

MARINE SCIENCE NEWSLETTER

A PUBLICATION OF THE DEPARTMENT OF MARINE SCIENCE AT COASTAL CAROLINA UNIVERSITY
P.O. BOX 261954, CONWAY, S.C. 29528-6054 • SPRING 2003

NOTES FROM THE CHAIR *by Keith Walters*

An official “changing of the guard” occurred in August 2001 when two years of distributed leadership came to an end and the Department of Marine Science hired its first chair from outside the university — me. My move from Middle Tennessee State University, located 30 miles south of Nashville, was prompted by a growing conviction that global warming would not turn my backyard into beachfront property in my lifetime and, more importantly, by the opportunity to become involved with a dynamic and evolving marine science program. The move was made all the more enjoyable by a Big Yellow Van breakdown on I-20 between Atlanta and Augusta. One of these days I’ll have to ask our physical oceanographer, Craig Gilman, why sea breezes don’t reach central Georgia in August. I’ve ensconced myself in Murrells Inlet a few minutes away from restaurant row (and an excellent sushi bar) and have completed one full year at the helm of the Department of Marine Science. The year has been witness to traumatic national events and some less dramatic departmental happenings that lay the foundation for the many new challenges of the upcoming year.

Unfortunately, the precipitous economic downturn of last fall has delayed the planned timeline for a new science building. The delay has necessitated innovative renovations to our existing facilities. Room SCI 126 has been converted into faculty and student office and research space designed to accommodate microbial and biomolecular activities. Trailer SCX 4 has been renovated into four office-labs to accommodate ongoing (e.g., myself) and new needs for research space (e.g., anticipated new hires). Unfortunately, even with completed and planned building renovations, space continues to be a limited resource and a major concern for the department.

On the academic front, departmental accomplishments have been many and varied. The traditional end of the semester Marine Science Student Research Symposium in April was expanded into a half-day event open to contributions from all students in Natural and Applied Sciences. The best oral and poster presentations received awards and although

marine science students took top honors I anticipate stiff competition from students in all the college’s departments. All participants agreed the symposium should continue as an annual college event.

The Department of Marine Science also reached an enviable goal of posting the greatest student retention of any department on campus; more than 80 percent of our Spring 2002 students were registered for Fall 2002. Although not experimentally verified, the increase in student retention suspiciously corresponds with expanding outreach efforts by our student services coordinator, Penny Oakley. The increased retention combined with increased new student enrollment is pushing our undergraduate program close to the magic 600 majors level.

Potentially the most momentous event of the past academic year was departmental, college and university approval of the new masters-level graduate program in Coastal Marine and Wetlands Studies. As I write, faculty are preparing syllabi for the program’s core course offerings and anticipated start date in Fall 2003. A unique aspect of the new master’s program is the requirement that students gain expertise in the areas of resource policy and management. The challenges associated with

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Keith Walters teaching MSCI 302L Marine Biology Lab

INTRODUCING **The Department of Marine Science's Newest Instructors: Elizabeth Moses and Erin Wolfe**

☛ **Elizabeth Moses** received a bachelor's degree in psychology from Wofford College (1986) and a master's degree in wildlife biology from the University of Massachusetts-Amherst (1995). Her background includes animal husbandry, marine education in parks and aquariums, aquaculture, and seven years with NOAA/NMFS as a contract marine mammalogist and commercial fisheries port agent. She most recently spent three years helping to produce a national traveling museum exhibit detailing the 300-year history of Jewish life in South Carolina. A native of South Carolina, she has also lived in Florida, Massachusetts and North Carolina.

☛ **Erin Wolfe** graduated from Franklin and Marshall College with a bachelor's degree in Biology (2000) and continued her education at the University of South Carolina. She received her master's degree in marine science from USC in 2002. Under the direction of Professor Sarah A. Woodin, she worked as a research assistant and technician while completing her master's degree. She also was able to gain valuable experience teaching through a teaching assistantship during this time.

THE RESEARCH SYMPOSIUM

The Department of Marine Science has offered MSCI majors an opportunity to present their research each semester at a research symposium. This past year the symposium was expanded to allow any students in the Natural and Applied Sciences the opportunity to compete for the best oral and poster presentation awards. The event was a success and will be held annually. This year's research symposium is scheduled for April 2003 (the exact date will be announced during the semester). If you are a student in the College of Natural and Applied Science and you would like the opportunity to present your work, please contact Professor Keith Walters at kwalt@coastal.edu.



Mario Travaline (left) and Jason Garwood preparing to take another boat trip in their on-going shark research with Professor Daniel Abel.

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developing a new, quality graduate program are many and include, most importantly, effective integration with the department's very successful undergraduate program. Once the master's program is in place, I anticipate that it will spur additional momentum and resources for ongoing departmental efforts to increase undergraduate involvement in marine science research.

Marine science faculty members continue to involve students in a wide variety of productive research projects. Rob Young's on-going study of dolphin sashimi preferences, Jane Guentzel's efforts to identify Coppertone products in fish skin, Eric Wright's continuing search for Holocene features, and Craig Gilman's rain mission to planet earth are just a few of the whimsically identified, ongoing research projects keeping students covered in mud, locked in labs and off the Grand Strand beaches this summer. Acquisition of a used bateau and

the department's first new four-stroke engine are making possible what Dan Abel has described as an amazing summer of shark research in Winyah Bay, including the all too frequent capture of rather large, 10 foot-plus, brown sharks. From departments of Biology, Chemistry and Marine Science's joint submission of a National Science Foundation Collaborative Research at Undergraduate Institutions proposal to study coastal ecosystem engineers to hosting the Southeastern and Mid-Atlantic Marine Mammals Symposium on campus to conducting an NSF Summer Workshop on "New Approaches and Techniques for Teaching Science: Addressing Environmental Problems to Stimulate Undergraduate Learning" to hosting the international visits of student and senior researchers, marine science faculty continue to expand the reputation of the department and university.

Cheers, Keith

MARINE SCIENCE PEER ADVISERS

Every first year marine science student has a peer adviser. A peer adviser is a junior or senior student who has volunteered to assist incoming students in any way they can. Most students contact their peer advisers with questions concerning college policies and procedures, academics and registration. However, a peer adviser is not limited to these topic areas and can usually help and/or point students in the right direction no matter what questions/concerns they may have. Remember, these are current marine science students who have been here for awhile and are familiar with Coastal Carolina University and the marine science program. Peer advisers are not required to contact you; this is your responsibility. If you need help, you have to ask.

An important thing to remember is that peer advisers are not a substitute for faculty advisers. All students are assigned a faculty member to assist them throughout their academic career. They are a valuable resource and can help in many ways, from deciding on an area of emphasis to locating career and graduate school resources. It is recommended that students meet with their faculty adviser several times throughout their years at Coastal, but students are required to consult with this person only once a semester. To help students decide on a

schedule for the following semester and have registration materials approved and signed.

Peer and faculty adviser assignments were given to students at Orientation but, if students do not have this information, contact Penny Oakley at poakley@coastal.edu and ask about your adviser(s).

SPRING 2003 MARINE SCIENCE PEER ADVISERS

☛ Jeremy Saeger	jesaeger@coastal.edu
☛ Devra Blanden	devblan@yahoo.com
☛ Heather Hostetler	hah75wb@hotmail.com
☛ Brian Mayer	briangonefishin2000@yahoo.com
☛ Heather Vukelic	hevcoastal@yahoo.com
☛ Jennifer Coor	JenMarfrog@aol.com jlcoor@coastal.edu
☛ Pam Madden	pmadden1@coastal.edu
☛ Bryan Larkin	brlarkin@coastal.edu
☛ Lauren Bridgman-Fralin	lbridgm@coastal.edu
☛ Kristin Kiernan	FLY413@aol.com

**Check out our Web site:
www.kingfish.coastal.edu/marine**

DO YOU NEED EXTRA ASSISTANCE WITH YOUR MATH AND SCIENCE COURSES?

Although we encourage all students to utilize the Math Lab in the Wall Building, the Department of Marine Science provides study sessions to assist with math and science courses. Many MSCI students need extra assistance with their course work to ensure their academic success. These study sessions are offered on Wednesdays from 3 to 5 p.m. in SCIE 106. Bring your book(s) and homework; upperclass MSCI students will be

available to provide direction when you need it. Students should plan on doing your course work during this time, and if they run into problems, someone will be there to help. If this time conflicts with other commitments, the Department of Marine Science also has individual tutors who can assist students during a time that is more convenient. For information, contact Penny Oakley at poakley@coastal.edu.

MSCI GRADUATES

Congratulations to the 23 marine science majors who completed their bachelor's degrees in fall 2002. The faculty and staff wish you all the best and we encourage you to keep in contact with the department. Spring and summer 2003 graduates (May and August) should plan on picking up their graduation packets in the Department of Marine Science office (SCIE 105) ASAP. The deadline for this graduation paperwork to be handed into the department is Wednesday, Feb. 5. Please contact Penny Oakley at poakley@coastal.edu with any questions or concerns. Remember to utilize the Office of Career Services (Prince Building 119) if you are planning an internship, job or graduate school search.

HOW TO KEEP INFORMED

The Department of Marine Science makes every effort to keep students informed as to current research opportunities, internship availability, administrative/paperwork deadlines, student organization meetings and events, etc. Students are encouraged to make an effort to read the bulletin boards and flyers posted throughout the Science Building, periodically check out the Department of Marine Science's Web site (www.kingfish.coastal.edu/marine), and be sure they are on the Department of Marine Science's e-mail distribution list (if students are not currently receiving MSCI related e-mails from Penny Oakley they should send their e-mail address to her at poakley@coastal.edu).

THE CMWS **The Center for Marine and Wetland Studies** by Adam Sapp

The Center for Marine and Wetland Studies (www.coastal.edu/cmws/) is one of the leading research facilities at Coastal Carolina University and resides in the College of Natural and Applied Sciences. Under the direction of Paul Gayes, Kearns Palmetto Professor of marine geology, the CMWS collaborates with several of the science departments at the university, including biology, chemistry-physics, and marine science. The research investigations under way in the center provide diverse research opportunities for students in those programs. The center operates at the Atlantic Center across Highway 501, a two-minute ride from the main campus.

A good example of the research that pertains to marine science is the project BERM: Beach Erosion Research Monitoring. The project consists of monitoring the changes in elevation of the beach at selected sites throughout the state to detect potential erosion problems and to ensure that the beach remains in good shape to attract tourism. While BERM staff member Dave Bernstein spends most of his time riding his ATV (the "Sandtracker") on the beach and Coastal graduate Mike Forte is cruising at sea, they are actually "at work" using the latest technology to study coastal erosion.

Other projects also investigate coastal erosion and complement BERM's findings. For example, several CMWS staff and Coastal students go out to sea at least once a year on NOAA's "Ferrel" research vessel to collect cores and samples of surficial sediment. These samples are brought back to the "Sed Lab," where they are analyzed for grain size distribution and carbonate content. These data are used to interpret sedimentary systems, paleo-environment, climate change and provide information on offshore sand resources for future nourishment projects.

CMWS scientists also cooperate with outside agencies such as the South Carolina Department of Natural Resources on projects

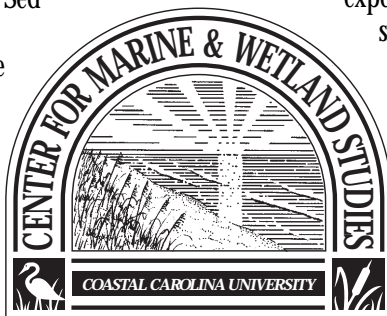
that monitor the effects of coastal construction projects, such as beach nourishment and sediment dredging on offshore ecosystems. CMWS Assistant Director German Ojeda is using side scan sonar technology and neural-networks to map shallow benthic habitats on the inner shelf of South Carolina. Submarine video records and diver observations are used to verify the accuracy of the maps produced using artificial intelligence.

The Environmental Quality Laboratory—a division of the CMWS—provides students and faculty with the opportunity to collaborate with external agencies in research projects relevant to the environmental problems of the Waccamaw region. It also provides the community with technical assistance in water analysis and monitoring of the water quality and establishes a link between graduation seniors and potential employers. Led by Professors Susan Libes, Jane Guentzel and Joe Bennett, students working in the EQL are currently involved in projects studying mercury concentrations and eutrophication on Waites Island.

Numerous opportunities for Coastal students exist at the CMWS on current and future projects. Often, students start their "career" at the center by participating in short, simple projects, but get rapidly involved in more exciting things. Most oceanographic cruises run by the CMWS involve active participation of Coastal students.

Marine science junior Shelley Poteet comments on her experience at the CMWS: "The one-on-one educational experience you get by working with individuals or small groups of researchers is one of a kind. I have learned so much just by working here this past summer. It has really given me a firm foundation of where I want my scholastic career to lead."

Students are encouraged to learn more about the center by checking the Web site (www.coastal.edu/cmws/) or by dropping by and talking with the staff directly.



THE ERIC SCHUCK-KOLBEN ENDOWED SCHOLARSHIP

This scholarship is made available annually to graduating Coastal Carolina University marine science majors to facilitate their entry into graduate school programs in marine science. The family of the late Eric Schuck-Kolben set up the endowment. Eric graduated from the MSCI program and went onto graduate school and a position with the U.S. Geological Survey. It is the wish of his family to assist Coastal students who would like to pursue graduate school.

☛ **Eligibility:** Marine science seniors who graduated Fall 2002 or will be graduating Spring or Summer 2003 with a minimum 3.0 Grade Point Average.

☛ **Awards:** Schuck-Kolben scholarship funds may be used to partially offset (a maximum of \$200 per applicant) the following expenses: cost of GRE exams, graduate school application fees, and/or travel to schools for interviews (mileage).

☛ **To apply:** Pick up an application in SCIE 105; receipts will be required.

For more information contact Penny Oakley in SCIE 105 or at poakley@coastal.edu

KEEPING IT TOGETHER . . .

With so much going on in Marine Science we rely on the administrative assistant, Arline "Cookie" Elston, to keep the department running smoothly. She is a valuable resource to

students, faculty and staff. She also hires several student workers each semester to assist in the numerous demands of a busy office. "Cookie" can be found in SCIE 105 or by e-mail at aelston@coastal.edu.

MARINE SCIENCE ALUMNI NEWS

The faculty and staff of the College of Natural and Applied Sciences take pride in our alumni and realize that they are one of our greatest resources. Recently, the college decided to create an annual event to provide a forum that will allow current marine science students to learn from our alumni. The first annual Alumni Panel Discussion and Reception held this past year was a success. Thanks to several alumni, students were able to gain a

perspective on the current job market, graduate program insight and information, and general tips for success in their career field. The tentative date for the second annual Alumni Panel Discussion and Reception will be Oct. 31, 2003, which is the Friday of Homecoming Weekend 2003. Please mark your calendars and contact Penny Oakley by e-mail at poakley@coastal.edu if you are interested in participating.

ALUMNI: WHERE ARE THEY NOW?

☛ **Megan Butterworth '02** lives on Seabrook Island and is working as a naturalist. This job includes teaching grade-school children about the marine environment. Several naturalist positions are available each year. She is willing to share with anyone interested in more information about this program.

☛ **Staci Owens '00** is an animal care specialist at Sea World in Florida. She works with all the marine mammals that are not in the shows. This includes work with dolphins, manatees, seal ions, harbor seals, beluga whales, walruses and polar bears.

☛ **Emily Decker '99** lives in California and is training dolphins and sea lions for the U.S. Navy Marine Mammal Program. She has information about an accredited internship with the program and is willing to provide information/resources to interested students.

☛ **Kristen Keteles '95** earned a Ph.D. in zoology (dissertation title, "Metal Partitioning Among Tissues and Exoskeleton of *Palaemonetes pugio* and its role in depuration and trophic transfer") from Louisiana State University in 2001. Keteles is in a tenure track position, assistant professor of biology, at the University of Central Arkansas in addition to being the Environmental Science Coordinator for the Biology Department. Keteles is trying to recruit graduate students and is willing to offer career advice to students.

☛ **Katie Fuhr '00** lives in Florida and has obtained a position as the Charlotte Harbor Aquatic Preserves Manager for the Florida Department of Environmental Protection.

☛ **John Matkowski '01** is working as an environmental scientist for EA Engineering, Science & Technology with the Water, Natural Resources & Ecotoxicology Group.

☛ **Laura (Parsells) Pasatiempo '98** recently graduated from the University of Southern Maine's Teaching Preparation Graduate Program and is very willing to assist any current students who are interested in the teaching field.

☛ **Brent Whelan '98** started his career right after graduation as a logistics analyst for the Virginia Class Submarine program. He soon transferred to the Native American Lands Environmental Mitigation Program (NALEMP) which monitored, physically tested and reported on impacts dealt to Native American lands as a direct result of Department of Defense operations. The area involved was all of Alaska and the Western U.S. His next move was back to Virginia as a supply logistician developing parts lists and tracking the outfitting of the new submarine the Navy is building. Currently, he is working as a defense contractor for EG&G Technical Services (www.egginc.com) in the D.C. area and he is enjoying family life with his wife and two children.

The Department of Marine Science would like to hear from any alumni interested in keeping us up to date as to their experiences and successes. If you are interested in sending an update and/or in receiving Marine Science Alumni relevant mailings please contact Penny Oakley by e-mail at poakley@coastal.edu with your request to be put on the alumni e-mail distribution list. Please note whether or not you would be willing to be a resource for current students who might contact you for information and/or advice.

Let us hear from you.

Please complete and return this form to the Department of Marine Science, Coastal Carolina University, P.O. Box 261954, Conway, SC 29528-6054 or e-mail information to Penny Oakley at poakley@coastal.edu.

Name _____

Name as listed on University records (if different from above) _____

Address _____

City _____ State _____ Zip code _____

Telephone number daytime (_____) _____ evening (_____) _____

Coastal Carolina University (or USC Coastal Carolina College) class of _____ (year)

Information/comments you would like to share with alumni and friends at Coastal Carolina: _____

HOW TO GET INVOLVED...

MSCI RELATED STUDENT ORGANIZATIONS

☛ **SUW:** Society of the Undersea World meets bi-weekly and its focus is marine science. The group sponsors several programs and offers many marine science-related activities throughout the year. For more information, contact the members of the SUW executive board at CoastalSUW@hotmail.com or Eric Wright at ewright@coastal.edu.

☛ **CUDA:** Coastal's Underwater Diving Association. This club is for students interested in Scuba Diving. Several trips are offered throughout the year. For more information, contact Kate Koontz at kkoontz1@coastal.edu or Scott Harris at msharris@coastal.edu

☛ **The Swim Club:** If you like to swim and would like more information about this club, contact Kate Koontz at kkoontz1@coastal.edu.

☛ **The Fishing Club:** If you like to fish, this is the club for you. This organization offers many trips. For more information, contact Brian Mayer at briangonefishin2000@yahoo.com or Richard Koesterer at roadkill@coastal.edu

☛ **SIGMA ZETA:** The Honorary Science Society. Application for membership is necessary. For more information, contact Becky A. Abell at rabell102198@cs.com.

☛ If you are interested in helping with the fish tank in room 105, contact Penny Oakley at poakley@coastal.edu.

RESEARCH AND "OUT OF CLASSROOM" EXPERIENCES

☛ Where in the Department of Marine Science can you do research in the Pacific Ocean? The Equatorial Waters? The Arctic Ocean? The Gulf Stream?

At the REMOTE SENSING LABORATORY. You can become involved in remote sensing research projects involving: Hurricanes, Coastal Dynamics, Ocean Color, El Nino, Climate Change, New NASA Satellites. Contact Craig Gilman (Science Building 209D)

☛ Last semester, many students were given the opportunity to do dolphin research/field work. If you are interested in this type of work contact Robert Young (ryoung@coastal.edu) or Elizabeth Moses (emoses@coastal.edu).

☛ Daniel Abel has made an effort to give every student who wants to get involved in shark research an opportunity to experience at least one trip on the water. If you are interested in this type of work stop by his office (SCIE 105) or contact him at dabel@coastal.edu.

These three opportunities are only a small portion of the experiences available. There are research projects going on throughout the year and the range of experience you can obtain is vast. You are encouraged to explore all areas of emphasis within the marine sciences: marine chemistry, marine biology, marine geology and physical oceanography. Start now by talking to faculty advisers, professors and/or using the MSCI Web site or MSCI student handbook. Your handbook gives bios for each faculty member and this may help you in deciding who to talk to in order to pursue the type of research you are interested in. Your peer adviser can also help in locating a project you would like to be a part of – USE YOUR RESOURCES.



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College of Natural and Applied Sciences

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