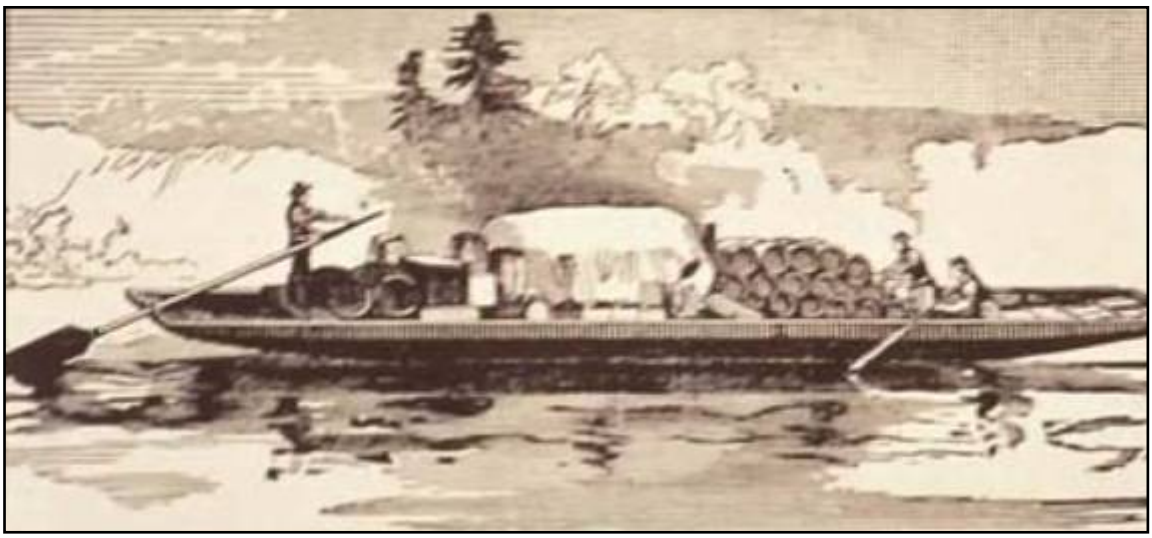
Waccamaw River Project
by Lynn Harris

The Waccamaw River Project conducted historical and archaeological research in the waterfront area of three Georgetown plantation sites - Richmond Hill, Laurel Hill and Wachesaw. The 1991 season of work was devoted to recording a large barge, dubbed no. 2 (38GE420) located in proximity to Laurel Hill. The 1992 season involved recording three other smaller barges. The primary goal was to document architectural features that would reflect the carpentry techniques used by the builders and the possible function of the vessel. Limited surface artifact sampling was conducted to provide some insights into activities and date ranges associated with the local riverine area.

Early development of rice as an export crop and the introduction of the tidally irrigated rice field gave rise to the construction of the Carolina rice barge or "flat"-- a possible adaptation of European barge designs melded with log boat construction techniques (either indigenous or African) in which a longitudinally split log formed the chine-girder of the craft. Plank built barges with composite chine-girder construction were also being built as early as 1760 and appear to have been used on plantations at the same time as the solid chine-log barges.

Barges are a type of watercraft that played an important part in South Carolina's plantation economy and riverine transportation system. These barges represent integral components in the archaeological and historical record linking land and water. Activities that took place on plantations, such as agriculture, boat building, and the use of barges for specific tasks, are therefore important for understanding the role of this vernacular and ubiquitous plantation craft.

The second project goal was to provide an opportunity for the Sport Diver Archaeology Management Program to teach volunteer sport divers about concepts in



Plantation barge.

underwater archaeology, vessels construction and documentation methodology. Divers from around the state assisted in all aspects of the project which ranged from simple surveying tasks, field log book keeping, search techniques, excavation, vessel documentation, artistic renderings of the site and vessel components, artifact cataloging and assistance with production of the final report.

Historical Background

Agriculture in the Georgetown District:

The Waccamaw River was a historically important shipping route from Georgetown to the inland settlements and plantations in the northeastern part of the state. The movement of tides that flooded and formed swamps affected the delta-like environment in the lower reaches of the river. This was excellent for the cultivation of rice, a primary agricultural activity along river during the 1700s and 1800s. Rice plantations extended all the way from Winyah Bay to Horry County (C. Rogers, 1970). The Wachesaw and Richmond Hill plantations, located approximately 25 miles upstream from the coast, have a rich and varied history that began in 1731. Richmond Hill became a rice plantation in about 1810, but Wachesaw did not start rice production until 1849 or 1850 (J. Michie, 1990: 175). These Waccamaw plantations were the most productive in the Georgetown District.

The Waccamaw River and Plantations:

The plantations on the Waccamaw River were strategically located in terms of the cultivation of rice, the production of salt, overland transportation of goods from ships at Murrells Inlet and facilitated riverine trade and visitation to and from the port of Georgetown. If these plantations had been situated any further upstream they would not have had the benefit of tidal effects of the river, which created fertile swamps for growing rice, salt marshes, and assisted the propulsion of watercraft that relied on sails or oars. A boat trip to the plantations from Georgetown took approximately seven hours, a day or a night trip, which was hastened or slowed by prevailing wind or tidal conditions.

Laurel Hill Plantation, situated in closest proximity to the underwater sites, was also involved in the production of salt during this period. In letter to his wife, a Confederate soldier named H. Wilson describes a boat trip on the Waccamaw River:

> "Al McDow and myself left (Georgetown) on Monday morning at 10 for a place called Laurel Hill (near to which is the salt works of Colonel Jordan).... We had a delightful trip... every half mile along the river were the magnificent rice farms and splendid residences... Up to this time, the passage was very tedious, as we were working against the tide without wind, but soon after a fine breeze sprung up and we had delightful sailing. We arrived at Laurel Hill at about 4 o' clock where we met Col. Jordon the proprietor of the place and salt works. He took us to his house and treated us with all the hospitality of a South Carolinian. I found the family quite

> intelligent, and also plain and unassuming in their manners...After leaving Laurel Hill at 7 1/2 o' clock we made good time for a few hours, having the advantage of an ebb tide, but soon a stiff breeze arose, which being a head wind against the tide, made the water very rough, and slow traveling, as a sail was of no advantage. We had to depend on the oars entirely, and with only two of us to row 25 miles, made but slow time. At times, the water was so rough that the boat had to go sideways... Sometimes the bough where I was sitting would be three feet out of the water. But we arrived safely at 2 'o clock in the morning, and since getting a sound nap, I feel quite well, and well paid for my adventure" (MS 1863, HH Wilson, South Carolina Library).

It is evident from this letter that Colonel Jordon owned Laurel Hill in the 1860s. During the 1700s, documents indicate that it belonged to Anthony Mathews (J. Michie, 1990: 24). The Allston family owned Richmond Hill until 1825 when it was sold to Dr. John D. McGill. Wachesaw Plantation was owned from the 1700's onwards by Capt. John Murrell and his descendants. Little is known about John Murrell. The current coastal town of Murrells Inlet, which lies on the original tract, bears his name (J. Michie, 1990:26, 27).

Although the rice plantations on the Waccamaw River were associated with great wealth and visited by many travelers and celebrities, the very climate and environment that was so favorable for rice cultivation was a great hardship for the families who lived there. Most plantation owners, like John McGill, spent only the winter months on the plantation and escaped to the seashore, interior of the state, or the mountains to get away from the heat and mosquitoes during the summer. Visitors to the plantations also complained of the snakes and alligators on the river. It was believed that an alligator would attack a man who ventured near the water. As Seldon Huntington, a missionary who undertook a trip up the Waccamaw stated, "My very entrails shudder at the thoughts of such monstrous creatures (alligators)...I felt very anxious to get away from all the snakes and alligators. We tied the vessel to a tree when the tide met us and the next day, Friday, we got down among the rice plantations where the country is very pleasant and handsome plantations with houses and Negro villages,"(USC Carolina, MS Seldon Huntington, 1831).

These excerpts illustrate the significant impact that waterway travel had on both on visitors and on the daily plantation life. Time was very influenced by tidal and wind conditions. The agricultural economy was also intimately linked to tidal influences and the use of these functional riverine "tidecraft."

Plantation Boats and Boat Building

Each plantation family owned a fleet of flats, rowboats and dugout canoes. This watercraft was used for transporting agricultural produce, people and livestock. The plantation possessions listed in the will of William Waties Jr., registered owner of the "Lorrill Hill" property from 1725 to 1736, included "123 slaves, 16 horses, 55 head of sheep, one pettiauger, 1 ferry boat, five canoes, 1 set of surveying instruments, half

ownership in a sloop...” (L. Drucker, 1980:1). Flats or barges are specifically mentioned in documents relating to the Waccamaw Plantations for tasks such as taking the framework for the house at Richmond Hill across the Waccamaw, to carrying furniture and supplies to Laurel Hill, and transporting people and cargoes of rice to the mill (C. Joyner, 1984: 73 & 82). Barges were also used for important social occasions such as wedding parties. On one occasion guests were "rowed home from a plantation wedding by slaves as far as twenty miles up the Waccamaw, keeping time to their rowing as they improvised songs in honor to the bride and groom.” In 1819, James Monroe cruised down the Waccamaw to Georgetown "on one of the plantation barges" which was decorated for the occasion and rowed by eight negro oarsmen dressed in livery (C. Joyner 1984: 128 &5). The size of a barge also appears to have been a significant factor in relation to use. The larger barges were used for tasks such as harvesting rice, whereas smaller ones were used for ferrying hands across the river, for carrying rice seed, mud for breaks and other light work (Doar, 1935:34). Slave craftsmen built plantation watercraft using hand tools such as the saw, plane, ax, hatchet, auger, chisel, and drawing knife. Carpenters felled great cypress trees in the swamps, which "measured 3 and 4 feet at the butts.” These trees were then hewed into 30 to 40 feet-long planks and taken back to the plantation by water. The construction of a flat is also described in Doar (1936: 34):

> "These flats were made bottom upward, so that the planks could be put on, and when finished they were pushed into the water and turned over. To do this they had an ingenious method, which was to take the flat out to the river, carry it to a deep place, fasten one end to the bank, at right angles to it, anchor or tie the other end in the stream to another flat, then throw mud on the one sited whole length until that side sank and the other rose. The force of the tide would then catch and whirl it over. It was then baled and the flooring put in and head and foot timbers"

Good carpenters were in demand and were even able to hire out their services off the plantation, provided they paid their masters a portion of their income. In 1854, a good hired carpenter was paid $120 to help build a house. To gain some idea of the buying power of this sum of money at that time - a horse, a valuable commodity, cost approximately $60 and a boat cost $30. Master craftsmen in large carpenter shops on plantations trained carpenters. The chief carpenter usually took on four or five apprentices at a time. A slave, Thomas Bonneau, was the chief carpenter for Robert Allston on Richmond plantation. Bonneau was very proud of his apprentices and claimed that he did not turn out "jack-legs," a term used to describe mediocre craftsmen. Other talented slave carpenter of note who were from plantations on the Waccamaw river were Renty Tucker from Hagley plantation, Richmond from Woodbourne plantation, Hardtimes Sparkman from Mt. Arena, and Welcome Beese of Oakland. Good carpenters were in demand by plantation owners and this skill was encouraged. In some cases, slaves were even sent to Charleston or England to learn particular skills such as cabinetry (C. Joyner, 1984:71). As slaves in South Carolina were from West Africa, also a riverine environment where boats and boat building were necessary, it has been suggested that carpentry skills associated with the West African tradition are also likely to have been imported by the slaves to the state.

Not only did slaves build the plantation boats, but were also responsible for their use and care. All the boats were kept sheltered from the sun during the day and locked up at night (C Joyner, 1984: 72 & 73). Boats were a valuable and essential commodity to the plantation. Further archaeological investigation into the manufacture and use of the Waccamaw wrecks could potentially provide some further insights into the carpentry skills of the builders and activities that were conducted on certain types of boats.

Fieldwork & Sport Diver Participation

One of the important fieldwork objectives of this project was to train volunteer sport divers in underwater archaeological techniques, specifically small craft documentation. The Charleston Field Office staff of the Maritime Research Division undertook this training. A local sport diver and avocational archaeologist, Hampton Shuping, also played a leading role in coordinating and directing project activities. During the course of the project, twenty-five divers from across South Carolina (and a few from out of state) participated in the work. All the diving was done over weekends. Sport divers and SCIAA provided workboats. All the sport divers paid their own expenses incurred by travel, food, equipment and air. SCIAA staff provided professional advice, training and specialized equipment like water dredges. All artifacts recovered by sport divers were kept by SCIAA for documentation and conservation.

Diving tasks during the project were delegated according to the number of diving volunteers present that day, their diving experience or particular skills, and work duties that were planned in advance. SCIAA staff and Schuping worked together on a weekly basis to determine work objectives and assignments for divers who indicated that they would be diving on the project the following weekend. Usually around eight sport divers were present. On occasions, there also were also non-divers who helped with topside duties. All divers and non-divers enthusiastically and efficiently took on any task that they were assigned.

Methodology

We selected barge no. 2 as our project site for the first season. Numerous timbers were disarticulated. The port and starboard sides were not symmetrically built and sediment from the riverbank had pushed in one side. Visibility was generally near zero. This diving and understanding the site was a challenge, even for experienced river divers. All new project participants were given a site orientation dive before starting work operations. A down line ran from the small bay where we beached the dive boats directly onto the site. We tried to make tasks as simple as possible, and to orient divers with familiar-feeling features on the wreck. The strength of the current was not always predictable. Taking long measurements or setting floats was often difficult. However, by the end of the season we had established methods to conduct these tasks with as much accuracy as possible.

As the interior of the barge, particularly the port side, was filled with a deposit of mud, it was necessary to use the Institute's water dredges to clear this area for recording purposes. All artifacts from the dredge spoil were documented and kept by SCIAA. When large numbers of volunteer divers were present, swim searches were conducted in the vicinity of the barge to locate any surface artifacts associated with the site. Artifact concentration areas were buoyed and recorded in relation to datums established on the shoreline.

Barge Construction

The most interesting barge was Laurel Hill no. 2. It was extremely large-17 meters in length and 4.75 in beam. The hull sides were comprised of a chine log built up with strakes (a chine log is a log which is carved out to form the side of the hull where the bottom of the vessel starts to change from a horizontal floor to an upright side). Ship-like features such as small framing members, knees (lodging and standing) and ceiling planking were present. Like most other barges there were multiple keelsons - in this case there were four. The ends of the keelsons were tennoned into mortises cut into the end of the vessel through a midship thwart. Thole holes for a sweep suggest that one end could be the stern. Treenails were used for attaching the larger components. Cut nails were used to fasten the planking.

The other three barges were smaller and less elaborately built. They lacked knees, framing members, and ceiling planking. All these craft had planked sides instead of chine logs. The craftsmanship and extremes to enforce structural strength in the No. 2 vessel led to a number of possible hypotheses. One explanation was that it was *the* plantation barge used for longer river trips-for example to the port of Georgetown. It carried larger loads than the other barges. Alternatively, it could have been the high status barge on the plantation that was used by planters and their families for social occasions. Another possibility is that the builder of the big barge had more skill or experience as a shipwright. The presence of cut-nails and a few ceramic sherds date the vessel between 1700 and1800. This date range suggests that the barge was in use during the height of the rice plantation industry.

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