Halley Mastro

Working Life Draft 1

**Bugging out**

There was something strange floating on the water’s surface in the dish under the microscope. As I tried to gently urge it into my field of view, I said, “not to be dramatic, but I think there might be an *entire bug”.* I stepped away to let my advisor look, after a few seconds, he said, “holy sh\*t”. We had spent the week playing with mud, searching for macrofossils in sediment from underneath the Greenland Ice Sheet. My mind started racing, but the one recurring thought was—how did I end up here? It was my first week in a ‘real’ lab, visiting my soon-to-be home during the spring before I was set to start as a master's student. No one in my family is a scientist. No one in my family has a graduate degree. Until about a month before I started the application process, I had no idea what graduate school really was.

Two years earlier, I took an undergraduate climate records course with a visiting professor. On the first day, he spent the lecture showing us photos from past field seasons in Baffin Island and Svalbard, while explaining the treasure troves of information that can be found in different types of cores. As soon as I left the building, I called my sister and frantically told her I had decided to become an Arctic paleoclimate research scientist—to which she replied, “a what?”. I was a 19-year-old Environmental Studies and Biology major, with no research experience outside the classroom. I knew where I was and where I ultimately wanted to end up, but I didn’t have a clue what the middle would need to look like in order to get me there.

Eventually, I found a roundabout way of asking that professor, “how do I become you?”, without being weird. I left that conversation feeling defeated, thinking graduate school wasn’t in the cards for me. I was already finishing my undergraduate degree a semester early to avoid taking out any more loans than I already had. I also couldn’t imagine finding a way to support myself through more school for the next 2-7 years. So, I tried my best to let go of the idea and started to think about post-grad jobs that might make me feel the same way I felt that first day in class. Still, I kept taking any opportunity I could find to get involved with research and geoscience... which were admittedly few and far between at a small liberal arts institution with no geoscience program.

Then, talking with my independent research advisor at the beginning of my last undergraduate semester, she asked me if I had considered applying to graduate school. I explained that I had been very interested, but definitely couldn’t afford it. She opened my eyes to tuition funding and graduate stipends, and it felt like a real possibility again. As I started researching funded graduate programs and how to apply, I once again started to feel hopeless. I read countless articles about what would make a competitive application—I needed prior connections with potential advisors, I should have already been a co-author on three peer-reviewed articles and participated in competitive research projects every summer. I felt like I was navigating a minefield. Every source had a different opinion on what a first email to a potential advisor should contain and when it should be sent, if you should follow up and when to schedule a video call, how to express interest in a project but still be considerate of important faculty member’s valuable time.

I started attempting to connect with faculty from a wide range of programs that I could see myself being excited about, trying my best to convey that I believed I deserved to be a part of the scientific community. In reality, I was synthesizing application advice from all the different “experts” I could find, and terrified that I was going to irrevocably break one of the unspoken rules of the process. I tried to express that my best qualities were my curiosity and teachable nature, but a desire and ability to learn felt meek compared to all the amazing, tangible research experiences I was sure everyone else had.

With each interaction, I felt less certain about the way I was presenting myself, even when I received positive feedback. Ultimately, I think that my lack of certainty of the perfect things to do or say forced me to be completely honest throughout the process and reflect deeply about why I wanted to do graduate research. Once I settled on a program and was able to visit for those few weeks when we found the bug, the confidence that my advisors had in me started to build my confidence in myself and my sense of belonging. Now that I am a graduate student, with many opportunities to connect with undergraduate students who may feel as uncertain and lost as I did, I hope that I can be helpful in demystifying the process.