Message from the Director, Dr. Ron Benner

It’s been a very good year for the Marine Science Program, and our students, faculty and staff continue to make us proud. Four of our faculty received awards for excellence in teaching and mentoring, three undergraduate students were selected as Goldwater and Hollings Scholars, a graduate student received the Dean’s Dissertation Fellowship, and a staff member received an excellence award! Hope you enjoy browsing the newsletter and sharing in our accomplishments during the past year.

Our Students are Awesome!

The Marine Science Program had 59 undergraduate majors graduate this past year, with 22% of these students graduating with magna cum laude or summa cum laude honors!

Some of our outstanding May 2015 graduates!

Back Row: Dale French, Greg Isales, Ali Swan, Ally Schachner, Stacy Brown, Laura Whalen & Nicole Hayes
Front Row: Luke Bassett, Lauren Stoker, Rebecca Webster, Viki Knapp & MSCI Director Dr. Ron Benner
Undergraduate Awards Day was held on April 16, 2015, and the Marine Science Program proudly recognized two of its most accomplished majors – Daniel Utter and Jory Fleming. Each took home an award for academic excellence, research and service to the program.

Undergraduate Award Day winners Jory Fleming and Daniel Utter with Undergraduate Director Dr. Gwen Geidel

Outstanding Marine Science Major Award

Daniel Utter was named this year’s Outstanding Marine Science Major. 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. Dan is the lead undergraduate lab assistant for Dr. James Pinckney and a lab assistant in the Baruch Wet Lab. He earned a Magellan Scholarship to conduct research on coral diseases. His previous research experience includes interning at the Republic of the Marshall Islands EPA and at the South African Shark Conservancy.

Traci Heincelman Memorial Scholarship

The Traci Heincelman Memorial Scholarship was established in memory of Traci Jeanne Heincelman, an outstanding Marine Science major who died in 2002 due to injuries sustained in an automobile accident. The $1000 scholarship is awarded to a junior majoring in Marine Science who exemplifies academic excellence, research and volunteerism. This year sophomore Jory Fleming received this award. Jory is a Capstone Scholar who is double majoring in Marine Science and Geography. His research has been funded by a Magellan Apprentice grant and includes work at the Beach and Dune Processes Lab and the Phytoplankton Ecology Research Lab.

Richard C. Morris Scholarship

The Richard C. Morris Scholarship was newly established this year to provide support for undergraduate students who demonstrate academic excellence and integrity. The first $1000 scholarship was awarded to rising Junior Victoria Garefino. Victoria completed an internship at Jenkinson’s Aquarium and works in Dr. Benitez-Nelson’s Research Lab.
**Goldwater Scholarship**

Riley Brady was named a 2015 Goldwater Scholar. He has been working in Dr. Rykaczewski’s lab, and is analyzing output from global climate models to investigate future responses of ocean ecosystems to climate change. Riley is currently using modeled wind stress, surface pressure and surface temperature to consider the effects of carbon emissions on major eastern boundary current upwelling systems over the next 100 years. Riley was awarded a prestigious NOAA Hollings Fellowship in 2014.

**Hollings Scholars**

Nine (9) rising juniors from USC were chosen as 2015 NOAA Ernest F. Hollings Undergraduate Scholars. This was the largest number of Hollings Scholars that USC has ever received in a single year, bringing the total number of USC Hollings Scholars to 34, with 16 won in the past two (2) years alone.

This year two (2) Marine Science undergraduates received this honor, Jamie Clark (pictured 5th from left) and Jory Fleming (pictured 6th from left, with Daisy).
All nine of the 2015 Hollings Scholars were assisted by Marine Science faculty members Dr. Claudia Benitez-Nelson (pictured 2nd from left), Dr. Jean Ellis and Marine Science Undergraduate Director Dr. Gwen Geidel. The Hollings Scholarship Program exposes undergraduate students to the mission of the National Oceanic and Atmospheric Administration (NOAA) and our nation’s history of ocean and atmospheric stewardship. The scholarship provides up to $8,000 of academic assistance per school year for full-time study during their junior and senior years.

**Graduation with Leadership Distinction**

Marine Science Program April 2015 graduates Josh Helgoe, Jeremiah Parks and Alison Swan all received the honor of Graduation with Leadership Distinction. Students graduating with Leadership Distinction demonstrate extensive, purposeful engagement beyond the classroom, understanding of course concepts in “real world” settings, and application of learning to make decisions and solve problems. This formal distinction honors the broader scope of achievements for students engaged within and beyond the classroom and sets them apart in ways worthy of recognition by others (e.g., potential employers, graduate schools).

**Discovery Day Winners**

Discovery Day is an annual event for undergraduates at USC, showcasing students’ scholarly pursuits in and beyond the classroom. Students present their experiences or findings from research/scholarly projects, study abroad, internships, service-learning and community service activities, leadership activities, and national fellowship competitions. Students have the opportunity to make poster, oral, creative, or artistic presentations and visual art displays. This year the Marine Science Program had eight (8) Discovery Day winners! Congratulations to undergraduates Jory Fleming, Bryce Melzer, Josh Helgoe, Patricia Perez, Julia Bennett, Suniel Iyer, Morgan Cunningham and Katherine Witherspoon.

**Buzz Scott Demonstrates his ROV for Marine Science Students**

Campbell “Buzz” Scott, President of OceansWide educational program and ROV pilot, visited USC in March of this year and demonstrated his Argus ROV. Buzz is particularly interested in teaching the next generation of marine researchers in the wonders of the deep sea by sharing the adventures of exploration using ROVs.
Yuan Shen was the recipient of the 2015 Marine Science Program Publication Award for his publication entitled “Origins and Bioavailability of Dissolved Organic Matter in Groundwater” that appeared in Biogeochemistry. He is also a past recipient of the 2013 Marine Science Teaching Award. Yuan is a Ph.D. Graduate Student in Marine Science under the supervision of Marine Science Director Dr. Ron Benner.

Meryssa Downer Piper was the recipient of the 2015 Marine Science Program Teaching Award. Meryssa received her Masters in Marine Science in 2015 under the supervision of Dr. Claudia Benitez-Nelson, and is currently working Dr. Benitez-Nelson’s research lab.

Marine Science Ph.D. Graduate Students Doug Bell and Ben Belgrad were both honored with the award of a 2015 Vernberg Bicentennial Fellowship in Marine Science. This fellowship provides an award of $1,000 to a Master’s or a Ph.D. student whose marine science research is being conducted at the Baruch Institute for Marine and Coastal Sciences.
Ph.D. Graduate Student **Brady Cunningham** was a recipient of the College of Arts and Sciences’ Dean’s Dissertation Fellowship of $25,000 for the 2015-2016 academic year.

**Faculty Corner**

**Dr. Claudia Benitez-Nelson** was the recipient of the 2014 *Sulzman Award for Excellence in Education and Mentoring* and also reappointed as a College of Arts and Sciences *Distinguished Professor*!

**Dr. Subra Bulusu** and **Dr. Joe Quattro** both received *Excellence in Teaching Awards* from the USC Alpha Order Chapter of Mortar Board National College Senior Honor Society!

**Dr. Tammi Richardson** received the *Michael J. Mungo Undergraduate Teaching Award*!
For the third year running, USC’s Marine Science Program and the Baruch Institute of Marine and Coastal Sciences hosted 10 students as part of a National Science Foundation (NSF) Research Experience for Undergraduates (REU) program. For over 25 years, NSF-REU programs have been in place to provide students with opportunities to actively engage in scientific research. Dr. Tammi Richardson leads the USC Marine Science effort. The program runs for 10 weeks during the summer, during which time the students work with faculty mentors to develop their own research projects. The development process includes formulating hypotheses, testing these hypotheses with experiments, analyzing data, and preparing and presenting a poster on their research. They also attend several professional development workshops that cover topics such as Resume Writing, Science Ethics, and Applying to Graduate School. Students in this year’s MSCI REU program came from across the U.S., from as far away as northern California. Their academic backgrounds were diverse, and included geology, environmental science, biology, marine science, and chemistry majors. One student was a double major in Biochemistry and Piano Performance!

REU programs in general offer students the opportunity to pursue research in a discipline that may not be offered at their undergraduate institution, and/or the opportunity to work in an entirely different ecosystem. In our program, students visited the Baruch Marine Field Laboratory – a location that several used as their research field site – and were introduced to standard marine science sampling techniques like net tows and seining. Students addressed problems related to larval fish diversity, geochemical climate indicators, plankton grazing relationships, nutrient cycling, and the impact of anthropogenic antibiotics on phytoplankton growth.
All REU students presented a poster at USC’s Undergraduate Summer Research Symposium. This symposium included presentations from all of USC’s summer research programs. There were a total of 76 posters from a broad range of the sciences. Among the MSCI REU students, Rachael Young, a Marine Science and Biology major from Rutgers University, won the Poster Prize- $1000 to put towards attending a scientific conference of her choice. Rachael will attend (and will present her poster at) the 2016 ASLO-Ocean Sciences Meeting in New Orleans in February. It was a busy but extremely fun summer for students and mentors. Dr. Richardson would like to thank Dr. Dennis Allen, Mr. Paul Kenny, Dr. Jay Pinckney, Dr. Claudia Benitez-Nelson, Dr. Lori Ziolkowski, Dr. Susan Lang, Dr. Erik Smith and especially Doug Bell (graduate assistant) for their help with mentoring and logistics. Thanks also to the staff of the Baruch Institute (Margaret Bergin, Teresa Donelan, and Anne Miller) for logistical support.

**Briefs**

Fall 2014 Honor Roll: 41 Marine Science majors placed on the President’s List (4.0 GPA) and another 89 placed on the Dean’s List (>3.5 semester GPA; >3.25 for freshmen). 43% of Marine Science majors made the Honor Roll in Fall 2014!

Spring 2015 Honor Roll: 37 Marine Science majors placed on the President’s List (4.0 GPA) and another 90 placed on the Dean’s List (>3.5 semester GPA; >3.25 for freshmen). 47% of Marine Science majors made the Honor Roll in Spring 2015!

Marine Science Program professors Dr. Subra Bulusu, Dr. Jay Pinckney and Dr. Tammi Richardson were all promoted to Full Professors!

Marine Science Program Administrative Assistant Kelly Hamilton received the College of Arts and Sciences Staff Excellence Award!

Marine Science Program professor Dr. Howie Scher was promoted to Associate Professor!

**Alumni News**

Patrick Boyle (BS, 2013) is serving on a 27-month water sanitation and hygiene project with the Peace Corp in a small mountain town, Sanagoran, in norther Peru.

Katrina Phillips (BS, 2007) and Drew DeLorenzo (BS, 2014) are 2015 recipients of very prestigious Graduate Research Fellowships from NSF! Katrina is now pursuing her PhD at the University of Central Florida and works in the Marine Turtle Research Group with Dr. Kate Mansfield. Drew now attends Washington University in St. Louis and is pursuing a PhD in Energy, Environmental and Chemical Engineering focusing on biofuels.

Emma Ann Kelley (BS, 2013) just accepted a position of Large Marine Ecosystems Specialist for NOAA’s Large Marine Ecosystems Program (through Integrated Statistics) in Silver Spring, MD!

Lauren O’Neill Madden (MS) just received tenure and promotion to Associate Professor at the College of New Jersey! She also gave the May 2015 Commencement Address.

Kenny Stange (BS, 2009) is now a zookeeper at the Houston Zoo!

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