After 10 weeks of long days and short nights, working around the clock – through horseshoe crab spawning and terrapin nesting season, it all came down to this. The Coastal Conservation Research Program (CCRP) intern symposium was in full swing at the Wetlands Institute (WI). This was the first time any of the undergraduates presented publicly, and the lecture hall was packed. A few parents were even standing in the back. It was my fourth year participating in the event… but the first time I dressed in a coat and tie, feeling both pressure to perform and a professor’s pride as Associate Director. I remained alongside my interns – while the light of the slide projector illuminated each speaker. For the first time, I was responsible for their summer experience and projects.

I’ve never been so pleased as that evening, seeing the students shine with their polished presentations. They came from diverse backgrounds, institutions, and majors – but they uniformly impressed the audience. From initial brainstorming for independent projects, through design and data collection, final analyses and writing of their first scientific abstracts, Dr. Ralph Boerner (Program Director) and I worked side-by-side with the interns. Their projects ranged from studies of climate change and local flooding, to impacts of beach fill on intertidal invertebrates; to terrapin reproductive biology and crab trap escape behavior. In each case we helped them find a way to test hypotheses, and to do their best.

Truth be told, I learned as much from them as they did from me. They taught me a lot about Geographic Information Systems (GIS), photo/video editing, and applications for scientific presentations. Throughout the experience I was impressed and humbled by the creativity, dedication, and discipline the interns demonstrated. To be a good mentor, I must listen, and remain receptive to new ideas and unique approaches to problem solving. In many ways, being an undergraduate student new to research is a gift: one comes to the table without the weight of preconceptions in science. I will spend the rest of my career working with undergraduates both in the classroom and in the field. To be the best mentor and teacher I can be – I need to maintain balance as a listener, learner, and in many cases friend to the student.

I’ve spent the last two summers at the WI in Stone Harbor, NJ, conducting dissertation research and working closely with the CCRP, an annual 10-week intensive hands-on internship. The program provides aspiring scientists real opportunities to work side-by-side with both junior and well-established people in the field and lab. I interned with the CCRP in 2004 and stayed through 2005 to serve as a Research Assistant. In 2012 I returned as a Visiting Scientist. Before I knew it, I was knee-deep in coastal creeks again, teaching interns about the ecology of shorebirds, horseshoe crabs, and diamondback terrapins. Although I was primarily there to focus on research, I became equally involved with their independent projects – providing mentorship. I keep in touch with many interns, and whether fielding questions about grad school, or editing manuscripts, I am grateful that they come to me.

I was invited to return and serve as Associate Director of the 2013 CCRP. Dr. Boerner and I held weekly professional development seminars covering topics including Ethics, Writing a Scientific Paper, Creating Research Posters, Statistical Analyses of Scientific Data, Planning for a Career in Conservation Science, and PowerPoint Presentation Development. I know I would have appreciated this kind of training before entering graduate school. The overwhelming value of the seminars has likely only begun to be realized by the interns – but they provided part of the foundation for a career in the STEM disciplines. As a retired professor who spent over 30 years mentoring undergraduates and graduate students Dr. Boerner taught me a lot about how I will spent my next 30 years mentoring students of my own. I am truly grateful to have already started down that road.

Perhaps my most challenging mentoring experience to date occurred as a new PhD student and Fellow in UF’s GK-12 program “Science Partners in Inquiry-Based Collaborative Education” (SPICE). I co-taught 7th grade Life Science at Mebane Middle School, in rural Alachua County, FL alongside Ms. Carmella O’Steen (2009-10). I learned to work within the framework of an exceptionally conservative institution while teaching evolutionary biology. In time the students were hooked by science, inquiry, and the processes and patterns we observe in all living things. I created a module using live Triops, tadpole
As a SPICE Type II Fellow (2010-2011), I continued to co-teach Life Science, this time at Lincoln Middle School in east Gainesville, alongside Ms. May Steward. I also served as a mentor to the new graduate student Type I Fellows. Lincoln is essentially urban and came with a separate set of challenges. Unlike at Mebane, I had to work hard to earn the respect of my students. But over time, even the most disinterested students found focus and created fewer classroom distractions. Over the course of both SPICE years, I facilitated science fair projects and judged entries at regional events. The expectations, philosophies, and classroom dynamics in the middle schools were completely different from my previous teaching experiences. Translating college-level science into terms and concepts relatable for 12-year olds was both difficult and gratifying, and continues to be useful every time I explain my research or science in general to the public. To quote Dr. Doug Levey, SPICE was “the toughest job I ever loved”.

As a MS student in Interdisciplinary Ecology at UF I conducted thesis research in the Florida panhandle. During the summer of 2008 I served as a Guest Scientist with the Florida Department of Education and Panhandle Area Educational Consortium’s jointly sponsored “Science Collaboration: Immersion, Inquiry, Innovation” (Sc:iii). The program gives opportunities for rural Florida middle and high school teachers to work directly with scientists. I took teachers into the field to radio track gopher tortoises and into the laboratory to assist with water quality sampling. The teachers learned techniques they could bring back to their classroom, and the experience reinforced my passion for sharing science in a memorable and thoughtful way.

As a PhD Candidate in Wildlife Ecology and Conservation (WEC), I’ve cut my teeth as a professor-in-training. Even more, I’ve become most comfortable teaching and mentoring undergraduates, guiding academic and professional development. Teaching in WEC provides some of my most rewarding and career reaffirming opportunities. Getting to know individual students and challenging them to realize their full potential drives me to be the best teacher, mentor, and role model that I can be. This spring I’ll serve as Instructor for the Wildlife of Florida course. I apprenticed as a TA under Dr. Steve Johnson last spring. He taught me crucial classroom management skills, interacting with students of varied backgrounds, skills, and disabilities. Engaging non-majors in a huge lecture hall of over 150 students three times a week is not an easy task. Undergrads have said our field trips provided some of their best memories. One student, originally from Peru went camping for her first time with us this past spring.

I’ve also taught extensively in Wildlife Techniques, an upper-level required course for WEC majors. Students often email or visit after graduation to say that this course was the most useful class they took at UF, and they share photos and stories of their experiences in the field. My former student, Eddie Roqueta created a film trailer featuring our Wildlife Techniques field trips and labs: http://vimeo.com/31570432. Eddie is now a student in Montana State University’s MFA program in Science and Natural History Filmmaking. Mentoring is a life-long commitment to helping folks find their way – to discovering passions and overcoming weaknesses. I had a crippling statistics phobia, and a serious fear of public speaking. Mentors like Dr. Boerner helped me not only overcome a fear of statistics but taught me to embrace the field. Dr. Bill Belzer, who was my first science mentor, helped me overcome a fear of public speaking. He gave me a chance to deliver turtle talks in his place, and over the course of the next two years I presented nearly 30 times all over western Pennsylvania. I still fight nervousness before each talk or lecture – but Dr. Belzer helped me realize my potential.

I believe it’s our duty to mentor the generations that follow us – to pay it forward, and provide guidance in the way that we, too, were mentored. I’ll close with a note received from a current mentee: “Thank you for all of your help this semester. I look forward to repeating the experiment and getting it published. You have helped me realize my passion for turtles and I wanted to thank you for that. I have really enjoyed listening about your experiences with wildlife and it makes me excited to make my own.”