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CITATION

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CAREER PROFILES Options and Insights

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Degree: When, where, what, and what in?

After receiving a Bachelor of Science in Marine Science and Biology from the University of Tampa and working for a few years, I returned to graduate school. I earned both a Master of Science and a PhD at the University of Rhode Island (URI) Graduate School of Oceanography (GSO). I studied biogeochemical cycling of nutrients for both degrees—carbon during the master's study and nitrogen during the PhD study. My PhD research developed from the need to understand how reductions in nitrogen loading from wastewater treatment facilities would impact the food webs of Narragansett Bay. Both degrees enabled me to understand the complexities of nutrient cycling, and with the PhD, how altering sources can have dramatic impacts. I received my PhD in 2014, and am still working with colleagues (both researchers and environmental managers) to understand the ecosystem impacts of the nitrogen load reductions.

Did you stay in academia at all, and if so, for how long?

When it was time for my job search, I was geographically limited. Therefore, I had to be open to all opportunities that came my way. I applied for my current position as I was finishing up my PhD. I interviewed for the position shortly before I officially graduated, and started working for the Narragansett Bay Estuary Program shortly thereafter.

How did you go about searching for a job outside of the university setting?

I tapped into the university's career office to help me tailor my CV to a resume for non-academic positions. I used their

expertise to translate my lab and field experience into skills that are easily recognized by multiple industries. I applied for jobs that interested me and seemed to present a challenge, and where I felt my expertise could be of use. I also relied on my professional network for tips on job hunts, interviews, and negotiation.

Is this the only job (post-academia) that you've had? If not, what else did you do?

This is the first job I've had since earning my PhD. I am a mother to two young boys and balance two other activities, as well. In 2014, I was elected treasurer of the New England Estuarine Research Society (NEERS). I manage the finances for this small professional society, which is a 501(c)(3). I work with the executive board to plan regional meetings (twice per year), and network with estuarine research professionals from Maine to New York. I will join the Omicron II class of Leadership Rhode Island in 2019. This group is dedicated to connecting and encouraging a diverse leadership for the state of Rhode Island in all aspects of Rhode Island life through professional development and personal growth.

What is your current job? What path did you take to get there?

I am the staff scientist of the Narragansett Bay Estuary Program, one of the 28 designated National Estuary Programs supported by the US Environmental Protection Agency's Clean Water Act. I manage the scientific projects and programs of the Estuary Program, coordinating with partners to expand research ideas and strategically use limited research funds. I routinely synthesize data for the Narragansett Bay watershed,



and work with partners to disseminate our findings. My graduate career provided an easy transition to this position, where I tap into my professional network daily and use what I learned in graduate school to protect, preserve, and restore Narragansett Bay and its watershed.

What did your oceanographic education (or academic career) give you that is useful in your current job?

I find that my coursework at GSO was invaluable. These courses challenged me to see the larger picture and to understand the many links between humans and their environment. Both my dissertation and master's thesis work introduced me to a large network of researchers, citizens, and future partners around the bay and watershed who are passionate about the region. These are the people I rely on today to help me do my job. I took opportunities to present my work at local, regional, and national conferences, and to learn science communication methods to bridge gaps and learn from others. I took on two very different projects during my graduate career. Going through the scientific process, making mistakes, and learning from them gave me the confidence to tackle the challenges I encounter in this job.

Working with various graduate student associations at URI has probably given me some of the most valuable skills

to tackle my job. Through those organizations, I learned how to gain consensus with diverse groups, look for common interests, and identify the most important concerns. These skills allow me to work with diverse partners and pursue a common agenda to protect and restore the water quality and habitats throughout the watershed.

Is there any course or other training you would like to have had as part of your graduate education to meet the demands of the job market?

When I started graduate school, I wanted to take as many different types of classes as I could. I found that I couldn't fit everything in and I wish I had further training in Geographic Information Systems (GIS), computer coding languages (R, Python, or MATLAB), and science communication. In my current position, I complete professional development training classes in computer coding and science communication. These skills help me analyze/understand data and disseminate information to our partners and the public. GIS is very demanding, and I collaborate with specialists in that field (including two staffers at NBEP) to maximize my organization's abilities to

disseminate results and generate research. Grant writing is very important, and while graduate students often do get that experience, formal classes or workshops would have been useful. Finally, negotiation is a topic that does not get much attention in graduate school. Negotiating is an important process during job interviews, and being comfortable doing that takes time and training.

Is the job satisfying? What aspects of the job do you like best/least?

Yes, my job is satisfying because it can be very challenging. I am no longer a classic field or lab researcher (and I do miss that at times), but rather someone who spends her time communicating with partners, synthesizing data, and disseminating those results. I meet with people from both Massachusetts and Rhode Island regularly to identify ways to partner and write proposals. Until recently, my main objective has been to establish and synthesize data for 24 environmental indicators. Now, my position has shifted focus to link those indicators together to better understand our watershed and how those data and conclusions advance science and policy. The main challenge of this job is telling the "watershed's" story. It is very easy to

tell the story of where data were collected, but it is sometimes difficult to find the same or complementary data in another location. What we observe at Site A does not necessarily apply to Site B. How, then, do we tell a complete story? At the same time, our watershed spans two states—Massachusetts and Rhode Island—that have very different wants/needs and data collection/interpretation capacities. The NBEP staff spend a significant portion of our time with partners overcoming these challenges. We recently published *State of Narragansett Bay and Its Watershed*, which focuses on the watershed's story, and places many environmental indicators in context with location, climate change, and history. Overcoming these challenges is very satisfying.

Do you have any recommendations for new grads looking for jobs?

Job hunting is an exhausting experience. Be open and honest with yourself and your network. Opportunities are found in the oddest of places, and many times through word-of-mouth. Use all resources you can to tailor your CV/resume and letters to the job application. Don't get discouraged if you don't get interviews right away—something will click eventually. 🍀

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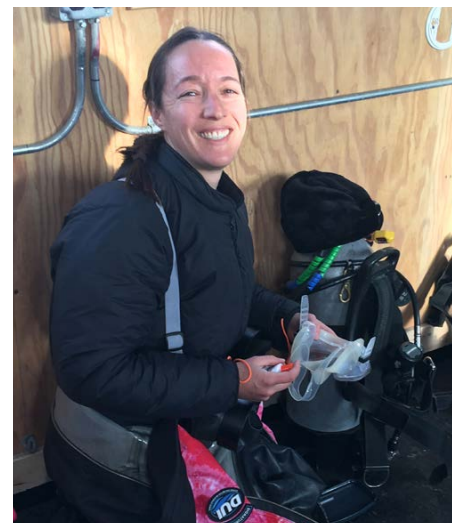
Degree: When, where, what, and what in?

I completed a PhD in oceanography at the Scripps Institution of Oceanography (SIO) in 2007. My dissertation was on passive acoustic monitoring of endangered North Pacific right whales (*Eubalaena japonica*) in the Bering Sea. I analyzed several years of acoustic data from seafloor-moored recorders to characterize the whales' seasonal occurrence and daily calling behavior. I also spent many months at sea on research vessels in Alaskan waters to conduct cetacean surveys, collect real-time acoustic data, and

assist in deploying and recovering moorings, and I traveled to several remote native Alaskan villages to spend time in their communities and schools. Prior to my graduate studies, I completed a BA in ecology and evolutionary biology in 1999 at the University of Colorado, Boulder.

Did you stay in academia at all, and if so, for how long?

Yes, for a little over four years. I continued as a postdoctoral scholar at SIO for a couple years in my graduate advisor's lab, then moved to Hawaii for another two-year postdoctoral appointment, which



was a joint position with the University of Hawaii and NOAA Pacific Islands Fisheries Science Center (PIFSC) in the Coral Reef Ecosystem Program.

How did you go about searching for a job outside of the university setting?

My postdoc in Hawaii allowed me to bridge the marine research communities at University of Hawaii and NOAA, and the connections I made led to some opportunities to remain there and continue working in my field. I worked for one year as a contractor within the Cetacean Research Program at NOAA PIFSC, and then as a senior researcher for several years for Oceanwide Science Institute (OSI), a nonprofit that focuses on marine bioacoustics research and outreach. In each case, I was more or less tapped for the position by the respective program leaders, who are friends and colleagues from grad school or a work situation. It was a combination of whom I knew and being in the right place at the right time with the right skills.

Is this the only job (post-academia) that you've had? If not, what else did you do?

In addition to working for NOAA and OSI, I also began teaching an undergraduate course at the University of Hawaii in 2012. I have taught this course nearly every year since then.

What is your current job? What path did you take to get there?

I'd say I'm now the oceanographic equivalent of a freelancer in the "gig economy." I keep a foot in the door of academia by teaching undergraduate courses at the University of Hawaii and the University of Oregon; these are part-time, temporary lecturer positions for which I am rehired each year. I recently returned from a three-month deployment as a research technician and scientific diver at McMurdo Station, Antarctica—another opportunity that arose sort of organically by getting to know researchers at the University of Oregon and discovering

that my skills and training were a good (and timely) match for a project need. I held the title of Science Director for Oceanwide Science Institute for a year but am now transitioning to more of an independent contractor role, where I continue to pitch in on projects for OSI as needed, and I'm beginning to offer my services in acoustic data analysis and reporting more widely.

What did your oceanographic education (or academic career) give you that is useful in your current job?

The ability to evaluate information and synthesize ideas from multiple sources and perspectives, whether reading scientific papers, browsing websites, or attending a meeting. Experience working in a wide variety of settings, often with limited resources, and often in tight quarters with the same people for extended periods—requiring lots of flexibility, creativity, and diplomacy to make things work. Being meticulous in all things—setting up equipment, troubleshooting, taking notes, organizing and backing up data, budgeting my time. Perhaps most importantly, a network of friends and colleagues that continues to grow. These people are so important for so many reasons—not just for finding jobs and opportunities, but also friendship, geeking out together, and providing support and encouragement!

Is there any course or other training you would have liked to have as part of your graduate education to meet the demands of the job market?

- Computer programming
- Electrical and/or mechanical engineering
- Business—management, communications
- Geographic Information Systems

Is the job satisfying? What aspects of the job do you like best/least?

I have always had many interests throughout my life and no single overriding passion, so on the one hand it is

very satisfying to work on a variety of projects, either in parallel or by switching it up every few months. And I do find teaching to be immensely rewarding, and a challenge that I enjoy. The aspect of the job(s) I enjoy least is the "feast or famine" of working from one project to the next and not being assured of a steady income or benefits.

Do you have any recommendations for new grads looking for jobs?

As others have said, build up skills in a variety of disciplines. In my opinion, quantitative and engineering skills seem to be especially beneficial—there will always be a demand for tech-savvy folks who are good at making and troubleshooting things. Also, keep trying! It's tough out there, and most of your applications will be ignored or rejected. Stay positive, keep an open mind, and talk to everyone, whether they are in your field or not—you never know where a conversation might lead. 📧