Greetings to all ye pollywogs and shellbacks! I took the helm as Director of the Marine Science Program in January 2014, and want to express a big thank you to our previous Director, Dr. Claudia Benitez-Nelson, who demonstrated great leadership for the program. In this newsletter you’ll see the undergraduate and graduate programs are flourishing. We had an outstanding class of students receive BS degrees this spring. Our graduate students are conducting cutting edge research and publishing articles in top-ranked journals, and our faculty continue to garner prestigious awards. We have a top-notch group of 89 incoming students this fall, and we are looking forward to an exciting year with inquiring young minds and new discoveries.
May 2014 Marine Science Graduates

Left to right 1st row: Annie Opseth(Masters), Lauren Hehman(Masters), Laura Thomas, Rachel Hartman, Kali Liantonio; 2nd row: Jaclyn Fisher, Stephanie Ayers, Annie Schneider, Julia Cipollone, Nicole Grafer; 3rd row: Craig Raffenberg, Candice Zegilla, Alexa Sonderman; 4th row: Glen Kilgore, Katie Mitchell; 5th row: Ron Benner, Ryan Bos, Mark Losavio, Claudia Benitez-Nelson, Rachel Piker. Not pictured: Brittany Altmire, Caitlin Baker, Michelle Barreto, Andrea Berry, Katie Curtin, Drew DeLorenzo, Clifford Felton(Masters), Alina Hall, Taylor Lee, Julia McGuire, Alex Miller, Mariela Monge, Kaagen Robinson, Emily Skiles, Jeffery Veatch, Adam Yeager.
Outstanding Marine Science Major Award

This year Jaclyn Fisher and Drew DeLorenzo were both recognized as Outstanding Marine Science majors. This $500 cash award is given annually to one or more senior majors in recognition of their outstanding academic performance, research participation, and support of the Marine Science Program through volunteer efforts. Jaclyn and Drew are both members of the Honors College and recipients of the prestigious national NOAA Hollings Scholarship. In addition to working in three faculty research labs (Dr. Ron Benner, Dr. Blaine Griffen, and Dr. Sean Place) Jaclyn served as the SEAS Education Outreach Coordinator and as an officer for the Honors Council. She graduated as part of the inaugural class of students demonstrating Leadership Distinction. She gratefully took her award on a summer trip to Greece and Italy before heading home to Maryland for a Master’s degree in in Conservation Biology and Sustainable Development at UMD.

Drew spent much of his time at Carolina working in Dr. Jerry Hilbish’s research lab and in the Rare Books division of the Thomas Cooper Public Library (a perfect fit, as he collects rare books). A business minor with a major in Chemistry & Biochemistry, Drew also served as SEAS Outreach Coordinator and as the Editor-in-Chief for MarSci, the online undergraduate research journal. He took summer courses at the Bermuda Institute of Ocean Sciences and the Duke University Marine Lab, helped restore coral reefs in Key Largo, and studied sharpnose sharks at the NOAA Southeast Fisheries Lab in Panama City, Florida. His awards include the Goldwater Scholarship, the Traci Heincelman Memorial Scholarship in Marine Science, and honorable mentions for both the Udall Scholarship and the National Science Foundation Fellowships. Drew is starting the Ph.D. program at Washington University in St. Louis, MO.
Rising Senior in Marine Science Award

The Rising Senior Award is given by the College of Arts and Sciences to a rising senior major who has demonstrated excellence in Marine Science. This year’s recipient, Emily Townsend, has an area of emphasis in Chemical Oceanography and a 4.0 GPA. Working with Dr. Seth John, Emily has produced novel and exciting measurements of specific Zn and Cd stable isotopes. As Dr. John says, the original project idea was his, but the rapid and successful progress of the work was entirely due to Emily, and will certainly result in a publication on which she will be a coauthor.

Traci Heincelman Memorial Scholarship

This award is given to a sophomore majoring in Marine Science who exemplifies academic excellence, research and volunteerism. This year’s award went to Kelly McCabe, a marine science-chemistry double major with an area of emphasis in physical oceanography. Kelly has been assisting Dr. Claudia Benitez-Nelson in developing a new instrument for the quantitative extraction of dissolved organic phosphorus from seawater. She also enjoys educating others about the ocean: taking SEAS outreach programs into elementary school classrooms, tutoring her peers, and working in the stingray exhibit at the St. Louis Zoo. As Dr. Benitez-Nelson wrote in Kelly’s recommendation letter, “she has that unique ability to explain various ideas in a wide variety of ways that matches the individual’s learning style.”

Richard C. Morris Marine Science Scholarship

A new award established this year by an undergraduate alumnus, the inaugural award will go to Victoria Garefino, who just completed her freshman year at Carolina. Dr. Howie Scher, who taught Victoria during her first semester, calls her “extraordinarily bright, full of initiative, and a student that you must take note of; mature, focused, and clearly inquisitive;” he also mentions that she “was exhilarated” by her opportunities to do field research, and that she “easily produced the finest and most organized work.” She says being at USC has “allowed her to get involved with marine science in more ways than she thought were possible”, including research trips to the Baruch Institute and Students Engaged in Aquatic Studies (SEAS), and that “there is nothing more that she desires than to continue her studies here at USC in the Marine Science Program and give back to this fabulous University.”
NOAA Ernest Hollings Scholars

This year Marine Science had a bumper crop of Hollings Scholars, a highly competitive national award. Riley Brady, Alicia Cheripka, Charlotte Eckman, Suneil Iyer and Kelly McCabe are among the 2014 Hollings Scholars. What a talented group! Riley is a McNair scholar who recently completed a semester abroad in Germany and a Research Experience for Undergraduates at UNC Chapel Hill. Alicia is a member of the USC Swim Team and spent this past July studying coral reefs in Indonesia. Charlotte, also a McNair Scholar, has interned at the Mote Marine Lab, studied in Costa Rica, and is conducting independent research on the effects of wastewater on marine bacteria. Suneil completed a Research Experience for Undergraduates at the University of Wisconsin this summer and will present his USC research on tidal and subtidal riverine propagation at the fall meeting of the American Geophysical Union. Kelly is profiled above. Altogether USC received 7 of the 106 awards made in 2014.

College of Arts and Sciences Graduation with Leadership Distinction

This spring was the inaugural class of students graduating with Leadership Distinction. Three students from Marine Science, Jacyln Fisher, Mark Losavio and Kaagen Robinson, were members of the inaugural class.

Dan Utter received Honorable Mentions for his Goldwater Scholarship and Udall Scholarship applications.
The following marine science students won awards at Discovery Day this year

Morning Poster Presentations: Environmental Sciences
1st Place - Craig Raffenberg (Senior)

Afternoon Poster Presentations: Environmental Sciences
1st Place - Daniel Utter (Junior)
2nd Place - Alexandra Norelli (Sophomore)

Research Experience for Undergraduate Students (REU)

The Marine Science Program hosted 10 students this summer in the second year of the NSF-supported REU program directed by Dr. Tami Richardson. Students came from Cornell University, Louisiana State University, Morris College, Piedmont College, University of Miami, Mount Holyoke, College of Charleston, University of Washington and Humboldt State for an intensive 10 weeks of lab and field research projects under the direction of Marine Science faculty. Students presented their research in a poster competition that was viewed and judged by faculty and graduate students.

Marine Science Graduate Awards

Marine Science Program Publication Award –

Michael Philben was the recipient of the 2014 Marine Science Program Publication Award for his publication entitled Reactivity of hydroxyproline-rich glycoproteins and their potential as biochemical tracers of plant-derived nitrogen that appeared in Organic Geochemistry.
**Marine Science Program Teaching Award** –

John Bartlett was the recipient of the 2014 Marine Science Program Teaching Award. John was an Instructional Assistant for Marine Science 210 and 311.

---

**Graduate Student Day Awards**

Michael Philben was the 1st Place Overall Oral Presentation Winner for USC (76 graduate students competed in Oral Presentation category). His oral presentation was entitled "Does oxygen exposure time control the extent of organic matter decomposition in peatlands?"

Doug Bell received a $4,740 USC SPARC Research award for his research project entitled Phosphorus Utilization by Phytoplankton in the Cariaco Basin.

Yuan Shen received a $1,200 Slocum-Lunz Foundation award for his research project entitled “Diurnal and seasonal changes in labile dissolved organic matter in a salt-marsh estuary”.

Trenton Agrelius, Shelby Butz, and Stephen Vega received F. John Vernberg Bicentennial Fellowships in Marine Science.

---

**Faculty & Staff Corner**

Dr. George Voulgaris received this year’s USC Educational Foundation Research Award for Science, Mathematics and Engineering. Dr. Voulgaris has developed a strong research program in coastal processes that incorporates novel approaches for studies of turbulence and sediment transport. His research has provided fundamental insights about the coupling and interactions between biological and physical processes on the seabed.

Dr. Joe Jones received the John Gardner Inspirational Faculty Member Award for his devotion to the education of students living on-campus by encouraging them to participate in meaningful experiences within and beyond the classroom.
Dr. Joe Quattro discovered a rare new species of hammerhead shark, the Carolina hammerhead, that had long eluded discovery because it is outwardly indistinguishable from the common scalloped hammerhead. According to Prof. Quattro, populations of sharks have greatly diminished over the past few decades. The biomass of scalloped hammerheads off the coast of the eastern U.S. is less than 10 percent of what it was historically.

Charlene Wilson Profit – received the College of Arts and Sciences Staff Excellence Award for her commitment to excellence and dedication to the well being of faculty, students and staff. Charlene is the administrative coordinator for the School of the Earth, Ocean and Environment, which includes the Marine Science Program.

Alumni News (send in your newsbites!)

Are you interested in attending a Marine Science Alumni Reunion in the Fall 2015? Maybe in the new Carolina Alumni Center! Send us your thoughts and suggestions! (email Shelley Schlenk: SCHLENK@mailbox.sc.edu)
A festival celebrating the film, The Loggerhead: A Question of Survival, was held in the Ernest F. Hollings Special Collections Library on May 6, 2014. The film is a student production made in 1973 with the support of the National Science Foundation and the University of South Carolina. It documents the efforts of a multiyear project to study, track, and protect loggerhead sea turtles on Kiawah Island, South Carolina. Dr. John Mark Dean, Distinguished Professor Emeritus, introduced the 30-minute film with Rhett Talbert, the student director of the original project. The loggerhead turtles continue to nest on Kiawah and other barrier islands due, in large part, to the pioneering research of these USC students and faculty.

Margaret Palmer, a Ph.D. graduate of the MSCI Program, is in the news again! Dr. Palmer’s research and advocacy about the adverse effects of strip mining on streams and creeks in Appalachia is featured in a News Focus article, The Mountaintop Witness, in Science magazine.

Mauro Maza Chamorro, a Ph.D. graduate of the Marine Science Program, has been appointed as Manager of the Marine Sciences Program of the Colombia National Science System (COLCIENCIAS).

Marine Science alumnus Erin McParland received a National Defense Science and Engineering Graduate Fellowship.

Thanks to Shelley Schlenk and Kim Noonan for their contributions to this Newsletter.
College of Arts and Sciences
School of the Earth, Ocean and Environment
Marine Science Program
University of South Carolina

Dr. Ron Benner, Marine Science Director
benner@mailbox.sc.edu  777-9561
Dr. Jay Pinckney, Director of Graduate Studies
pinckney@sc.edu   777-7133
Dr. Gwen Geidel, Director of Undergraduate Studies
geidel@sc.edu   777-7171
Stephanie Bradley, Graduate Program Coordinator
bradlste@mailbox.sc.edu  777-7170
Shelley Schlenk, Student Service Coordinator
schlenk@mailbox.sc.edu  777-6163

712 Main Street, PSC 108
Columbia, SC 29208
www.msci.sc.edu

Marine Science Program

University of South Carolina