2015 Exploring Ocean STEM Careers
Birch Aquarium at Scripps Institution of Oceanography, UCSD
Meet the Scientists

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As a first-year graduate student at SIO, Kaitlyn is taking classes and beginning to test her own ideas. Right now, she’s studying the effects of ocean acidification due to carbon dioxide emissions on little shrimp that are from Mission Bay. Her data should soon show her if it affects the hardness of their outer skeletons and if they can still match the color of eelgrass as well, which is their favorite place to hang out! In the future, she hopes to study California spiny lobster, a local species you can see here at Birch.

What inspired you to work in your current field?
I read National Geographic as a kid and I knew I wanted to see the beautiful animals in their spreads firsthand. I also wanted to help them and I decided the best way to do that was to study them myself and tell people about what I found, similar to what the magazine does.

Please describe the path that led you to where you are now:
I decided to attend an out-of-state college so I could be near the ocean. In Washington, I had the chance to study animals in my courses and then drive five minutes to the shore to find them in the wild. Since being able to communicate my work is important to me, I majored in both biology and English, which provided good work balance too. After graduating college this past June, I moved right down here and jumped into studying at SIO!
What experiences helped prepare you for your career?
Some of the best experiences I had in college were studying marine biology in Mexico for five weeks and working as a NOAA Hollings intern in Maine. I spent so much time snorkeling over coral and rocks to check out the diversity of animals and algae in a tropical area, and in Maine, I learned a lot of computer skills to help me learn more about an endangered species of salmon. These experiences, which I fit into my summers, were both enjoyable and helped prepare me for graduate work. They also allowed me to prove to others that I was ready for more education right after finishing my undergrad.

Please share any funny/inspiring stories or favorite things about your career:
I love how many different things I get to do in a single week. I can be up to my neck in ocean water rummaging in seagrass for my animals one morning, wiring up part of my system that afternoon, calculating results the next morning, and taking measurements of my experimental water later.

Do you have advice for middle school and high school students interested in a career in science?
I got a lot of advice about making sure I had a broad educational background, and from where I'm standing now, that is now my biggest piece of advice too. When I'm developing ideas about what I want to study, I am so glad I have a little bit of knowledge about genetics, acid-base chemistry, ecology, and statistics. Surprisingly, I'm already finding as I want to study something more deeply, I need more and more background knowledge to do that.

Are there any resources you would recommend for students looking at a career in ocean and earth science, especially at UCSD and SIO?
For me, going to the ocean is the first step. Generating good research questions often starts with questioning what I see out in nature—why do some animals do this or that, and what does that mean for them? Getting familiar with what is present in your field of interest is very important because it can help you find your particular passion. I would also encourage students to read guidebooks, textbooks, even papers in journals if they can get their hands on them to learn more about what interests them. A large chunk of my time is doing just this.

Favorite quote?
“We'll go where the air is pure, where all sounds are soothing, where, no matter how proud one may be, one feels humble and finds oneself small- in short, we'll go to the sea” --Alexandre Dumas, *The Count of Monte Cristo*