



STEPPING OUTSIDE THE CLASSROOM

SCIENCE COMMUNICATION TO IMPROVE THE CONSERVATION OF COASTAL RESOURCES

BY: MARISA CROWHURST

University of Florida (UF) undergraduate students explored Florida's Nature Coast in Cedar Key, climate change impacts, coastal conservation, and science communication through an experiential learning experience called the Uncommon Classroom Experience. The Department of Agricultural Education and Communication (AEC) professors Dr. Lisa Lundy and Dr. Jamie Loizzo piloted this high impact experience and were assisted by teaching and research assistants, Marisa Crowhurst and Kyleigh Caybe, who joined the class for the Cedar Key excursion. Uncommon Classroom experiences, according to the Honor College's website, are "courses designed around unusual topics with cities, places and natural landscapes serving as experimental classrooms."

The purpose of the course is to introduce students to topics they may not be usually exposed to within their major. For example, Lundy and Loizzo's course introduced eight UF Honors College students

to science communication with an emphasis to improve conservation of coastal resources through living shorelines and Florida's Nature Coast.

"Science communication is about connecting people to science in a way that makes it interesting, accessible, and easy to use," Lundy said.

The uncommon experience was in partnership with the UF Institute of Food and Agricultural Science (IFAS) Nature Coast Biological Center (NCBS). NCBS is an IFAS facility that provides research, teaching, and extension and uses science and public outreach to "improve the conservation and management of coastal and marine resources". While Lundy and Loizzo did not initially include natural disasters, crisis communication, and community resilience in their lesson planning, Hurricane Idalia added additional real-world learning about coastal ecosystems and nature and human recovery.

Uncommon Learning Goals

Both the professors and students alike had goals in mind for their uncommon classroom experiences. The undergraduate students had a variety of majors including environmental science, wildlife ecology and conservation, psychology, political science, and interdisciplinary. The class was looking forward to a new kind of learning and an interactive experience with the environment.

"With spending hours in impersonal lectures and professors having too many students to learn one's name, it is difficult to sustain a passion for future careers and endeavors because it seems distant and unattainable," said Hannah Bokor, one of the eight students who went on the Cedar Key trip, "Seeing the damage done by a hurricane, touching living shorelines, and exploring the town in person is an experience that cannot be communicated



in a video or lecture and achieve the same effect.”

The class was especially excited to take their personal cameras and other AEC professional photography gear to take photos and videos of their Cedar Key visit to create final communication projects. The projects provided a way for the students to tell their stories, share their learning, and communicate coastal conservation through visuals.

Lundy and Loizzo have visited NCBS and Cedar Key over the years for various meetings, projects, and recreation. “I think a lot of people when they think of Florida, think of beach towns and theme parks and those are all wonderful, but there’s this really beautiful natural part of Florida. Really, that’s part of the nature coast,” Lundy said.

The instructors wanted students to soak up the beauty of Cedar Key, make memories with fellow students and the faculty, as well as see the passion of the NCBS scientists who live and work there. Lundy also hoped that the students practiced science communication skills to capture the bigger picture of issues like climate change and sea level rise to share with diverse audiences.

Breaking the Boundaries of the Classroom

On Friday, November 3, students loaded into two vans with Lundy and Loizzo and headed to Cedar Key. The class began their day meeting Dr. Mike Allen, director

of the Nature Coast Biological Station, where he talked about research and extension at NCBS, a little about himself and his career, and impacts Hurricane Idalia had on the facility and surrounding areas. Allen also talked to the undergraduate students about graduate school and future opportunities. The class was able to ask him a wide variety of questions about how he got into his career, the impacts of sea level rise, and learn more about NCBS and their projects.

“We are here to communicate science and help to improve peoples’ lives because of that.” Allen shared with the class.

He also discussed how Cedar Key and NCBS prepared for the hurricane and how amazed he was with the community’s resiliency. After an in-depth talk with Allen, the students grabbed their camera gear and loaded up in the vans to follow Dr. Savanna Barry, a regional specialized extension agent at NCBS, for a field experience to learn more about her work and living shorelines.

Barry took the class to the living shorelines first for their first boots-on-the-ground experience. She explained that living shorelines are stabilized shorelines that are made of natural materials such as plants, sand, or rock. Barry explained that they supported the area during Idalia by contributing to the roadways staying intact, whereas prior to the shoreline projects previous hurricanes had completely destroyed

the roadways. Barry also had everyone be silent for a moment so that they could become immersed in the shoreline sounds. The students heard little pops and bubbles from the oysters along the shore.

Lundy said she really hoped the students when thinking back on this experience would have memories that included all their senses.

“They’ll be able to remember what they saw. They’ll be able to remember what they touched. They’ll be able to remember what they heard. And hopefully, those will be very vivid memories from that for them of their time at UF,” Lundy said.

According to Bokor, “I’ve learned about hypoxia in waterlogged soils in classes and books before, but standing in mudflats and smelling the sulfur dioxide gas myself made the biogeochemical cycles I have found to be boring in the past suddenly feel more relevant.”

The scientists and students hopped back in the vans and golf cart to Barry’s next tour spot. The students moved around each location with their photography gear to capture unique angles for their final project images. They were able to go to three different project locations with Barry to learn about the living shorelines, hurricane and climate change impacts, as well as Barry’s role at NCBS and her background. The class headed back to NCBS and loaded up vans to head back to Gainesville.

The next day, the class had an early morning to head out to Cedar Key. Upon arrival, the instructors and students climbed on board a boat with Captain James “Lamar” Evers and put on their life jackets. They boated out to the nearby Seahorse Key and hopped off the boat. Seahorse Key is part of Cedar Key’s National Wildlife Refuge and hosts UF’s Seahorse Key Marine Lab. The class explored the key as well as climbed up the lighthouse tower.

Captain Lamar guided the students down a newly cut trail to see Idalia’s latest impacts. Lamar showed the class the hurricane’s damage to Seahorse’s beach and how the landscape changed. He discussed the impact of sea rise level on the shorelines and how the hurricane caused significant destruction. After exploring the island, the class got back on the boat and returned to Cedar Key for lunch and to explore the town before heading back to Gainesville for the day.

Hurricane Idalia's Impact

Initially, the class and instructors were supposed to stay in Cedar Key at one of the hotels. Hurricane Idalia came earlier in the semester, caused some damage, and changed plans their plans. The real-time gravity of the situation gave the instructors and students a unique perspective on high-impact experiences and crisis communication. Visiting after



the storm, the class was able to observe the hurricane's impacts, as well as the town's quick recovery. The storm flooded the first floor of the hotel that the class was supposed to stay in for the trip. Lundy and Loizzo adapted their original plan to instead drive the students back and forth so that they could still have an experience.

Allen shared how Idalia impacted aquaculture in the area and how the shellfish farmers had severe and catastrophic damage to their farms. He also discussed how the Governor of Florida has allocated funds to help the farmers recover, but that it will be a long road to rebuild and recover. Allen said much of the community had recovered, but NCBS was making repairs to its first-floor wet lab and public learning center, and the town's grocery store was still out of commission.

The Weather Channel's reporter Jim Cantore broadcasted live during Hurricane Idalia from NCBS. The channel returned after the storm to record and air a news story about Cedar Key's recovery. Allen discussed with the students that UF/IFAS worked with the media for crisis communication before, during,

and after the hurricane.

Back in the Classroom

The Uncommon Classroom Experience gave the UF Honors College students a unique experience to learn about Florida's Nature Coast, living shorelines, NCBS scientists, and science communication. The students created final visual communication projects to showcase their experiences and learning. The projects can be viewed on The Streaming Science Project's [website](#).



“I was able to ask professionals at the Nature Coast Biological Station questions, an opportunity I have never had to this extent. Time was intentionally blocked out, which is not common in classes, making me feel that my interests and inquiries are truly relevant and further inciting my passion and desire to learn. Overall, I found this uncommon classroom experience to be incredibly impactful, and I hope future students will have the opportunity to participate.” Bokor shared about her experience.

To learn more about the University of Florida's Honors College Uncommon Classroom Experience, please visit their [website](#).

