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ACUA STUDENT

ADVISORY COUNCIL ON UNDERWATER ARCHAEOLOGY | VOLUME 8 ISSUE 1 | SPRING 2020



Tori Galloway. See article on page 2. Photo credit: IU Center for Underwater Science.

Greetings!

We hope that you are all having a great spring semester so far! We love hearing what students from all over the world are up to. In this edition, we have some great articles about anchors in the Dominican Republic and Mexico, a lock in the Savannah-Ogeechee Barge Canal, and the Portsmouth Island Life-Saving Station. We are also very excited to introduce our new graduate representative Kirsten Hawley. Thank you to everyone that continues to share their stories and reading our student newsletter!

Remember, we are always looking to highlight student research and projects! Simply email grad-rep@acuaonline.org. We will be more than happy to share your photos and stories on the ACUA Facebook and Instagram. Hope to hear from you soon!



We had a great turnout at the ACUA Panel “Women and People of Color in Underwater Archaeology” at the 2020 SHA meeting in Boston. We thank you for the great discussions about challenges and possible solutions to diversity and inclusion in underwater archaeology!

At the meeting, we said goodbye to Morgan Smith and Tara van Niekerk as ACUA student representatives and thanked them for their great work in the past two years. At the same time, we welcomed Kirsten Hawley as a new graduate student representative! See page 7 for more information about Kirsten.

- Aleck Tan, Graduate Student Representative



ACUA student reps: Morgan Smith, Kirsten Hawley, and Aleck Tan. Photo Credit: Aleck Tan.



ANCHORS THROUGH THE AGES: METHODOLOGICAL APPROACHES TO SOURCING AND DATING EARLY WROUGHT IRON ARTIFACTS



When it comes to diagnostic artifacts, anchors are thought to be one of the most easily recognizable forms of technology. Throughout the history of maritime archaeology, heritage managers and other stakeholders have generally thought that anchor morphology, often shown in artistic renderings, is a reliable and useful tool for dating and sourcing shipwrecked artifacts.

As heritage managers are beginning to find this morphology to be unreliable, at the least, anchors are still useful and abundant resources for obtaining element-based evidence, if methodological approaches in early wrought iron

analysis are made applicable. In an effort to combat these inconsistencies created from artistic renderings and our previously flawed understandings of anchor morphology, a team of researchers with Indiana University’s Center for Underwater Science aims to run geochemical analyses on a series of anchors associated with early 15th- and 16th-century European shipbuilding. This data will serve to create a database of early wrought iron, which does not yet exist. As we continue to gain new insight on sourcing and dating analyses of early wrought iron artifacts, we will continue to add to this database until we are ultimately able to effectively source and date early wrought iron through minimally-invasive methodologies.

By taking a geochemical approach, the archaeologists involved intend to find information that is not readily available or abundant through site context. All samples collected for isotopic and concentration analyses are in very small amounts; a sample of <math><1\text{g}</math> is drilled from the anchor crown, which can be done in-situ. The sample area is then filled in with marine epoxy. In the Caribbean, where many of these early anchor samples will be obtained, the sample location is quickly covered by calcium carbonate.

My role, as a graduate student and scientific diver, is to collect anchor samples from sites in



Two anchors on Caballo Blanco Reef, Dominican Republic. Photo credit: IU Center for Underwater Science.

the Dominican Republic and Mexico to help prepare and analyze anchor samples in Indiana University's metallurgy lab, and to try to provide interpretation and analysis of the data from context related to early European trade, travel, and colonialism in the Caribbean and Mexico. The first anchors will be sampled from a series of sites thought to be associated with early

Iberian Shipbuilding. The chosen sites are believed to be important to understanding early European trade and colonization in the New World. We are hopeful that this data will provide insight into 15th- and 16th-century Iberian shipbuilding and manufacturing technologies.

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LOCK 6 OF THE SAVANNAH-OGEECHEE BARGE CANAL



FIGURE 1. Southeastern corner of lock 6 in the Savannah-Ogeechee Barge Canal. Photo credit: Alyssa Saldivar.

lumber, cotton, rice, peaches, bricks, and naval stores. Traversing the length of the canal, barges transporting these goods made their way from inland plantations to the booming port of Savannah. The canal remained in operation for much of the 19th century until the early 1890s. The development of the Central of Georgia Railway created a quicker and more efficient means of transportation of goods, thus forcing canal use to cease.

Since the closing of the canal, efforts have been put in place to help preserve the historic site, specifically the tidal locks (FIGURE 1). Efforts have been made by Savannah's Department of Parks, Recreation, and Cultural Affairs, and the Savannah-Ogeechee Canal Society to repurpose the canal into a historic park. By utilizing the historic tow path along the canal waterway, a beautiful scenic route is provided for visitors to absorb the significance of

Savannah is home to one of the busiest ports on the eastern seaboard of the United States. It is because of this that the city is and has always had a rich maritime landscape since its foundation in 1733. One of the most recognizable landmarks of this maritime culture is the Savannah-Ogeechee Barge Canal, a staple in the movement of agriculture goods from the Georgia interior to its coastal towns. Chartered by the city in 1824, the canal was built between 1826 and 1830 by African and Irish laborers. The canal spans 16.5 miles, beginning with the first tidal lock at the Savannah river and ending with the sixth tidal lock at the Ogeechee river. During the 19th century, this waterway passed through the heart of industrial Savannah transporting local crops and goods, such as

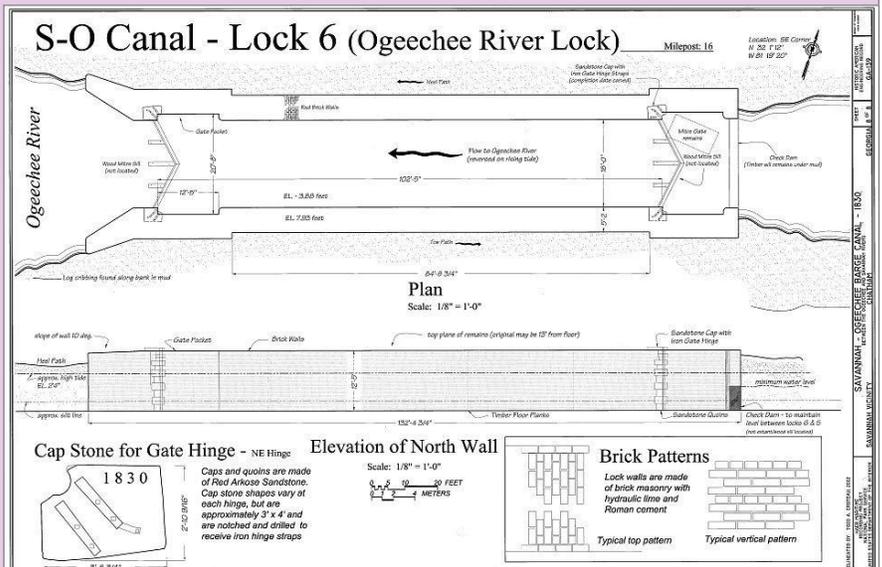


FIGURE 2. Lock 6 original drawing. Photo Credit: Library of Congress.



FIGURE 3. Hinge stone with iron clamps. Completion date of 1830 can be seen in the upper right corner of stone. Photo credit: Alyssa Saldivar.

this site. The most well-preserved section of the canal is tidal lock five, where the Savannah-Ogeechee Canal Museum and Nature Center is located. Nearly half a mile down the tow path is tidal lock six, the section that connects to the Ogeechee river. As you approach the lock on foot you will notice at the southeastern corner of the lock is one of the four hinge stones with iron straps and the completion date of 1830 etched into the stone (FIGURE 3). The hinge stones acted as joints for the doors at the western and eastern openings of the lock. The brick work of lock six on the southern embankment is intact, but its preservation has suffered over the years due to flooding, visitor interaction, and plant overgrowth. The northern side of the lock is overgrown with vegetation and is inaccessible to the public.

During Dr. Kurt Knoerl's Maritime Archaeology class in the Spring of 2018. I was tasked, along with several other students, to draw a site map of tidal lock six of the Savannah-

Ogeechee Canal. While the purpose of this project was to teach us how to draw an archaeological site map, it also served an opportunity to create a more recent site map of the lock (FIGURE 4). The previous drawing of lock six showed what it originally looked like with no degradation (FIGURE 2). Over the course of the semester, my team and I were able to assess the degradation process of lock six's southern brick wall. By creating a new site map, we were able to compare it to the original drawing of the lock and pinpoint where the most damage was. In doing this we were able to provide the Savannah-Ogeechee Canal Museum an updated map of this section of the canal and a better understanding of where their preservation goals can be directed. While we were only able to map out the southern section of lock six, it is our hope that in the future we will be able to return and assess the northern side of the lock. In helping preserve this historical landmark, we are not only maintaining the physical site but its story as well. This barge canal, first built at the height of the canal era in America, successfully moved goods to coastal towns throughout Georgia and allowed the region to prosper.

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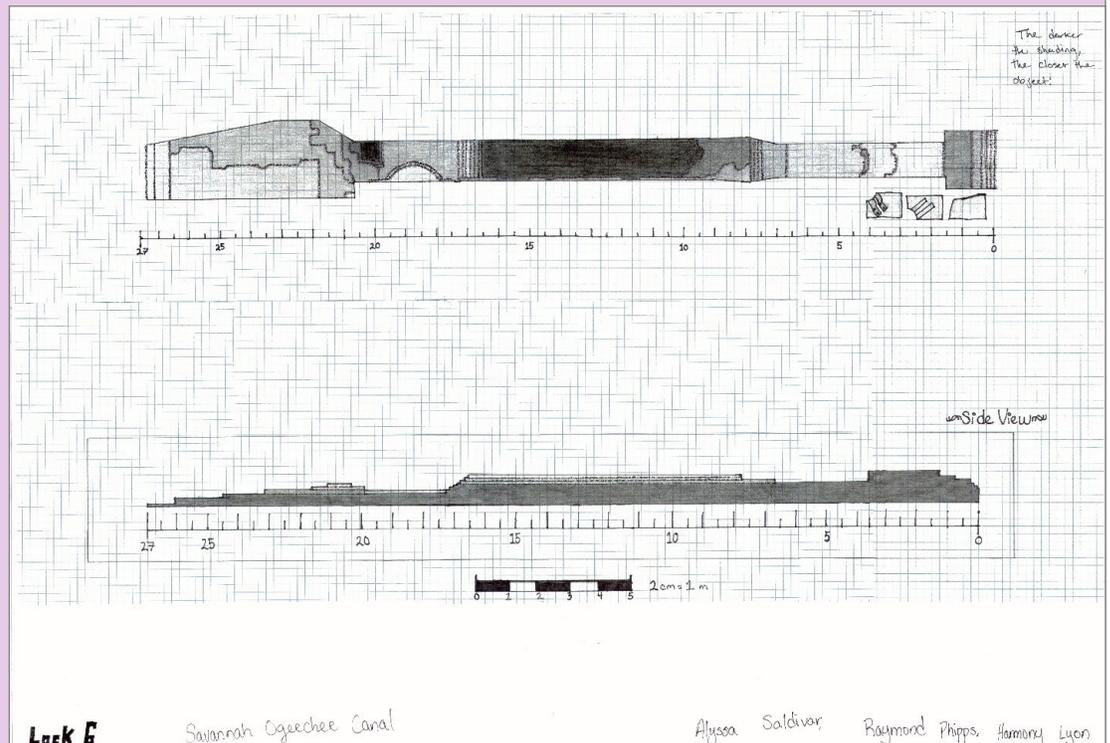


FIGURE 4. Site map of southern side of tidal lock six of the Savannah-Ogeechee canal. Photo Credit: Raymond Phipps, Alyssa Saldivar, Harmony Lynn.

PORTSMOUTH ISLAND LIFE-SAVING STATION

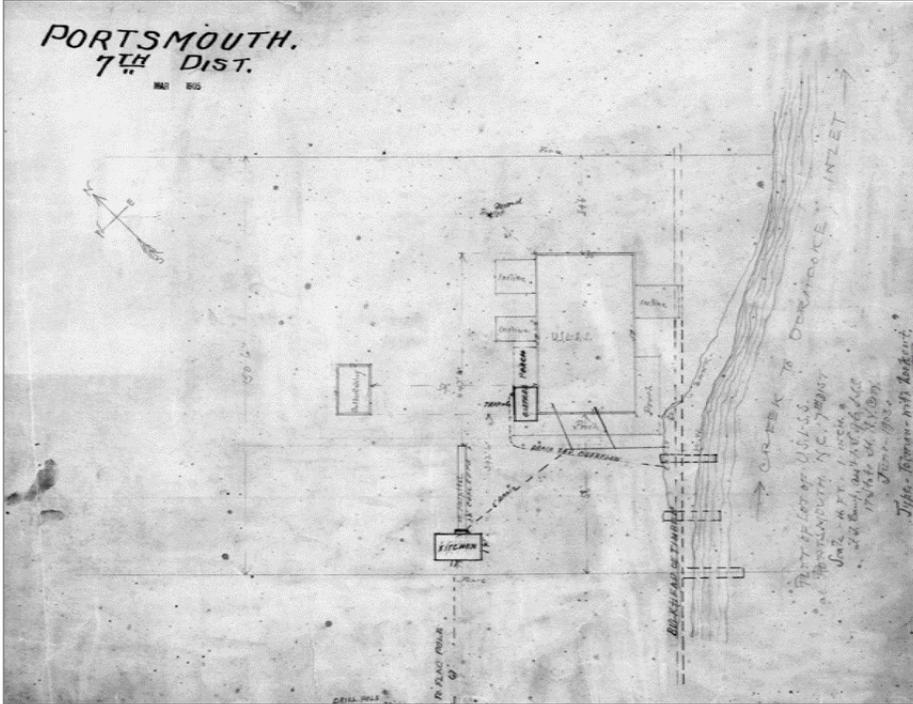


FIGURE 1. 1903 Plot of Portsmouth Island Life-Saving Station. Photo Credit: Tommy Jones.

way of life on the Outer Banks. Large extended families... produced numerous sons who became surfmen and keepers. The Life-Saving Service became a part of the local heritage, a very symbol of the region" (Shanks and York 1996:131). On Portsmouth, many of the island's long-term inhabitants found employment as surfmen, mechanics, and other auxiliary roles. In addition to providing alternative employment opportunities, the station itself literally became the focal point for life on Portsmouth Island. After its construction, it became the largest and most prominent visible landmark on the island, surpassing the marine hospital constructed in the earlier half of the century (Jones 2006:18).

North Carolina's harsh coastline along the Outer Banks has claimed the lives of sailors attempting to navigate it since Europeans began to settle in North America. As the United States began to increase shipping along its Atlantic seaboard, the need for a standardized service to aid distressed mariners became apparent. Several notable incidents in New Jersey, the Great Lakes, and North Carolina prompted Congress to appropriate funds for the formal creation of the Life Saving Service on June 17, 1878 (Jones 2006:7). A few years later, and many wrecks along Cape Lookout, the need for additional stations to patrol the lengthy shoreline stimulated the creation of additional stations along Core Banks. The first was built at Cape Lookout in 1886 while Portsmouth Island, across Ocracoke Inlet from Ocracoke Island, received its station in 1894 (Jones 2006:8).

Like many other Life-Saving Stations across the Outer Banks, Portsmouth's Station became an integral part of the island's community. Ralph Shanks remarks that "The Life-Saving Service would become an honored

Finalized in June 28, 1894, the station was modelled on the architecture of George R. Tolman's Quonochontaug, Rhode Island Station. The station on Portsmouth Island is classified as a Quonochontaug-Type station, which are characterized by their exterior being clad almost entirely in shingles (Chenery 2000:68; Jones 2006:18). The station's first keeper, Ferdinand G. Terrell, assumed command in September of that year and the station became fully manned in November. The initial station possessed minimal installations in comparison to the property visible today. Only a privy and a storage shed for oil and coal joined the main building upon construction in 1894 (National Park Service 2007:34-37). Situated along Coast Guard Creek, the station remained exposed to tidal surges and severe weather which forced alterations to the layout of the grounds. Additionally, the surfmen erected a boat house along the seawall to more efficiently stow their surfboat. It would later be relocated as well (FIGURE 1) (Jones 2006:19).

The wreck of the barkentine *Vera Cruz* remains the most notable incident involving the

Portsmouth Life-Saving Station. In May 1903, the vessel ran aground on Dry Shoals carrying immigrants from the Cape Verde Islands. After the captain abandoned the vessel, as well as its crew and passengers, the Portsmouth Island crew began the arduous task of rescuing close to 400 stranded individuals. In total, the rescue operation took 32 trips in the life boat in addition to several more in skiffs borrowed from the island's inhabitants. The station house became the temporary refuge of the immigrants, until they were brought to New Bern for processing but not before consuming the station's entire reserve of supplies (Jones 2006:25-26).

As the role of the Life-Saving Service, eventually the Coast Guard, evolved, so too did that of the Portsmouth Station. The passage of the Eighteenth Amendment added the responsibility of seizing alcohol from vessels passing through the inlet. In one unfortunate case, the schooner *Message of Peace* ran aground in Ocracoke Inlet, prompting the station's crew to seize the vessel's contraband whiskey bound for New York. Later, the station was tasked with manning pickets across the inlet in an attempt to stop the smuggling of alcohol after dark (Jones 2006:27-28).

After Prohibition, the Coast Guard found little use in maintaining the station at Portsmouth Island. Many stations, including Portsmouth's, were shut down in 1937 and 1938. The advent of World War II and Nazi Germany's U-Boat threat made patrolling North Carolina's coastline imperative and the Coast Guard reopened the station. Once the war concluded, the Coast Guard permanently closed the station. After that, the station changed ownership before being incorporated as part of the Cape Lookout National Seashore in 1977. The station is currently listed on the National Register of Historic Places and the station house has been converted into a museum documenting the Life-Saving Service on the Outer Banks and the station's role in Portsmouth Island's community (FIGURE 2) (Jones 2006:28).

Presently, the Life-Saving Station provides visitors to Portsmouth Island a glimpse into life on the abandoned island. Relics of the Service and Portsmouth crew members decorate the interior of the station house. For many, the work of the Life-Saving Service remains an obscure historical phenomenon especially in comparison to the modern Coast Guard. Thanks to the work



FIGURE 2. Portsmouth Island Life-Saving Station, June 2019. Photo Credit: Will Nassif, 2019.

of the National Park Service, Friends of Portsmouth Island, and other organizations, the Life-Saving Station still stands today to serve as a reminder of the development of the Coast Guard, as well as its place in Portsmouth Island's history.

As part of a North Carolina Preservation Technology and Training Grant (NCPTT), East Carolina University's Program in Maritime Studies visited the site in the summer of 2019. Under the direction of Dr. Lynn Harris, students recorded the structures and foundations that remain on the grounds as well as cultural materials on display in the station. The team focused on recording at-risk structures and artifacts using innovative technology such as Real-time kinematic positioning systems. As a result, students were able to accurately plot the surviving structures on the ground in order to demonstrate the alterations made over time, as well as how much has decayed. Thanks to the efforts of the students and the many other groups tasked with preserving the station, the memory of Portsmouth Island's surfmen will carry on.

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Please welcome Kirsten Hawley as our new ACUA grad student representative!

Kirsten Hawley is a first year graduate student at Indiana University (IU), pursuing PhDs in Anthropology and Earth and Atmospheric Sciences. Her dissertation research will leverage geochemical analysis techniques to examine archaeological material from submerged prehistoric cavern and sinkhole sites in the Dominican Republic. Kirsten's research interests include contact-period Caribbean archaeology, human-environment interactions, connectivity and movement in the prehistoric Caribbean, and trace element compositional analysis. In addition to her studies, Kirsten serves as the laboratory coordinator for the IU Center for Underwater Science and is a PADI Open Water Scuba Instructor who enjoys teaching scientific diving techniques in the IU Academic Diving Program.



UPCOMING CONFERENCES



North American Society for Oceanic History, 14-17 May 2020. Pensacola, FL. <https://nasoh.org/conferences>

11th Biennial Fields of Conflict Conference, 24th-27th September 2020. Edinburgh, Scotland. <https://www.ed.ac.uk/history-classics-archaeology/news-events/events/11th-biennial-fields-of-conflict-conference-2020>

The 4th Asia-Pacific Regional Conference on Underwater Cultural Heritage (APConf), 2-6 November 2020. Keelung, Taiwan. <http://www.apconf.org/>

2020 Conference - Sea Change: Human and Climate Influences on our Maritime Past. 21-22 November, 2020. Dublin, Ireland. <https://www.nauticalarchaeologysociety.org/annual-conference>.

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STUDENT NEWSLETTER

Compiled by ACUA Board Graduate Student Representative

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For any comments, questions, or suggestions, please contact:
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