

SNRE Spotlight: Chelsey Crandall talks fisheries, interdisciplinary research and her future in Florida



Chelsey Crandall graduated from SNRE with her doctorate in Fall 2016. Photo Courtesy of Chelsey Crandall.

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SNRE alumna Chelsey Campbell Crandall finished her doctoral dissertation in Fall 2016. We got a chance to ask Chelsey a few questions about her experience in the Interdisciplinary Ecology graduate degree program. Read on to learn about Chelsey's research inspiration and future plans in the state.

Can you tell me a bit about your background? Where did you grow up? What brought you to academia?

I am originally from Tampa, Florida, though I have been in Gainesville for more than 12 years now. I knew for a long time that I wanted to be a marine biologist. I grew up spending summers at the beach, and we were always close to the water in one form or the other, be it the Bay or the Gulf, and I fell in love with the marine environment early on. And in all honesty, I think nature documentaries had a big influence on me too. Growing up watching Discovery

Channel and Animal Planet got me super excited about animals and research, and I looked up to the scientists and researchers they would depict out there tagging sharks or tracking big cats or crocodiles or what have you.

I came to UF as an undergrad back in 2004 and majored in zoology (back before it merged with Botany to become Biology). Funnily enough, I have been here ever since. I had always intended to continue through to a Ph.D., and it just worked out that I remained at UF. I worked for a few years in between, first in the Malacology and Marine Invertebrates Collection at the FLMNH, then as a field technician for the Florida Program for Shark Research. I then did my master's in Fisheries and Aquatic Sciences under Dr. Daryl Parkyn, where I looked at what otolith (fish earbone) shape has to say about population structure in Gulf of Mexico greater amberjack.

How did you first become interested in fisheries management?

Hmm, I guess there are a couple of steps here. I first became interested in working in fisheries in general through a combination of experiences gained while volunteering at the Florida Program for Shark Research as an undergrad and through a course I took with Dr. Debra Murie (Global and Regional Perspectives in Fisheries). I found fisheries attractive for a couple of reasons. Firstly, fish are really cool. Second, fisheries are really important to the state of Florida and to many people globally, and so I saw working in fisheries as a way to have a positive impact on the marine resources of my state.

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I became interested in fisheries management, and the human dimensions of fisheries specifically, during my master’s degree while taking Dr. Kai Lorenzen’s Fisheries Management Course. Prior to that class, it had never occurred to me that you could study the people who fish, or how important it is to understand the human component of fisheries systems (as I was taught, fisheries management is really about managing people, not fish).

Can you give me a brief description of your dissertation research?

For my dissertation, I studied marine fisheries stakeholders (i.e., anyone connected with marine fish and fishing) in the state of Florida and their participation in management and science. There were really three parts to my dissertation. Firstly, I studied stakeholder participation in management decision-making: specifically, how they feel about current engagement opportunities and



Fisheries stakeholders working together for management solutions. Photo Courtesy of Chelsey Crandall.

about fisheries management in general. Secondly, I studied stakeholder participation in science, specifically looking at what motivated recreational anglers to participate in a citizen science program called the Angler Action Program (in which anglers voluntarily enter data about their fishing trips). Finally, I looked at what motivates fishers to voluntarily participate in efforts to reduce discard mortality (or the mortality of fishes that are released after they are caught), in this case through the use of devices that reduce the impacts of barotrauma. Barotrauma can occur when fish are caught at greater depths-the change in pressure as they are brought to the surface from depth can cause their internal gases to expand, which can do things like cause their stomachs to be pushed out of their mouths or their eyes to pop out, and they may be too positively buoyant to return to depth on their own.

So to sum it up, I studied some of the different ways that fisheries stakeholders can participate in management, looking specifically at how people feel about current engagement in the fisheries management process and what motivates them to participate in management and research.



Crandall in the field. Photo Courtesy of Chelsey Crandall.

What was the most challenging part of the dissertation process?

For me it was learning a whole new field. Coming from the biology/ecology side of things, the human dimensions/social science aspect was all new to me. Working with people is very different from working with animals.

What was most rewarding?

Oh man, so much of it was rewarding. To start, it is so cool to see a project through from conception to completion. Also, I got to learn so much! The research itself was really rewarding too, and I hope my results can have a positive impact on fisheries management in the state.

What kind of impact do you think your research will have?

I hope that my research helps management understand how fisheries stakeholders feel about engagement, and that it leads to more effective engagement in the future. In addition, understanding motivations should help management and researchers more effectively recruit participants in future efforts. Ultimately, I hope my work can contribute to reducing conflict

between fisheries stakeholders and management.

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I know that your background was not in social science, but the human dimensions was central to your dissertation. What inspired you to move in that direction, and how was the transition?

The decision was inspired by my newfound interest in the human dimensions of fisheries. The transition was both hard and really cool. My background was much more biology/ecology-based, so I had virtually no training in social science approaches or methods and had to learn them all on the fly (through classes and help from peers and mentors), which made for an exciting Ph.D. Working with people was certainly different from working with animals, but I really enjoyed it.

Can you talk a bit about the value of interdisciplinary research? Why is important to communicate between fields?

I think interdisciplinary research is really important. Though people may work on different systems, methods and approaches applied in one field can be really useful in other systems and fields, and interdisciplinary communication helps to keep people from “re-inventing the wheel” you might say. Also, so many of our systems are complex in nature, and to truly understand all the components of what is going on we need interdisciplinary research.

Congratulations on finishing your degree! What's next for you?

Next I look for jobs! I plan to stay in Gainesville for a little bit at least to finish up some of the projects we have been working on, and am applying for postdoc funding to continue with our research on the human dimensions of Florida’s fisheries. Ultimately, I would like to work in academia and find a faculty position at a Florida university. Staying in the state is something that is important to me and to my family.