



UNIVERSITY OF CALIFORNIA, SANTA BARBARA

College of Letters & Science

UCSB

# Alumni Spotlight

This month's Spotlight features Samantha, a former Aquatic Biology and French double major who's now diving into the turquoise seas of Moorea to research the protection of coral reefs.



**Samantha Davis:  
PhD Candidate in Ecology,  
Evolution, and Marine Biology  
UC Santa Barbara**

## What are you up to now, post-graduation?

I'm wrapping up my final year of my PhD. I've been studying coral reef ecology and trying to understand what makes reefs resilient and able to recover from different types of disturbances. Coral reefs are actually in decline around the world for a variety of reasons. For example, back in the 80s, reefs in the Caribbean started to die off because of overfishing and an outbreak of a disease that killed an important herbivore, the sea urchin. The fish and sea urchins eat algae, which can compete with the coral for space. A lot of the reefs in the Caribbean have still not recovered.

When coral dies off, it's a big deal. You end up with reefs that are breaking down because the coral's no longer alive. When that happens, the abundance of fish

that people count on for fishing and tourism drops off. Reefs are also important barriers in protecting islands against storms. So there are really big costs, especially for island nations that are reliant on the reefs for basically everything. People in my field are learning about what factors give reefs resilience and developing management or conservation strategies.

My research involves about three months of really intense field work a year in Moorea, French Polynesia, in the South Pacific. Going out into the water, surveying different organisms like coral, fish, algae, running experiments. It's pretty physically intense. For the rest of the year, I'm going to conferences and am back in Santa Barbara analyzing the data and trying to get the findings published. I also teach on campus.

**"There are people who advise you along the way, but you're ultimately guiding yourself."**



My favorite part of what I do is getting in the ocean. It sounds very simple, but that's where it all started for me. I moved to California when I was five and already had an interest in the ocean, but it was this abstract thing. Ever since I got a taste for the real thing, I've been inspired by all that's going on in this vast, mysterious part of our planet. I love swimming around and looking at all the different organisms and thinking about what they're doing and trying to understand all the different relationships. The other thing that's really important to me is trying to make an impact that helps people. I think a lot about how the research can help people better use and manage the resources they rely on so that they can continue to use them.

**How did you get to where you are?**

I knew I wanted to be an Aquatic Biology major when I came in, but during my first year, every class I took for GEs, I thought, "Hmm,

maybe I could do this instead." I took cultural anthropology and was like, "Yeah, I'm going to be a cultural anthropologist, for sure." The next quarter I took biological anthropology and was like, "Nope, this is what I'm going to study, the evolution of human behavior." To be honest, the second year of the Pre-Biology major was really challenging. I was taking Organic Chem, Physics, and Bio. I wasn't sure whether I'd make it through and I wasn't feeling engaged. So I made sure to think about a fallback plan. But the third quarter of the Bio series is the ecology and evolution course, and that hooked me back in. The upper division was then so fun, I had no problem with those.

I also loved taking French classes in high school, so I had continued to take those until I decided to double major in it. It was really fun to have this other piece of my education that wasn't scientific to keep the literary thoughts going, to be able to read novels and keep developing my lan-

guage skills. And those language skills ended up being really valuable when I joined my lab and there was an opportunity to work in French Polynesia. I had an understanding of the language ready to go.

I started working with the lab that I'm in now when I was a junior in undergrad. I was into the classes my advisor teaches, so I asked about research opportunities. I got to go to Moorea as an undergraduate assistant, which really set me on my current path. Up until that point, I'd been working for labs on campus, but being able to go out in the field as an undergrad showed me that field research was what I loved. I did an honor's research project with the department and presented in the Undergraduate Research Colloquium, which kept the grad school door open while I tried to figure out what my options were. After undergrad, I did a post-baccalaureate semester through Cal State Northridge where I lived on

**"I think a lot about how the research can help people better use and manage the resources they rely on..."**



**“[In grad school] you come face-to-face with your strengths and weaknesses.”**

Catalina Island and learned about the marine system. That made me sure I wanted to go the grad school route. I applied to UCSB, and here we are!

Grad school is really challenging because you're pushed to be your own master. You get used to this really structured environment of undergrad where someone tells you, "Learn this, here's a couple tools to help you, and here's a couple whacks at it." But in grad school, you design your own project and you are responsible for it. There are people who advise you along the way, but you're ultimately guiding yourself. To have that level of responsibility, and starting out totally clueless, it's been one of the most personally challenging things I've ever done. You come face-to-face with your strengths and your weaknesses.

For a long time, I had this block where I thought I wouldn't pass my comprehensive oral exams. I thought at some point, I was going to be declared a fraud. Which is really common, the Imposter Syndrome. And orals was the time when I was pretty sure that was going to happen. But it didn't. It went really well and I got a lot of great feedback. It was a big confidence boost and made me realize

that these people wanted me here and believed I could do it. And I had done it after all.

**What was the best thing you did as an undergrad to help you get to where you are?**

Talking to my professors and TAs. I would go to office hours and have just casual conversations like, "What are you doing? What is interesting to you? Why are you doing this?" Even with grad students outside the Bio Department. Those conversations led to people saying, "You should try this lab opportunity," or, "You'd be great for this." Just taking that extra step to talk to professors and TAs about something in addition to asking about the class made a huge difference.

**What do you wish you had known while you were in undergrad?**

The opportunities that were available to me and how to find them. I talked to lots of people and got suggestions, but I didn't really know how to look for internships or research careers beyond that. A lot of it was word of mouth, which is a good strategy, but I wish I'd taken more advantage of the

career center. The first time I went there was this year, which is kind of hilarious. I've been here all this time and finally walked in and was like, "This is all here?" Looking at that earlier would have made me feel less like, "This is what I've got to do because these are my only choices." I'm definitely interested in what I'm doing, but I went to grad school in part because I only spoke to grad students so that was the option I



**“Why not...focus on what makes you want to get up in the morning and do things?”**



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If an alum's story is meaningful to you, consider reaching out with questions using the contact information provided.

knew was available. I probably would have still done what I did, but it would have been nice to have done a more comprehensive search and feel confidence from the start that I was picking my path because it was the best one for me, not just because I didn't know what else to do.

#### **What was the best thing about being a Gaucho?**

There's so much going on around campus that, as I've gone from freshman to senior to grad student, I've always found something to relate to at every stage. You can evolve with the campus. There's always some event going on—shows, improv groups, lectures, performances, movies... When I started grad school a lot of other students found it was really cool you could get these reduced-priced tickets to see these big names, big shows, all

this stuff. There are always a lot of different cultures and ideas represented. I think that's one of the coolest things about UCSB—that exposing people to a wide range of experiences is a huge portion of what goes on here and something the community really values.

#### **Any final words of wisdom for the current Gaucho generation?**

Talk to people. Ask questions. Then use all that to find out what interests you and pursue that. You can spend a lot of time doing what other people want you to do and what they say is practical, but at some point down the line, you're going wake up and realize, "This doesn't make me happy." Why not skip that whole process and focus on what makes you excited to get up in the morning and do things? Whatever that is for you, do that.



*Samantha welcomes UCSB students to contact her via LinkedIn for mentorship and with questions about grad school or the field of ecology. Requests to review applications or inquiries about open positions will not be responded to.*

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