

MRU eNews

Newsletter for UC Multicampus Research Units and Programs

University of California Office of Research



UC MRUs Address Management of Coastal Resources

California depends on its coastal and marine resources to create over half a million jobs and to bring in \$10 billion annually through recreation and tourism. In addition, the state has six major ports and a commercial fishing industry that together generate over \$4 billion yearly in revenues. To sustain this industry, it is essential that California maintain the health of its coastal resources, yet it is becoming apparent that human activities have led to significant modifications in the ecological systems of many coastal zones. Near-shore waters receive wastewater from domestic, industrial and agricultural drainage; contaminated sediments have begun to restrict dredging in some ports; invasive non-native species are threatening California's estuaries, including San Francisco Bay (which is the most heavily invaded estuary in the U.S.) Many of the states fisheries have collapsed, and former economically-valuable

species are on the endangered list.

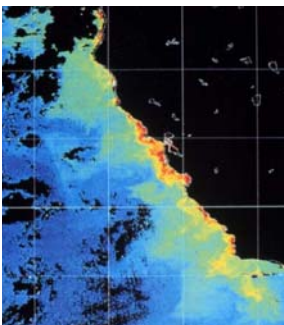
It is in this challenging context that two UC Multicampus Research Units, the **UC Marine Council (UMC)** and the **California Sea Grant College Program**, promote research and education on California's coastal resources. The UC Marine Council fosters and coordinates marine policy, research, education and public service throughout the UC

coastal and marine resources, and through its Extension and Communications component, transfers information and technology developed in its research to industry and government. Sea Grant's marine advisors and specialists form a direct link for two-way communication between the

university, industry and the public. Both UCMC and Sea Grant have recently participated in efforts, in consultation with the State Resources Agency, to encourage the establishment of coastal management degree programs at UC.

A good example of how these units directly improve the environment and lives of Californians is the **Coastal Environmental Quality Initiative (CEQI)**, a \$2 million research grants program for UC faculty and graduate students administered by UCMC with funding from the state legislature. Through close interaction with the State Resources Agency, the Marine Council each year sets new research priorities for CEQI focused on California's ocean issues.

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Scientists monitor ocean chlorophyll levels off the California coast (above) in order to judge the health of ocean plant life and thus the state of local marine food chains. Shoreline erosion threatens coastlines at Capitola (right) and urbanized areas near Pacifica (below), south of San Francisco. Photos courtesy of Gary Griggs.



system. UC San Diego-based Sea Grant—the largest of 30 Sea Grant programs across the

nation—similarly sponsors research at universities throughout the state on the sustainable use of

New Network to Monitor Health of California's Ocean Zones

In the coastal zone, ocean, land and the atmosphere come together. Managing and monitoring the natural processes and human activities that impact coastal resources is a huge challenge—and one that is being addressed on regional, national and international levels. Strategies for sustaining a healthy coastal environment need to be based on the best available current scientific understanding as these strategies have a direct impact on water allocation, water quality, fisheries management, marine protected area design, conservation, oil spill response, and other activities along the coast and in the interior of California. Hence the current high level

of interest in coastal ocean observation systems.

The UC Marine Council has provided two years of funding through the Coastal Environmental Quality Initiative (CEQI) to establish the **Network for Environmental Observations of the Coastal Ocean (NEOCO)**. This is a multi-campus collaboration that will result in a network of coastal environment observation sites. Seven UC campuses are participating. Each site will be instrumented with sensors for temperature, salinity, sea level, chlorophyll fluorescence, turbidity, dissolved nitrate concentration and meteorology to collect physical, chemical, and biological data. They will be linked to

other observation programs. The goal is to provide a simple, but high-quality record for the next century.

NEOCO will serve the research and education needs of UC students and faculty researchers while providing California with a much-improved record of changing conditions in the coastal ocean (whether due to local expression of climate change or due to the effect of local human activities). In addition, this real-time data will be of direct use to a variety of ocean users and the NEOCO sites will provide an invaluable facility for marine education. For more information on NEOCO visit the project website at <http://www.es.ucsc.edu/~neoco/>.

Message from Vice Provost Coleman

The UC Marine Council is one of several UC research units created in recent years to serve the interests and needs of the people of California. UC faculty and graduate students have taken up the challenge of finding ways to preserve California's coastal resources for the long term, while recognizing, at the same time, that fisheries, ports, recreation and tourism are major economic engines for the state, producing substantial revenue and thousands of jobs in California.

In these lean budgetary times, the University of California is doing all it can to preserve funding for these critical research programs. There is widespread agreement that UC research plays a direct role in stimulating the state's economy, in confirming the soundness of its social policies, and in preserving its natural wealth and resources. The UC research findings of today will yield benefits for years to come.

I invite you to visit the new University of California website at www.universityofcalifornia.edu for a brief overview of how organized research is making a difference in California and beyond.

Lawrence B. Coleman
UC Vice Provost for Research

Visit our website at:
www.ucop.edu/research/

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Profile: Russell Moll, California Sea Grant Director



Dr. Russell Moll was appointed Director of the California Sea Grant in September, 2000, after serving as Director of the Michigan Sea Grant Program, President of the nationwide Sea Grant Association, and Associate Director for the Biological Oceanography Program for the NSF in Washington. Dr. Moll has published extensively on the Great Lakes, on nearshore marine environments and on temperate and tropic rivers, with a particular interest in the biology of phytoplankton and biostatistics. His work has taken him to West Africa, where he managed a research team conducting a major study of the Gambia River. Dr. Moll earned his Ph.D degree in 1974 from the State University of New York at Stony Brook.

Upcoming Events *meetings and conferences*

RecFish II. February 13-26, St. Petersburg, Florida. A national symposium for the marine recreational fishing community, scientists and managers to deliberate the evolving use of Marine Protected Areas. Co-sponsored by the National Sea Grant Office. WWW.nmfs.noaa.gov/irf/rec2.htm

Third International Conference on MARINE BIOINVASIONS. March 16-19, Scripps Institution, UC San Diego. Sponsored by the California and MIT Sea Grant Programs. FTP://seamail.ucsd.edu/pub/pdf/Bioinvasion03.pdf

Sea Urchins: International Conference on Fisheries and Aquaculture. March 25-27, 2003. Puerto Varas, Chile. Conference to assess the current state of sea urchin fisheries and aquaculture around the world. WWW.ifop-acuicultura.cl/SeaUrchin2003/index.html

OCEANS 2003 Conference. "One Hundred Years of Oceanography and the Century to Come." September 22-26, 2003. San Diego Convention Center, Mission Valley. Conference in honor of Scripps's Centennial. For more information contact Bob Wernli, Conference Co-Chair, at wernli@spawar.navy.mil.

READ ABOUT ALL THE UC MRUs IN THE
GUIDE TO UC MULTICAMPUS RESEARCH UNITS
AT: WWW.UCOP.EDU/RESEARCH/MRU.PDF

News of Recent Marine Research

"CALIFORNIA AND THE WORLD OCEAN '02 CONFERENCE" SPOTLIGHTS UC RESEARCH

The *California and the World Ocean '02* conference was held in Santa Barbara this past October. The **California Sea Grant College Program** (Sea Grant) was a sponsor and the **UC Marine Council** (UCMC) a co-sponsor of this event that was organized by the California Resources Agency, the California Environmental Protection Agency and the Coastal Zone Foundation. This was the third such meeting convened since 1964 to revisit state strategies for resource stewardship and economic sustainability and to share California's experience with a national and international group of attendees.

Participants from county and state agencies, non-profits, environmental groups, colleges and universities met for three days to address marine protected areas and reserves, water quality, shoreline erosion, support for marine research, invasive species and other pressing issues affecting our coastal and marine resources. The conference underscored the state's need for policy and scientific input to help create, implement or improve ocean and coastal resource management strategies.

The UCMC selected six PIs and graduate students who have received funding through

the California Environmental Quality Initiative (CEQI) to present their work in a special session entitled "Responding to California's Ocean Agenda: The California Coastal Environmental Quality Initiative". Topics included phytoplankton toxins, marine invertebrate ecology and biology, and analysis of data from coastal observation systems.

Sea Grant organized the "Sea Grant Graduate Researcher Symposium" with representatives of the more than 1200 students who have been involved with the California Sea Grant Trainee Programs presenting their research. Poster sessions provided further opportunities for the exchange of research results and ideas among the diverse constituents for whom protection and management of ocean and coastal resources is a concern.

SCHEIBER NAMED POLICY ADVISOR FOR UCMC

Professor Harry N. Scheiber, Director of the Earl Warren Legal Institute and the Stefan A. Riesenfeld Professor of Law and History UC Berkeley, was recently appointed UCMC Policy Advisor. A professor of marine policy law with hundreds of publications on a range of topics, Professor Scheiber's latest book is entitled, *Law of the Sea: The Common Heritage and Emerging Challenges*. He also serves as Chair of the Sea Grant Advisory Board.

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Recent grants have supported innovative research on the effects of pesticide run-off on salmon populations, the changing habitats of fish and mammal species, and coastal circulation and pollutant dispersal patterns, among dozens of other projects. UCMC also recently prepared, at the request of a state legislator, a comprehensive report on the ecological impacts of offshore oil platform removal in order to inform future decision making. Both UCMC and Sea Grant are helping to position UC as the leading resource for the state of California in the exercise of responsible stewardship of its extensive and valuable marine resources.

For more information on the California Sea Grant College, see www-csgc.ucsd.edu/.

For more on the UC Marine Council and the Coastal Environmental Quality Initiative, see www.ucop.edu/research/ucmarine/index.html. An online directory of nearly 700 UC marine researchers and descriptions of the university's many marine-related programs is also available at that site.