competitive grants and fellowships in 2009. Laurel Hiebert (right), a Ph.D. student in Sveta Maslakova's lab, has received a prestigious NSF



graduate fellowship in support of her work on the larval development and evolution of the nemertean worm *Micrura* (larva above). PhD student Stephanie Schroeder (Shanks Lab) received the University of Oregon Phyllis Para Talus Presidential Fellowship and travel grants from the Malacological Society of London and the Pacific Northwest Shell Club to support her work on the territorial behavior of intertidal limpets. Ph.D. student Maya Wolf (Young Lab) received the University's Paul and Helen Weiser Memorial Fellowship and a travel grant from the American Society of Parasitologists in support of her dissertation work on the life cycle of a copepod parasite residing in nudibranch gastropods.

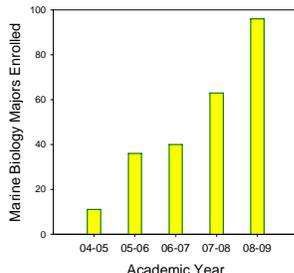


We thank these individuals and organizations for their generous donations to OIMB over the past year.

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| Sylvia Behrens Yamada '74 and Russell Yamada | |
| Sharon Bronson Northby '69 and Jan Northby | |

Enrollments Rise as Marine Biology Major Grows

The past couple of years have seen record enrollments in OIMB classes, fueled in part by the Marine Biology Major that was begun 5 years ago. In 2009, 270 students enrolled in accredited OIMB courses and numerous groups from other colleges and universities used OIMB facilities for their own courses. The graph below reveals a healthy increase in the number of Marine Biology Majors since its inception.



Scholarship Recipients

Some of your donations are used to support scholarship funds for students who need assistance in order to experience an intensive marine lab education. Over the past 5 years, we have awarded 92 separate scholarships from funds administered by and for OIMB, including the Laura Bickerstaff Memorial Scholarship, the Neil Richmond Memorial Fellowship, the Robert C. Terwilliger Fellowship, the Moberly Memorial Award, and the OIMB Alumni Fund. This year's scholarship recipients were Brittney Dlouhy, Jamie Torgerson, Matthew Kleinman, Chelsea Berggren, Kate Thomas, Annie Walser, Christina Wickman, Cherie Lawrence, Daniel Erickson, Alinda McMorran, Elizabeth Cooney and Maya Wolf. All of us are grateful for the endowments and other contributions that make this assistance possible.

New Courtesy Faculty

The University of Oregon has appointed two new courtesy faculty to the OIMB staff: Dr. Cynthia Trowbridge and Dr. Sandra Brooke. Both individuals have taught courses at the University of Oregon and both are active in research on marine animals. Other active courtesy faculty at the institute are Steve Rumrill and George Von Dassow.



OIMB's own Cover Girl!

OIMB was the feature story in the Fall 2009 edition of Oregon Quarterly, the U. of Oregon Alumni magazine. The article, written by freelance writer Susan Glassow, was illustrated by professional photographer Jack Liu. Susan, who is the mother of recently graduated M.S. student Katie Bennett, researched her article carefully by interviewing faculty, staff, students and members of the community. The article gives a clear and flattering picture of the current impact of OIMB both locally and nationally. Alumni should have received a copy in the mail. If you have not seen the article, visit the on-line edition at the following web site: http://www.oregonquarterly.com/autumn2009/web_extra_3.php The cover girl, incidentally, is invertebrate parasitologist Maya Wolf, a Ph.D. student in the Young lab.

Help Support OIMB Students, Projects, Programs and the new Marine Life Center!

Gifts of any size are appreciated and needed. If you would be interested in discussing tax implications or other aspects of charitable giving, please call the director at 541-888-2581 ext. 299. He will put you in touch with a professional who can advise you.

To donate to one of the following funds, please provide the following information with your check made out to OIMB.

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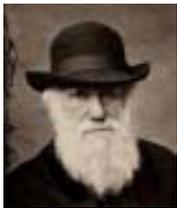


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This year marked the 200th anniversary of Charles Darwin's birth and the 150th anniversary of the publication of Origin of Species. Celebrations by scientists everywhere marked this occasion. At OIMB, we celebrated with a public lecture in October highlighting Darwin's extensive contributions in Marine Biology, the field in which he made his first scientific discoveries and among his most enduring contributions. As I was preparing to deliver this lecture in authentic Victorian dress (below right), kindly loaned by the Very Little Theatre in Eugene, I had occasion to contemplate the small role of Charleston, Oregon in the rich heritage of Marine Biology worldwide. Our campus is full of historical photos, buildings and artifacts that remind us daily of the sturdy shoulders upon which we stand. Our legacy includes many of you, our alumni and friends, who made discoveries, wrote dissertations, attended lectures, built careers, and still donate generously to the advancement of this special jewel on the Oregon Coast. Thanks for believing in OIMB and being part of our incredible heritage.



Craig Young, OIMB Director



OIMB Grad Students Prevail over OSU's Hatfield Marine Science Center in Marine Biology "Civil War" games



The annual football game between the University of Oregon and Oregon State University, the so-called "civil war", is legendary. Several years ago, marine science students at the two rival institutions began their own version of the games. This year's OIMB-Hatfield exchange took place on May 29. Nine UO grad students spent the day in Newport, attending a special workshop on effective poster presentations. Following the workshop, everyone competed in a grueling physical challenge that involved digging for worms in the mud, bobbing for plastic sharks, spoon races with invertebrates, and racing in survival suits. OIMB brought home the trophy, which is decorated with PVC pipe, plastic mesh, cable ties, duct tape and other materials emblematic of marine field research. President LaRiviere and Director Young (left) were visibly proud of the victors!



OIMB Scientists and Students Explore Deep-sea Coral Reefs and Methane Seeps in Gulf of Mexico



Craig Young, Richard Emllet, Michelle Wood and George Von Dassow led a deep-sea expedition to cold methane seeps in the Gulf of Mexico in October. Eight OIMB graduate students were taught deep-sea biology on the cruise and all participants made submersible dives and participated in research projects on the larval development and reproduction of deep-sea organisms. This is the last cruise on a 4-year deep-sea project funded by the National Science Foundation. Cruise highlights were published on line in a real time blog that was followed by K-12 students back home. The blog, which was organized by Trish Mace, is available at the OIMB Kids website: <http://www.oimbkids.com/v2/>

Record Research and Education Funding at OIMB

OIMB scientists currently hold \$5,365,130 in external funding for research and educational programming, including an NSF COSEE Grant (P.I. Hodder), an NSF GK-12 grant (P.I.'s Shanks and Hodder), two research grants from the NSF Biological Oceanography Program (P.I.'s Young, Emllet and Wood; P.I. Shanks), and two grants from the NSF Molecular and Cellular Bio-science Division (Von Dassow, P.I.). Additional funding comes from various state agencies and private companies. With this external funding, the small faculty at OIMB is expected to spend approximately \$1.4 million on research and outreach programming annually over the next few years.