

YAIO Interns Shine this Summer

The North Carolina State Government Internship Program provides students with professional work experience that connects their classroom studies and potential career choices. The Youth Advocacy and Involvement Office (YAIO) is coordinated by the North Carolina Department of Administration. This year, the Reserve had three internships available between our Kitty Hawk, Wilmington, and Beaufort offices. After reviewing the pool of applicants, Reserve staff landed on three highly qualified students to help with Reserve activities and take on their own project during their internship. Cody Mead, Samantha Godwin, and Tara Early quickly settled into their respective roles at each Reserve office and contributed valuable time and energy toward activities taking place over the course of the summer. With the conclusion of their internships fast approaching, we wanted to share some insight into the projects they took on while at the Reserve.



Tara Early, Sea Turtle Monitoring and Outreach Intern

When she's not out hiking 8.4 miles across Masonboro Island Reserve in search of sea turtle nests, Tara has been collecting data on the diamondback terrapin population under the supervision of Stewardship Coordinator and Southern Sites Manager Hope Sutton. These are the responsibilities that come with the title of Sea Turtle Monitoring and Outreach Intern at our Wilmington office. Tara's studies in environmental science, with a minor in both physics and biology at Appalachian State University, make her well-equipped to help with monitoring at Masonboro Island Reserve, North Carolina's largest site in

the National Estuarine Research Reserve System. It is clear that Tara has a strong passion for conservation based on her willingness to participate in management activities, like building protective enclosures to place around sea turtles nests and responding to species strandings in the area.

Cody, a rising junior studying secondary education at Western Carolina University, was selected to be the Coastal Reserve Education Intern. He's been working with Education Coordinator Lori Davis to assist with summer camps, teacher workshops, and other public programs that are designed to educate participants about one of North Carolina's greatest ecosystems, estuaries. He has spent hours trekking through the mud on the Rachel Carson Reserve to teach budding scientists about marsh plants, fiddler crabs, and other components and functions of our valuable estuarine ecosystems. In addition to exploring the Reserve, Cody has led activities in the classroom, including showing students plankton under a microscope, entertaining preschoolers during morning story time, and providing a touch tank so campers can interact with hermit crabs.



Cody Mead, Education Intern, shows a hermit crab to a camper

Since day one, Cody has done a terrific job at leading educational field trips and developing projects designed for K-12 students. It's safe to say that he is well-suited for a future role in education.

Samantha has been dividing her time between our three northern sites; Kitty Hawk Woods, Buxton Woods, and Currituck Banks Reserve, while working with Site manager Scott Crocker to gain hands-on experience in the field of natural resource management. Her main project this summer focused on monitoring water quality at Currituck Sound, which involves measuring meaningful water quality parameters, like salinity and dissolved oxygen, and collecting water samples for nutrient analysis. In addition to obtaining valuable research skills, Samantha has helped with the development of educational materials and worked extensively with the public through visitor interaction. We've enjoyed working with Samantha and she'll certainly be missed when she returns to Mars Hill University in the fall to continue working towards her degree in biology.



Samantha Godwin, Natural Resource Management Intern, changes a sonde at Currituck Sound

Reserve staff were incredibly grateful to spend the summer with three confident, ambitious YAIO interns. It will be sad to see them leave, but we look forward to hearing about their success in future endeavors. To learn more details about their summer projects and experiences, read their responses to questions posed by Reserve staff below.

Tell me about the project you are working on through the YAIO internship.

Tara: I am working with the North Carolina Coastal Reserve monitoring sea turtle populations on Masonboro Island for the 2015 nesting season. We walk the island searching for signs of sea turtle activity. When we come upon a nest we take photos of the tracks, determine species, and in the case of a nest, take an egg sample and protect the nest with mesh. I have also been working on diamondback terrapin monitoring in the marsh grass located behind Masonboro Island.

Cody: In efforts to help with beach erosion, my main project for the summer is to add an additional stop to the current field trip on the Rachel Carson Reserve. We stop at the dunes on Bird Shoal and discuss their importance, formation and plant life on the dunes. I hope the added stop will raise awareness of the value of sand dunes and dune plants.

Samantha: As an intern for the N.C. Coastal Reserve & National Estuarine Research Reserve at the three northern sites in Currituck Banks, Kitty Hawk Woods and Buxton Woods, many "mini-projects" have arisen throughout the summer that I've been able to assist with. However, the most long-term project I've been working on involves water quality monitoring of the Currituck Sound. The Coastal Studies Institute in Wanchese has been gracious enough to lend us their YSI sonde, a device that measures meaningful water quality parameters (e.g. salinity, dissolved oxygen, pH, etc.), that will be used at four sample sites from Kill Devil Hills to Corolla. In addition, I've been collecting samples for nutrient and phytoplankton analysis. While I will only be able to contribute to these efforts until the end of July, this project is intended to continue as a long-term monitoring effort of the Currituck Sound.

Why does this topic interest you?

Tara: I have always been passionate about conservation, so working with endangered species and species of concern is an old dream of mine. I have loved this internship specifically because I have been able to see all sides of a conservation effort and the expertise that goes into it.

Cody: I want to become a science teacher and this internship allows me to experience teaching science to all age levels. I was able to study material pertaining to one of my special interests, geology, and then I had the opportunity to teach students this information which helped this knowledge become ingrained in my mind. This experience was a perfect blend of science and teaching, which is what interested me the most.

Samantha: Ecosystem function of estuaries is incredibly sensitive, especially to water quality parameters such as salinity and nutrient levels. A rich diversity of life is supported by estuaries, which can be threatened by the vulnerability of these ecosystems. In addition, coastal communities rely on functional estuaries for seafood and recreational purposes, underlining the importance of maintaining the integrity of estuarine function.

What has been your favorite part of the YAIO internship?

Tara: It is hard for me to choose a favorite part of the internship because I have loved every minute of it! If I had to choose, it would be the opportunity to see a sea turtle nest up close and personal in the process of protecting it. I have been given a lot of responsibility as an intern, which I appreciate and have tried to take full advantage of.

Cody: My favorite part of the internship has been going out into the field. During this internship, I have had multiple chances to visit the Rachel Carson Reserve and use the site as our living classroom. I believe that the living classroom is vital to connecting the students with the material.

Samantha: In a broad sense, this internship has provided me with exposure to the field of natural resource management at a hands-on level unmatched by any coursework I've completed. The wide variety of tasks, projects, and educational opportunities I've been able to complete/assist with have given me incredibly valuable and relative experience to my career objectives in coastal management. I've also been able to collaborate with other agencies including the UNC Coastal Studies Institute, The Nature Conservancy, and the NC Wildlife Resources Commission to broaden my scope of the opportunities available in this field.

Tell me about your most memorable field experience at the Reserve.

Tara: I had the opportunity to respond to a turtle stranding in Southport, N.C. I was excited about the possibility of some sort of rescue mission, but unfortunately the turtle had already passed away a few weeks prior. Needless to say, I had absolutely no idea what to expect. Learning to process a stranded turtle was interesting, and the memory of collecting a flipper from a turtle that was partially decomposed is something I will not soon forget.

Cody: In mid-June, we hosted a teacher workshop here at the Rachel Carson Reserve and the teachers were so invested in the lessons. The enthusiasm shown by teachers and getting out into the field with them was the most memorable field experience so far.

Samantha: Every Wednesday is “Water Quality Wednesday”—probably my favorite day of the week. Last week, I was able to tackle the day’s tasks on my own: I measured the water quality parameters with the YSI sonde, took water samples from all four sample sites to test for chlorophyll and nutrient levels, and went to the UNC Coastal Studies Institute laboratory to filter the samples. The sense of accomplishment I had that day was incredibly rewarding, and I just thoroughly enjoyed being able to “hang out” on the boardwalks for the day!

What have you learned from your experience at the Reserve?

Tara: I have learned quite a bit from my experience at the Reserve, including an in depth knowledge of sea turtles, terrapins, coastal species, invasive species, and how to use portable GPS/ArcMap units. Aside from the tangible things, I have also learned how to be self-sufficient and self-motivated. The Reserve members expect you to be self-reliant when working, and it is up to you to ensure that the work is completed on time.

Cody: I have learned a great deal about the estuarine ecosystem and how it functions. As an educator I have learned the importance of preparation before classes. I have learned how to adjust information for different age groups. Most importantly, I have gained experience teaching science and will continue to do so when I return to college.

Samantha: Overall, my experience at the Reserve has enhanced my understanding of the multifaceted field of natural resource management. I have gained valuable research skills, worked extensively with the public through visitor interaction, developed educational materials, and have even been exposed to the process of management decision-making. I am very thankful to have been given this opportunity, knowing that one day in the near future I plan to be immersed in this exciting field!