

Inside this Issue:

Graduate Research Colloquium	2
Open House	2
REU	2
MBGSA	3
Faculty Notes	3
Recent GPMB Degrees	6
Student Awards	7
Undergraduate Research Highlight	7
Alumni Notes	8
GML Social Media	8

Grice Marine Laboratory
205 Fort Johnson Rd.
Charleston, SC 29412
843.953.9200
gricemarinelab.cofc.edu

Graduate Program in
Marine Biology
marinebiology.cofc.edu



DR. ERIK SOTKA: FROM GRASSHOPPERS TO GRACILARIA

Dr. Erik Sotka grew up in Oregon as a science nerd. As a 9-year-old he thought he would become a mathematician. As a teen, he entered as many science fairs as he could, and always failed to win any ribbons. The closest he came was winning “honorable mention” for an ethically-suspect project involving grasshopper cannibalism. Erik put 100 male grasshoppers in a single aquarium to see if their chirp rates changed with humidity and temperature. They chirped unhappily and tore each other’s limbs and heads off all night. There was one single-legged grasshopper left by dawn.

Despite this inauspicious start, Erik continued seeking out research opportunities. The summer after his freshman year at the University of Washington (Seattle), he worked in a biochemistry lab, seeing first-hand the acrylamide plates that revealed the basepair sequences of fungal DNA. He generated a thesis on butterfly evolutionary ecology, where he spent most of his time coaxing butterflies to procreate (key: add fresh, breezy air and sun). But, none of these experiences were as life-altering as when he enrolled in Marine Invertebrate Zoology and Botany at a marine laboratory in the San Juan Islands. Erik was astounded that biologists could work in such a beautiful setting surrounded by these cool animals and plants. It is this last experience that motivates him today, as he witnesses first-hand the other side. He is now a teacher and advisor at a marine laboratory, hoping to provide that same eye-opening experience to a new generation of scientists.



(Continued on page 6)

GML WELCOMES VISITING SCIENTISTS



Karl Marx Andaya Quiazon joined the GML community in January 2016 as a visiting Fulbright Scholar from the Philippines. He received his BS and MS in Aquaculture from Central Luzon State University (CLSU) in the Philippines. Karl then traveled to the University of Tokyo, Japan, where he received his MS and PhD in Aquatic Bioscience, and completed a JSPS Postdoctoral fellowship. While at Fort Johnson, Karl is working in the field of fish parasitology with Isaure de Buron, particularly looking at the beneficial use of anisakid nematodes for use in fish stock assessment. Karl is a current faculty member of CLSU, and is excited to bring back home the knowledge, camaraderie, and warmth of the people of Charleston.



Glauco Barreto de Oliveira Machado joined the GML community in fall 2015 as a visiting scientist from Brazil. He is currently a PhD student at the University of Campinas in Brazil, where he has been studying the association between small herbivores and microalgae. While earning his master’s degree, he studied the association of two herbivorous amphipod species with the brown alga *Sargassum*. Glauco is currently working with the Sotka lab at GML. He is interested in understanding the role of predation on small herbivore-alga interactions, as well as studying the role of the nutrition of herbivorous amphipods on their interaction with algal hosts. In his free time, Glauco enjoys biking and running.

GRADUATE RESEARCH COLLOQUIUM

The 19th annual Marine Biology Student Research Colloquium was held on October 2nd and November 14th, 2015. The colloquium featured keynote speaker Daniel Huber, an elasmobranch biologist and Associate Professor of Biology at the University of Tampa. Dr. Huber's research focuses on the biomechanics of feeding and locomotion in elasmobranchs. He gave two addresses at this year's colloquium: "Musculoskeletal Biomechanics of Cartilaginous Fishes" and "Teaching Philosophies: Theory, Application, and Extension." Due to record flooding in the Charleston area, the student research presentations, originally scheduled for October 3rd, were delayed, and Dr. Huber's second address was delivered via webinar. Fourteen gradu-

ate students gave oral presentations. Eighteen marine biology and environmental studies graduate students presented posters on their thesis research. Robin Frede received the best oral presentation award, and Victoria Ruddle received the best poster presentation award. The colloquium concluded with a cookout and lowcountry boil for students, faculty, and colloquium attendees at the Marshlands House outdoor classroom.



*Daniel Huber, Ph.D.
University of Tampa*

Grice Marine Lab Staff

Shelly Brew

Administrative
Coordinator

Madison Edwards

Administrative
Specialist

Tony Harold

Acting GML Director &
Professor of Biology

Kristy Hill

Molecular Core Facility
Manager

Peter Meier

Marine Operations
Manager

Craig Plante

GPMB Director &
Professor of Biology

Greg Townsley

Laboratory Manager

FORT JOHNSON OPEN HOUSE

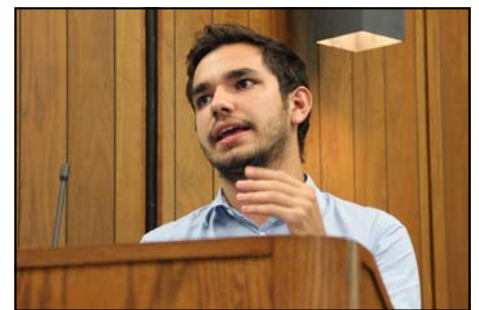


GPMB students at the 2015 Open House

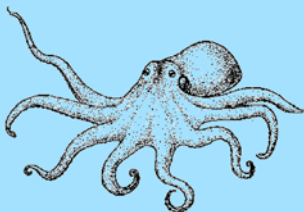
On October 24th, 2015 the Grice Marine Lab partnered with the South Carolina Department of Natural Resources to host an open house at the Fort Johnson campus. The event boasted over forty exhibits that brought in a crowd of around 1,700 people. At the Grice Marine Lab, students, faculty, and staff contributed to the GML tours and exhibits, which included a touch tank, plankton samples under microscopes, preserved fish specimens from the collection, a showcase on shark and ray research, a variety of specimens in the wet lab, and tours of the first floor of the lab. The event brought awareness to local conservation efforts and marine research and was considered to be a huge success.

SUMMER REU PROGRAM

In summer 2015, Fort Johnson once again welcomed ten undergraduate research interns from across the United States and Puerto Rico. These students were selected from a highly competitive pool of applicants to participate in our NSF-sponsored Research Experiences for Undergraduates (REU) summer program. Working with scientists from among our Fort Johnson partners as part of the research theme, "Marine Organism Health: Resilience and Response to Environmental Change", the interns pursued research questions in physiology, toxicology, parasitology, ecology, molecular biology, and biochemistry using diverse marine organisms, including fish, crabs, seaweed, phytoplankton, sea urchins, alligators, benthic microalgae, and parasites. Interns also participated in workshops, field trips, and social events, providing numerous opportunities for networking with scientists, graduate students, and other undergraduate students. Additionally, the interns participated in the Science Communication Workshop Series (SCICOM), through which they gained new skills for communicating their science to professional, peer, and public audiences. The workshops, led by science writer and environmentalist Carolyn Sotka, focused on how to take advantage of opportunities to publicize work, including the use of social media tools. To complete their summer experience, the interns gave oral presentations and wrote research papers based on their data. Thanks to everyone who made the 2015 program a success! To learn more, visit our website at reu.cofc.edu.



REU intern Aaron Baumgardner



MARINE BIOLOGY GRADUATE STUDENT ASSOCIATION

The Marine Biology Graduate Student Association (MBGSA) prides itself on immersing graduate students in the Charleston community through social events, charity, and conservation. Any money raised is given back to the students in the form of travel funds and conference entrance fees so that students can participate in research conferences both locally and world-wide. At the start of the 2015 fall semester, all members were invited to an MBGSA sponsored dinner and a Riverdogs baseball game, which provided an opportunity for new students to mingle with current students. In both the fall and spring semesters, the MBGSA held their biannual Fort Johnson Road Cleanup, where students picked up trash in an effort to help beautify the James Island community. This fall, the MBGSA had a table at the Fort Johnson open house, which included merchandise and bake sales, raffles, and a touch tank of local animals. The annual holiday party was held just after fall finals were completed, allowing a chance for students to unwind before the holidays. This February, the MBGSA joined forces with the Master of Science in Environmental Studies (MES) program to volunteer at the MES's annual 8K Run for H2O. Recently, the MBGSA hosted a final celebration at the end of the semester for the whole Fort Johnson scientific community with a BBQ and games.



Members of the MBGSA at a Riverdogs baseball game

FACULTY NOTES

Burnett Lab: After successfully defending his master's thesis in May 2015, graduate student Jason Wang entered the Ph.D. Program in Marine Biology and Biological Oceanography at the University of Southern California in the fall of 2015. Graduate students Sarah Song and Rebecca Derex also were awarded master's degrees in the fall of 2015. Becca received a John A. Knauss Marine Policy Fellowship and in February 2016 began a one-year internship in Washington, D.C. working in the Policy and Constituent Affairs division of NOAA's National Ocean Service. A major piece of work was published in *Physiological Genomics* by lab postdoctoral fellow Jill Johnson, describing how CO₂ alters the response to hypoxia in shrimp. Former graduate students Jennifer Ikerd and Anna Tommerdahl also published their thesis research in *Comparative Biochemistry and Physiology* and the *Biological Bulletin*, respectively. The lab was represented well at the Portland SICB meeting in January 2016 with presentations by Jill Johnson, graduate student Mark Lehtonen, and 2015 REU intern Alessandra Jimenez-Yap. Congratulations to Alessandra for winning the Louis E. Guillette Best Student Poster Award in the Division of Comparative Physiology and Biochemistry! The lab also said farewell and congratulations to Jill as she began her new permanent position as Senior Scientist in the Pharmacogenomics Division of Pfizer Pharmaceuticals in Groton, CT. Lou Burnett finished a two-year

term as President of the Southern Association of Marine Laboratories and is currently serving as President-Elect of the Society for Integrative and Comparative Biology.

McElroy Lab: In summer 2015, five undergraduates, two high school students, and two MES students studied both fish-parasite interactions and horned lizard ecology in the McElroy lab. CofC HHMI student Shannon Lusk examined the effect of *Kudoa inornata* on swimming performance and muscle physiology in spotted seatrout. NSF-REU student Thientahn Trihn (with sage advice from SCDNR biologists) developed a waterfall raceway, discovered how to entice American eels to climb the waterfall, and tested the effect of acclimation temperature and parasites on eels' climbing behavior and success. Finally, NSF-REU student Sierra Duca repeated an experiment performed by a previous REU student showing that wild spotted seatrout, which are infected by *Kudoa inornata*, have softer muscle than mariculture seatrout. These projects were completed in collaboration with Dr. Isauere de Buron. Two high school students, two College of Charleston undergraduates, Emmaline Bendell and Reggie Johnson, a Brazilian exchange student, and MES grad student Courtney Heuring expanded the lab's work on introduced populations of the Texas horned lizard on barrier islands near Charleston. This group found that three local populations are estab-

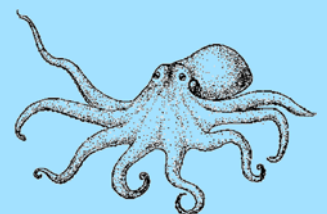
(Continued on page 4)

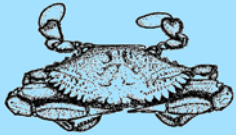
Be sure to Like
us on Facebook!

[www.facebook.com/
GMLCofC](http://www.facebook.com/GMLCofC)

and

[www.facebook.com/
GPMBCofC](http://www.facebook.com/GPMBCofC)

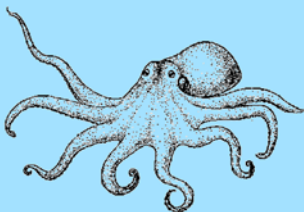




Grice Logbook is available online at <http://gricemarinelab.cofc.edu/about-the-laboratory/grice-newsletter>



Mark Lehtonen, of the Burnett Lab, spends a day out in the field



GML Logbook - 4

FACULTY NOTES

lished with population densities greater than observed in the lizard's native range. Specific projects looked at blood parasites and locomotor performance, lizard diet, morphology and genetics, and insect diversity on the dunes. In spring 2016, MUSC Post-Bac student Reggie Johnson joined the McElroy lab. He will examine locomotor performance and behavior in two species of lizards found on the barrier island dunes. Finally, MES grad student Kristen Gold joined the lab in early 2016; she will continue to work on introduced populations of the Texas horned lizard.

Harold Lab: As a follow-up to Michelle D'Aguillo's paper from her M.S. thesis research (D'Aguillo *et al.*, 2014) on trophic biology of the estuarine goby species *Gobiosoma bosc*, the Harold lab has been examining the relative growth trajectories of dentition towards testing the hypothesis that ontogenetic shifts in structures explain diet shift during life history. Two independent studies, Tasneem Dossaji (BIOL 499) and Dana Warheit (BIOL 397), and undergraduate volunteers Miranda Brooker and Mindy Goforth, all contributed substantially to the project in 2015. Specimens archived in the GML Fish and Invertebrate collection are the main source of material used in this research. Other activities from the lab resulted in a book chapter on deep-sea hatchetfishes (Sternoptychidae) in *The Fishes of New Zealand* (Roberts *et al.*, eds.), an article on an invasive *Bregmaceros* species in the eastern Mediterranean Sea (Harold and Golani, in press), co-authorship on the Red List of Marine Bony Fishes of the Eastern Central Atlantic (Polidoro *et al.*, 2016), and descriptions of two new species of deep-sea hatchetfish (*Polyipnus*) from off Taiwan and New Caledonia at various stages of production (in revision/in review). Also, a special recognition of the work of Morgan Hart (GPMB) who produced a collaborative manuscript (submitted to *Herpetological Review*) on snake foraging by the bowfin, *Amia calva*, based on studies done in the graduate Ichthyology course (BIOL 632).

Naylor Lab: The Naylor lab worked on seven different publications over the past year, including articles published in *Ichthyological Research*, *Zootaxa*, *Journal of the Linnaean Society*, and other journals. Hayley DeHart successfully defended her thesis titled "A Comparison of Demographic and Genetic Estimates of Population Size in Bonnetheads (*Sphyrna tiburo*) and Sandbar Sharks (*Carcharhinus plumbeus*)." Post doc Shannon Corrigan attended the ConGen 2015

workshop in Montana from August 31st-September 5th, 2015, and post doc Lei Yang gave a talk on the evolution of skates and rays at the Joint Meetings of Ichthyology and Herpetology (JMIH) in Reno, Nevada in 2015. GPMB student Drew Duckett was awarded an AMNH Lerner-Gray Memorial Grant for Marine Research in summer 2015, a Great Lakes National Scholarship in fall 2015, and a Marine Genomics Fellowship in spring 2016. Drew also gave an oral presentation at JMIH in 2015 titled, "Maximizing Statistical Power in Shark Population Structure Analyses." GPMB student Jordan Taylor received a South Carolina Graduate award for spring 2015 and spring 2016, and she was also the winner of the CofC 3-Minute Thesis Competition with a presentation titled "The Elasmobranch Fishes from the Late Eocene of South Carolina."

Plante Lab: Research this past year focused on benthic microbes, specifically microalgal ecology. REU summer intern Jessica Lowry attempted to tease apart the roles of dispersal limitation and environmental factors in structuring diatom assemblages on South Carolina barrier island beaches. Dr. Plante presented the results of this biogeography study at the 2016 Ocean Sciences meeting in New Orleans with co-authors Jessica Lowry and Kristy Hill-Spanik. CofC undergraduate Aubrey Butcher finished up her Bachelor's Essay project that employed high-throughput DNA sequencing to characterize the effects of sand renourishment at Folly Beach on benthic microalgal communities. Aubrey graduated in December and is currently working at MUSC. New MES graduate student Kara Pettigrew has started a similar project studying the late 2014 renourishment project at Tybee Island, GA. Two new undergraduates, Kacey Hirshfeld and Zach Dellacqua, have just started follow-up projects that will verify previously observed short-term changes in BMA community composition and test alternative mechanisms for these rapid changes.

In addition, undergraduate Morgan Larimer used a CofC MAYS award to study the nest microbiology of olive ridley sea turtles, which lay eggs in mass nesting events (arribadas) and generally exhibit high embryo mortality. She used DNA sequencing to compare fungal and bacterial communities in high- and low-hatching success nests to test whether high metabolic activity due to abundant broken eggs or specific pathogens are causing nest failure. CofC undergraduate Caroline Cooper also worked to develop a new method to measure short-term erosion rates in marine mud- and sand-flats employing dyed sediment plugs.

FACULTY NOTES

Podolsky Lab: The Podolsky lab continues to focus on the ecology and evolution of marine invertebrates, particularly at early life-history stages. Graduate student Kevin Mack, aided by undergraduate James McGivern, is studying the potential for cold temperature to limit the northward invasion of the porcelain crab *Petrolisthes armatus*. Tess Dooley is completing her Bachelor's Essay research looking at the effects of elevated CO₂ and multi- vs. single-male spawning on fertilization success in the sea urchin *Arbacia punctulata*. Undergraduate James Peyla has begun a study of the distribution and morphological plasticity of the euryhaline squid *Lolliguncula brevis* in the Charleston estuary system, aided by Darina Debenedictis, who also helped with Tess' work. Undergraduates Maddie Hickey and Anna Harwood are collaborating on an experimental study of sexual selection in pycnogonids (sea spiders), testing whether females choose to mate with larger males, as a follow-up to previous work showing that mated males in the field were larger than unmated males. An undergraduate from Macalester College, Kaelyn Lemon, spent the summer in the lab as part of the Fort Johnson REU program researching population variation in the sensitivity of sea urchin larval development to ocean acidification. Finally, Bob is spending his sabbatical year partly in Charleston— studying the temperature and pH sensitivity of dynein, an ATPase that drives sperm motility— and partly in Friday Harbor, WA where he will be studying the effects of ocean acidification on a diversity of encapsulated embryos.

Shedlock Lab: Claire Stegman (GPMB '15) defended her thesis on sex-linked genetic markers in loggerhead sea turtles in December and reported her research at the SICB Portland, OR Annual Meeting in January. Claire is now living in Salt Lake City, UT, where she will combine her MS in marine biology with a second MS degree in environmental engineering starting this summer. Shedlock lab alumnus Jen Newby (GPMB '13) finished her second successful "deadliest catch" winter season as a Bering Sea Crab Fisheries Observer and has been recruited by NOAA as a full-time Fisheries Biologist, based in Kodiak, AK. Undergrad molecular biology and genomics ace Katharine King (HONS '16) is wrapping up an integrated synthesis of RNAseq, SNP discovery and methyl-associated AFLP genotyping in sea turtles and alligators this spring for her award-winning undergrad research program. Shedlock is kicking off the second year of a new NSF-funded Omics REU program, based

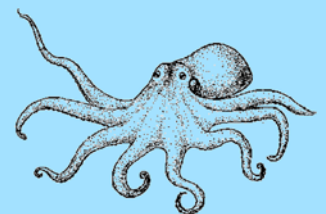
downtown at Harbor Walk in the Computer Science Department and in the Hollings Marine Laboratory at Fort Johnson. Last year's inaugural student-driven Omics research program was wildly successful and generated a large body of publishable results (co-mentored with affiliate GPMB faculty Dr. Paul Anderson). Look for the Omics REU gang commuting this summer across Charleston Harbor on the *R/V Chamberlain* water taxi skippered by Captain Pete Meier! PI Shedlock was recently awarded two highly competitive grants: a US Fulbright Scholar Grant and a Long-term International Faculty Fellowship by the Japan Society for the Promotion of Science. Shedlock will be using these awards to spend his sabbatical travelling through SE Asia and Indo-Pacific to advance international research on the population genomics and conservation biology of Pacific marine turtles and cetaceans, based at Japan's National Institute of Statistical Mathematics and the Tokyo Institute of Technology.



Andy Shedlock with a loggerhead turtle on a sampling trip

Strand Lab: In the past year, Allan Strand has been working in both marine and terrestrial environments on both sides of the Atlantic. In the summer, the Strand lab was awarded a DOE grant to study fine-root decomposition in coastal pine forests. Seth Pritchard and Dan McGlenn are co-PIs. They are conducting the research at the College's research and education station in Hollywood, SC. Also, Allan was lucky enough to teach in the College's program in Trujillo, Spain in fall 2015. He taught a course named Natural History of Spain, but the most interesting part was co-teaching the same students who were taking archaeology and history courses devoted to the same area. Showing the students the interplay of human history and natural history was extremely rewarding to Allan.

Follow us on Twitter!
@GriceMarineLab



RECENT GPMB DEGREES

Hayley DeHart — A Comparison of Demographic and Genetic Estimates of Population Size in Bonnetheads (*Sphyrna tiburo*) and Sandbar Sharks (*Carcharhinus plumbeus*) (Advisor: Gavin Naylor)

Alyssa Demko — Latitudinal Gradients of Seaweed Nutritional Content and Palatability to Generalist Marine Herbivores (Advisor: Erik Sotka)

Rebecca Derex — The Role of Hydrogen Sulfide as a Signaling Molecule in the Hypoxia Response of *Callinectes sapidus*, the Atlantic Blue Crab (Advisor: Karen Burnett)

Elizabeth Duermit — The Ecological Effects of Claw Removal on Stone Crab (*Menippe* spp.) and Habitat-Related Phenotypic Variation (Advisor: Dara Wilber)

Kelly Fridey — Bioinformatics Approach to Determining Transcriptional and Translational Responses to Heat Stress in the Florida Red Tide Dinoflagellate *Karenia brevis* (Advisor: Fran Van Dolah)

Courtney Gerstenmaier — Genetic Diversity Affects Community Processes within a Non-Native Population of the Seaweed *Gracilaria vermiculophylla* (Advisor: Erik Sotka)

Sharleen Johnson — Field Validation and Application of Two Bioenergetics Models to Evaluate Relative Habitat Quality for Coastal Striped Bass (*Morone saxatilis*) in the Southeastern United States (Advisor: Tanya Darden)

Andrea Margiotta — Rugosity: A Useful Metric for Intertidal Oyster Reef Assessments? (Advisor: Dara Wilber)

Megan Meek — Growth Dynamics of Co-occurring *Karenia* Species in the Gulf of Mexico (Advisor: Fran Van Dolah)

Nicole Schanke — Photoprotective Ability of the Antarctic Diatom *Fragilariopsis cylindrus* in Response to Ultraviolet Radiation (Advisor: Jack DiTullio)

Sarah Song — Respiration and Whole Body Lactate in Wild and Aquacultured Penaeid Shrimp Challenged with Hypoxia and the Bacterial Pathogen *Vibrio campbellii* (Advisor: Lou Burnett)

Claire Stegman — Development of Genetic Markers to Sex Subadult Loggerhead Sea Turtles (*Caretta caretta*) Using AFLP Technology (Advisor: Andy Shedlock)

A.J. Turner — Oviposition Substrate Preference in Scyliorhinid Sharks (Advisor: Peter Etnoyer)

Jason Wang — Protein-Level Characterization of Hemocyanin Isoforms in the Pacific Whiteleg Shrimp, *Litopenaeus vannamei* and Their Expression Following Hypoxia (Advisor: Karen Burnett)

Hope Wertz — Plastic Debris in Charleston Harbor: Characterizing Particles in the Field and Assessing Their Effects on Juvenile Clams (*Mercenaria mercenaria*) (Advisor: John Weinstein)

FROM GRASSHOPPERS TO GRACILARIA (CONT.)

(Continued from page 1)

In the last year, the Sotka laboratory was focused almost exclusively on an invasive seaweed called *Gracilaria vermiculophylla*. Erik's group wants to know the role that evolutionary adaptation might have played in facilitating the successful invasion, which at this point has expanded from its native Japan onto virtually every high-salinity estuary in the Northern Hemisphere. In 2015, with funding from the National Science Foundation, the lab marshalled a team of undergraduate and graduate students, a part-time technician, and College of Charleston collaborators (Stacy Krueger-Hadfield, Courtney Murren, and Allan Strand), representing an enormous pool of creativity, ingenuity, and hard work. They attempted to answer two specific questions: what biological traits help *Gracilaria vermiculophylla* survive in the novel conditions of the introduced range, and are there differences between native and introduced populations in these traits? They collected and reared 41 populations from native Japan, the east and west coast of the United States, and Europe. With a total of about 1200 plants, the Sotka lab assayed tolerance for heat, cold and salinity stress, tissue strength and strain resistance, re-

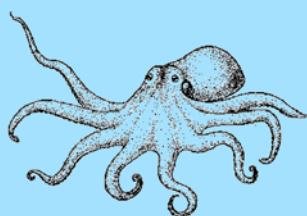
sistance to herbivory, and plant architecture. They are now busily analyzing and interpreting these data, a process that surely will take most of the next two years.

To relax, Erik tries to keep middle age away with running, weights, and tennis. He enjoys playing guitar, camping, failing miserably at crossword puzzles, and keeping up with his growing kids. He and his wife, Carolyn, also travel when time and money allow.



Erik Sotka with his family and members of his lab

Visit us online!
gricemarinelab.cofc.edu
 or
marinebiology.cofc.edu



STUDENT AWARDS

Baylye Boxall—Marine Genomics Fellowship

Jefferson Canann—Presidential Summer Research Award (2016)

Becca Derex— Knauss Marine Policy Fellowship (2016)

Drew Duckett — AMNH Lerner-Gray Memorial (2015) and a Marine Genomics Fellowship

Bobby Edman — People’s Choice Award at the Ninth Annual Graduate Student Research Poster Session (2015), and nominated and elected to Sigma Xi Scientific Research Society (2015)

Nicole Enright — Marine Genomics Fellowship

Robin Frede — Best Oral Presentation Award at the Graduate Student Research Colloquium at the College of Charleston (2015)

Rachel Grey—Joanna Deep Water Fellowship (Summer 2016)

Morgan Hart — Second Place Poster Presentation at the Graduate Student Research Colloquium at the College of Charleston (2015)

Whitney Heuring— Winner of the Natural Sciences and Abstract Mathematics category at the Ninth Annual Graduate Student Research Poster Session (2015), Presidential Summer Research Award (2016), and nominated and elected to Sigma Xi Scientific Research Society (2015)

Janelle Johnson — Nominated and elected to Sigma Xi Scientific Research Society (2015)

Mark Lehtonen — Nominated and elected to Sigma Xi Scientific Research Society (2015), Slocum-Lunz research grant (2015), and Presidential Summer Research Award (2016)

Kevin Mack — Slocum-Lunz research grant (2015)

Chris Mealey—Nominated and elected to Sigma Xi Scientific Research Society (2015), Second Place for Oral Presentations at the Graduate Student Research Colloquium at the College of Charleston (2015), and Tyson Best Abstract Award to present at the World Aquaculture Society meeting (2016)

Christine Michael — Best Poster at the Joint Annual Meeting of the South Carolina Fishery Workers Association and the South Carolina Chapter of the American Fisheries Society (2016)

Jordy Taylor — 1st place at the College of Charleston Graduate School’s Three-Minute Thesis Competition (2015), The SC Graduate Award (Spring 2015 and 2016)

Kea Payton — Presidential Summer Research Award (2016) and The SC Graduate Award (Fall 2015 and Spring 2016)

Victoria Ruddle — Best Poster Presentation Award at the Graduate Student Research Colloquium at the College of Charleston (2015)

Wiley Sinkus — Slocum-Lunz research grant (2015)

Claire Stegman—Slocum-Lunz research grant (2015)

Ann Wassick— Slocum-Lunz research grant (2015), Joanna Deep Water Fellowship (Summer 2016)

Cameron Williams— Marine Genomics Fellowship



GPMB student Victoria Ruddle receives the 1st place award for her poster presentation at the Grad Student Research Colloquium

UNDERGRAD RESEARCH HIGHLIGHT

Aubrey Butcher completed her undergraduate degree in Biology in December of 2015. Aubrey sat down with GML staff member Madison Edwards to answer a few questions about her undergraduate research project.

Q: Can you briefly summarize your undergraduate research project?

A: I worked with Dr. Craig Plante on a benthic microbiology project that looks at the differences in community structure at beaches that have undergone renourishment versus beaches that have not undergone renourishment. We started sampling in January 2014, and we are now working on our analyses.

Q: What sparked your interest in working on this project?

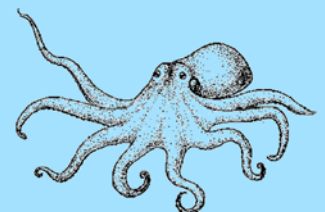
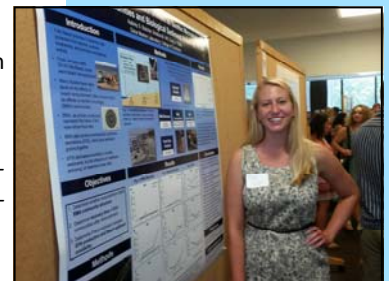
A: I’m from the Outer Banks of North Carolina, so I have always been invested in coastal communities. Since high school, I’ve taken a particular interest in microbiology and was even president of the Phytoplankton Club. Dr. Plante was my advisor and I soon discovered that I had similar research interests to him. After discussing a potential project, we applied for a SURF grant and started the project from there.

Q: What are your future goals in science?

A: I would like to attend graduate school to further study microbiology.

Q: If you could be any marine organism, what would you be?

A: I would be a Coscinodiscus (a type of diatom). They are the “snowflakes of the sea,” because they are each unique. They can also withstand incredible amounts of pressure, which is pretty cool.



ALUMNI NOTES



Chris Bradshaw (2006) Since earning my Master's while working with Dr. Gorka Sancho at Grice Marine Lab, my wife and I moved to St. Petersburg, Florida. I worked for Florida Fish and Wildlife Conservation Commission (FL FWC) at the Fish and Wildlife Research Institute (FWRI). I started out with the Fisheries Independent Monitoring (FDM) group in 2009 within FWRI to run an at-sea sampling program for headboats and charter vessels along Florida's gulf coast where our staff ride along with the vessels while measuring and tagging discards. I was then moved within FDM in 2010 to supervise all of the state's commercial port agents and have been doing that job ever since. I currently also help with diving for other sections and with the monitoring of some of our short seasons for reef fish on both coasts.



GPMB alums Luis Leandro ('08) and Amanda McCarty ('08) with their son, Tiago, at the United Nations Framework Convention on Climate Change in Paris, France

Courtney Gerstenmaier (2015) After finishing my master's degree at the College of Charleston, I had the wonderful opportunity to be a John A. Knauss Marine Policy Fellow in Washington, DC. While there, I worked jointly with the NOAA Fisheries Office of Communication and the Smithsonian's National Museum of Natural History as a science communicator and educator. During my fellowship year, I had the opportunity to experience informal education through activity development and public programming. I also had the unique opportunity to serve as a bridge connecting NOAA Fisheries's science and the museum's on-site and online content. At the end of my fellowship, I jumped at the chance to come back to Charleston and to Grice as an adjunct professor teaching the undergraduate Invertebrate Biology Laboratory courses! It has been a very unique experience to teach a course that I took as an undergraduate. Hopefully, dissections and field trips will create a few more marine invert lovers!

Sabrina Hymel (1998) I now work as a scientist and lab manager in the Department of Entomolo-

gy at the University of Minnesota. While urban entomology may seem far removed from marine biology, the scientific training that I received during my time at the College of Charleston made it possible for me to bridge into many other types of research. A large part of my research efforts at the University of Minnesota is with a group called the Scientific Coalition On Pest Exclusion (SCOPE). SCOPE is a group of scientists, pest managers, public health experts, and facility managers whose goal is to bring scientific study to exclusion practices as a fundamental part of IPM strategies in residential and commercial structures. The ultimate goal of the working group is to provide end-users practical guidance, such as designing pest-proofing into new construction, as well as deploying exclusion materials at any stage of an existing structure's lifespan. We were recently featured in an e-newsletter from the USEPA, which you can access by visiting <https://www3.epa.gov/pestwise/news/pesp/pepwire-2016-02.pdf>.

Amanda McCarty (2008) At the end of my Master's degree at the College of Charleston, I was awarded a John A. Knauss Marine Policy Fellowship with the United States Senate Committee on Commerce, Science, and Transportation, which has oversight responsibility for the work of NOAA and the Coast Guard. I began working on climate change policy while working for the Senate and transitioned into a position in NOAA's Climate Program Office working at the interface of science and decision making. My responsibilities have included policy and program initiatives that are both domestic and international in focus. I have supported the development and implementation of President Obama's Climate Action Plan, trained marine resource managers on how to adapt to climate impacts, initiated an assessment of the climate mitigation potential of coastal ecosystems, and coordinated NOAA's strategic planning and budgeting for climate activities. I have also had the unique opportunity to negotiate on behalf of the United States government at the United Nations Framework Convention on Climate Change for the past 6.5 years.

GML SOCIAL MEDIA

Here at GML we are making an effort to ramp up our social media presence. You can help us by sending alumni updates, lab pictures, etc. to Madison Edwards at mnedward1@cofc.edu. Be sure to follow us on Facebook and Twitter, as well as our blog!



@GriceMarineLab



www.facebook.com/GMLCofC
www.facebook.com/GPMBcofC



blogs.cofc.edu/gricemarinelab

