

The Biology Flash

Photograph by Shelley Kirkpatrick

Biology News Ticker

Josh Ankeny ('16) received a Tri-Beta Fellowship for his proposal "The housing of endotoxins in *Palythoa* spp. Zoanthid corals."

Dr. Gail Drus presented her research with *Tamarisk* on an expert panel in Tempe, AZ.

Gretta Ghaner ('15) was accepted into Salus University Doctor of Optometry Program, Scholars Program. She was also accepted at Lock Haven University and Ohio State University.

Monika Goss ('16) was accepted into UPMC Altoona Medical Laboratory Science Program.

Paige Mundy ('15) was accepted into the Molecular, Cellular, & Integrated Physiology Ph.D. program at University of California Davis.

Shylah Novak ('16) was accepted into UPMC Altoona Medical Laboratory Science Program.

Travis Schofield ('16) received a Tri-Beta Fellowship for his proposal "The effects of chaperone inhibition on planarian regeneration."

Meghan Studds ('15) was accepted into Veterinary School at Ohio State University, Purdue University, Virginia-Maryland Regional College, and the University of Tennessee.

Matthew Williams ('15) was accepted to Drew University Theological School.

Dr. Irene Wolf received a Faculty Development Grant to develop a zebrafish colony.

Professor Sue Shoemaker Touched Her Students' Lives

After 21 years coordinating the Saint Francis University Marine Biology program, Dr. Sue (Morra) Shoemaker is retiring. She will remain with the department to smoothly transition the program to our incoming Marine Biologist, Dr. Melissa Meadows, who we are delighted to welcome into the department this Fall. We asked some of Dr. Shoemaker's alumni to write a few words about their careers and how they were influenced by their time in her program.



I can confidently say that Dr. Sue Morra is the main reason I am where I am today. When I got to Saint Francis, all I knew was that one day I wanted to be a Marine Biologist. I had no clue what that meant or how I would get there. My first semester at college did not go so well, and my grades were pretty terrible. Dr. Morra made it clear in my advising meetings that she knew I could do better.

Dr. Morra was preparing me for the rest of my career. I have since gone on to graduate school and now am at a small teaching college (Flager College), just like Dr. Morra. I am sitting on the other side of the desk and seeing students who are doing the same things that I did. Because of her, I can get them on track, just like she did for me. Thank you Dr. Morra, from a slacker who needed a no non-sense professor just like you. - Ed McGinley ('04), Ph.D.

After graduating college, I was accepted to the National Marine Fisheries Service Observer Program, and spent several months going to sea to monitor catch and bycatch. It has been amazing to look back and see how much of what I'd learned from Dr. Morra's classes transferred into my career. When it came time to take my fish tests for the observer program, her continuous reminders to pay attention to detail when making species identifications really paid off. That same attention to detail also helped me to gain a position at QuanTech, Inc. as a Staff Biologist. My knowledge and accurate identification of Atlantic fish species, as well as catch methods, allowed me to quickly become part of many projects at QuanTech, beyond the original surveys for which I was hired. I currently conduct field surveys for QuanTech while my husband and I raise our daughter. My goal is to enroll in a masters program within the next two years when my daughter starts kindergarten. - Sara Saunders ('05)

As a Marine Biology student ('07), I never thought I would end up working in the business world. My path to a career was different than most, graduating from SFU and heading to Vermont Law School for a masters degree in Environmental Law and Policy. Upon graduation from VLS, I was offered a position working for Liberty Mutual, with an eye towards toxic torts and environmental risks. Ultimately, I took another professional turn and secured a rewarding career in large loss and litigation for Liberty Mutual. I took the path less travelled but I had Dr. Morra's support each step of the way.

Dr. Morra taught more than science; she taught life lessons. Enjoy the path you are on, make the best decision given what you have, and always learn. Push boundaries and never accept anything but your personal best from yourself. These are the foundations of a rich life that I was so blessed to have learned from The Good Doctor. She was my professor, my mentor and ultimately, my friend. For each stage of that relationship, my family and I are so very thankful. - Megan Schaeffer ('07), MEL



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Alumni: do you have news to share? New job? Attending graduate school?

Please contact us and let us know:

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Finding Life in the Earth's Most Remote Habitats

Dr. Amanda Martino, a SFU alumnus, returned this past fall as a Visiting Assistant Professor of Biology. When she was a student (SFU Class of 2007), she majored in Biology, with concentrations in Environmental Science and Marine Biology, and was also a member of the SFU Track and Field Team (a proud thrower!). Classes at Saint Francis as well as a summer internship on the Chesapeake Bay sparked her interest in both molecular microbiology and ocean systems.

She went on to get her Ph.D. in Biogeochemistry and Geosciences from Penn State University, studying the microbial communities of the deep seafloor. The deep ocean floor is subject to extreme pressures, cold temperatures, and severe nutrient limitation, and yet life is abundant, even deep in the sediments and underlying rocks. This almost completely uncharacterized microbial life

surviving at the seafloor and below is being accessed for study through the International Ocean Discovery Program, which drills into the seafloor to recover sediment and rocks from great depths.

Dr. Martino has been involved with these efforts and has sailed on several research expeditions lasting longer than a month. Dr. Martino used advanced DNA sequencing and analysis techniques to determine possible identities and even possible ecosystem roles of many of these microorganisms, which are only distantly related to previously known lifeforms. She continues research projects in this area, and looks forward to involving undergraduate students in this work.



Dr. Amanda Martino

Gabe Schuler Travels the Globe to Study Marine Biology

During fall semester 2014, Biology Major (Marine Biology Concentration) Gabe Schuler was impossible to find on Saint Francis University's Loretto, PA campus. That's because he spent the semester with the Bermuda Institute of Ocean Sciences on an internship with the Microbial Observatory Lab under the direction of Dr. Rachel Parsons. Gabe conducted research on bacterioplankton communities in the oxygen minimum zone of the Sargasso Sea. "The most valuable part of (doing research in Bermuda) was having the great opportunity to conduct research in marine biology and experience another culture at the same time," said Schuler.

Gabe has made a habit of taking advantage of opportunities through Saint Francis University to travel and learn outside of the tradition classroom. During his freshman year, Gabe traveled to

Ambialet, France, as part of SFU's study abroad program. This semester, fresh back from Bermuda, Gabe is enrolled in the immersion semester at Raystown Field Station, a joint program between Juniata College and Saint Francis, where students spend a semester taking science classes while living at a modern field station along Raystown Lake.

Despite his time away, Gabe has valued his time on campus as well. "The most enjoyable aspect of being a marine biology major at SFU is the small size of the marine biology program. This has allowed me to form a tight knit group with other students, and has allowed for a more personal interaction with professors," said Gabe. This interaction also comes with opportunities, such as the chance to maintain the 1500-gallon aquarium in the Science Center. After



Schuler aboard the RV Atlantic Explorer, just prior to a research cruise into the Sargasso Sea.

graduating in Spring 2016, Gabe plans to go to graduate school to further pursue research in Marine Biology. His experiences on campus and abroad should be great preparation for that next step in his career.