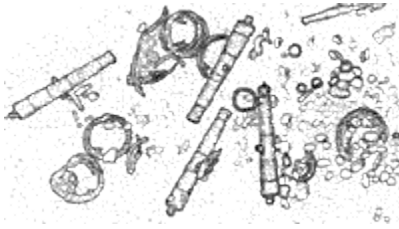


Fall 1998 Daily Reports



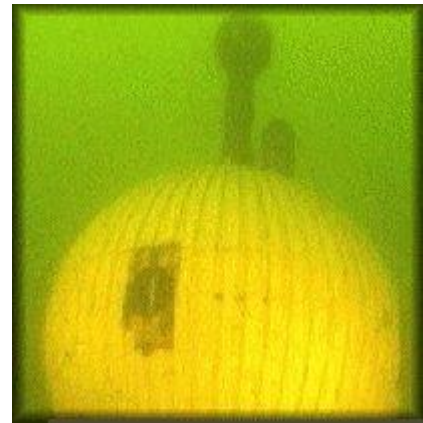
Monday 9/14 and Tuesday 9/15



The North Carolina Underwater Archaeology Branch staff and associates arrived in Beaufort Monday afternoon. After launching their boat and storing gear, they settled into their apartments and then spent the evening renewing ties with last year's participants from Intersal and Maritime Research Institute, University of North Carolina at Wilmington and our hosts at the North Carolina Maritime Museum. On Tuesday, after an early morning briefing session, crew members busily set to work constructing and repairing gear, and making final preparations for the field work.

Wednesday 9/16

The *Seahawk* with a full crew will make this season's initial inspection of the shipwreck site. The first reports from the site brought good news - the IMS current meter had made it through the hurricanes intact. Hopefully, it continued to collect data throughout the worst of the storm and will provide important data on the kind of forces that impact the shipwreck remains during catastrophic events. Divers spent most of the day relocating mooring blocks and reinstalling the temporary baseline. It was pipes, which had been jetted deep into the sand, were missing. There was a very noticeable scour on the north side and sand build up on the south side. Divers reported that a section of wooden hull structure is uncovered near anchor A-1 as well as the tops of ballast extending to the north from the mound. Previously exposed features such as cannons C-1 and C-4 are now covered. In order to record these changes in the seabed surrounding the site, a reference datum was reestablished to take elevations. This year's readings can then be compared with those taken last year.



Thursday 9/17

Project vessels encountered large ocean swells as they made their way to the site. The swells created strong currents and surge on the bottom hampering all phases of diving operations. However, before conditions completely deteriorated, the alignment for the permanent baseline was established and the elevation datum was secured and calibrated to last year's work. Investigations at the site were curtailed at noon and the vessels carefully made their way back to Gallant's Channel. The afternoon was spent downloading and processing digital images, which included photographs of various aspects of the project.



Friday 9/18

By this morning, yesterday's winds had calmed down and work commenced. The screw-eye anchors used to attach the ends of the permanent baseline were washed in and set, 150 feet apart on a north/south orientation. This alignment will run the baseline along the northeast margin of the exposed mound and over the area where the remains of the shipwreck hull are expected. The chain was deployed and stretched out in position; the final attachment will take place on Monday to allow the screw-eye anchors to settle and become firm in the sea bed. The elevation datum was established relative to last year's work and readings were taken over the east portion of the exposed mound and adjacent sea floor. Researchers explored and began mapping the north side of the mound where timbers have been recently exposed, presumably by the ocean currents generated during Hurricane Bonnie. It now appears the wood structure consists of a series of double frames with hull planking attached underneath them. The planks indicate the orientation of the shipwreck in a north/south direction. The recovery of what appears to be part of a Roman numeral draft number suggests that this section is part of the vessel's end and most likely the bow. Draft numbers were nailed on the outside of the hull at the waterline to indicate how heavily the vessel was loaded.

Monday 9/21

The *Seahawk* crew proceeded to the site first, hoping to catch clear water for photography and mapping of details. Eight feet of visibility was reported as they began to work. However, light muddy sediments that have collected in the scoured area on the north side were easily stirred up and visibility quickly deteriorated in that portion of the site. As the day wore on and the outgoing tide intensified, the whole site became clouded and eventually unworkable due to the muddy sediment in the water column. Before that happened, researchers were able to install and secure the paramagnet baseline, record some elevations and investigate portions of the exposed timbers found logged under the ring of anchor A-2. A mid-nineteenth century ceramic ginger bottle was spotted next to cannon C-4. Since this area was exposed last year, the bottle must have been dislodged from somewhere else and re-deposited at its new location, presumably during hurricane Bonnie. This illustrates the dynamic environment surrounding the shipwreck remains.

Tuesday 9/22

The installation of the permanent baseline was completed and its stability was immediately put to the test. Highly visible plastic tags were attached every two foot to aid divers in low visibility conditions. Ocean swells rolling in from offshore increased during the day with some high as eight feet. While the swells gently affected the research vessels, below the water divers were tossed about the site. Attempts to take accurate readings for distance and elevation were nearly impossible, only with great difficulty could the grid frame be erected on the bottom. At noon diving operations were curtailed and everyone came to shore. Later in the afternoon everyone met to discuss what had been learned so far and what will be accomplished over the next few weeks.

Wednesday 9/23



The *Seahawk* went out to the site first thing to check conditions. Ocean swells from Hurricane George were 8 to 10 feet high as they rolled over the site, too dangerous to put divers in the water. The day was not wasted, though. Minor repairs were made to the vessels and faulty dive gear was checked. Gallant's channel Lab was cleaned and organized in preparation for the inflow of artifacts expected in the coming weeks. Conservators set up their photo-documentation stand and then began disassembling a large

concretion that had been in wet storage since last year. The concretion was complex and contained pieces of wood, iron cask hoops, case bottle fragments and several unidentifiable items. Only a mold of iron objects is left, the iron itself having disintegrated in the salt water, so the conservators will now begin the slow process of casting them with epoxy. It is a very time consuming job.

Thursday 9/24

While the conditions weren't great, researchers were able to return to the ship and continue diving activities. The exploration of the wooden timbers was mostly completed. The structure was only a portion of the ship's hull, and consisted of a series of frames and planking, that apparently broke off and settled adjacent to the mound of anchors and cannons as the ship deteriorated after wrecking. While this has not lead to finding the main part of the hull structure (if it exists), it provides archaeologists clues on how the ship was constructed and its size. Wood samples taken from this section will provide vital clues as to where and when the ship was built. Measurements were taken from the permanent baseline and transects to guide the excavation units. The first exploratory trench will cross the baseline at N120, which is north of the exposed mound near the north anchor.

Friday 9/25

This turned out to be the best day of visibility for the divers. At high tide it was in excess of ten feet on the bottom and allowed work to proceed quickly. Taking elevations, establishing reference stations, final mapping of the exposed structure, and laying the transect lines at the 30

and 120 marks on the baseline were completed. The exposed hull structure is a 20 by 5-foot section that was trapped by heavy objects as the vessel collapsed to the sea bed. It is uncertain whether additional structure survives, however, the study of this piece will be vital in determining the size, type and age of the shipwreck. Excavations began along the 120 transect line to the east of the baseline. Near the baseline, ballast stones and iron hops were discovered, but cultural materials soon disappeared. The only thing located in the 10-foot section from 10 to 20 feet east of the baseline was the end of the north anchor's wooden stock.

Monday 9/28

Strong winds from the southwest made working impossible. The crew of *Seahawk* did venture out to the site in order to broadcast the daily 11:00 transmission to Fort Macon, but then quickly came back in. Final preparations were made on the 6-inch dredge system and repairs were made to the 6-inch airlift system. These excavation devices provide archaeologists with a means to move large amounts of sand in order to explore buried artifacts. At the level where cultural materials are encountered, screen baskets are used to catch the very small artifacts that might be swept up as sand is removed. During excavation four divers work each system: the dredge/airlift operator, the assistant operator, the archaeologist/mapper, and artifact recovery person. The archaeologist/mapper uses communication gear and is in touch with the topside crew to keep them informed on the progress of the excavation. The dredge/airlift operators can signal the archaeologist/mapper to let people know on the surface when to cut the pumps off, when artifacts are being sent up, and similar information. All artifacts from each 10-foot section of a transect unit (approximately 3-foot wide trench) are brought up to the surface together; unique artifacts are mapped within the unit and tagged separately. Transects units will be laid out to 30', 60', and 90', and 120' with other units being placed as needed, based on information gained from the initial excavation.



Tuesday 9/29

The excavation of several 10-foot trench units was completed. Along the 120-foot transect line, which is north of the exposed mound and adjacent to the north anchor, the predominant find was more sets of iron hoops, moderate amounts of ballast, and many unidentifiable objects. It is becoming apparent that the ship contained a large number of cask hoops when it sank and it also appears that these were bundled together in storage rather than representing the casks themselves. The most interesting artifact was a well preserved wooden dead-eye and iron strap that once held the ship's rigging to the side of the vessel. Materials have been found buried one to two feet below the surface along the 120 foot-transect line and between E80 to 110 across the baseline. Excavations will continue in a westerly direction to see how far cultural debris extends in that direction. Along the 30-foot transect line the presence of more sand over the site made it more difficult for the researchers to reach artifacts which were first discovered at E90**, a large

hole over 3 feet deep and extending out more than 10 feet in diameter was dug. While it was difficult to uncover enough to map, excavators recovered a variety of lead shot, similar to those recovered from the bag shot last year. Excavations will continue west along the 30-foot transect. Good underwater visibility permitted extensive photo documentation to be completed of the exposed structure. During cleaning of this area, another lead, Roman numeral draft number was recovered. It is in a twisted condition and will need to be studied in the laboratory to determine what number it represents.

****Note:** The baseline runs south 00 to north 150 along the east 100 line; therefore, when working west of the baseline, numbers will be < E100 and to the east will be > E100.

Wednesday 9/30

Excavations along the transects at the 30 and 120-foot marks on the baseline have slowed down considerably due to the increasing amount of sand overburden. Both excavation tools were taxed to keep the sand out long enough for archaeologists to examine and map the remains at the bottom of the trench. However, both excavations revealed a rich layer of cultural materials with lead shot of all sizes being the most recognizable and numerous artifact found throughout. However, most artifacts are locked up in concretions and will be unknown until they go through the conservation process. The amount of materials that are present on the site and the distance they extend away from the exposed mound is beginning to be revealed. It's evident that years of excavation will be needed to thoroughly explore the shipwreck site and additional years to examine and stabilize recovered artifacts.



Thursday 10/1



Blown out again...there's nothing you can do about weather. The crew were treated to a lecture by Lindley Butler on 18th century artifacts - the majority of what we are finding on the site fit nearly into what is expected for the early part of that century. Shards of dark green glass bottles, both hand-blown round ones for wine and others of the square-bottomed case style, and pieces of salt-glazed stoneware jugs and red earthenware storage containers have been found on the shipwreck site and are typical of the period. While no definitive artifact has surfaced to link the

shipwreck to Blackbeard the pirate, everything found so far points to a large, heavily armed vessel from the early 18th century. No other shipwrecks of that size, armament, and period, other than *Queen Anne's Revenge*, are recorded for the Cape Lookout area.

Friday 10/2

Conditions on the site were very rough day with a stiff north wind agitating the ocean. Both the airlift from *Pelican* and the dredge from *Snap Dragon* were used along the 30-foot transect and together removed a large amount of sand off the cultural



level, which was buried approximately 3 feet below the sea bed. This area turned out to be very rich in artifacts, which included hundreds of lead shot of all sizes, a curious brass object and shards of glass (which appear to be the remains of bag shot), strips of lead in various sizes, a curious brass object and the mouth of a large ceramic storage jug. Due to the very low visibility and bottom surges, investigators made a preliminary sketch of the artifact scatter, recovered the brass object and the piece of jug, and headed for home. Hopefully, next week will bring better conditions to explore and document this area of the shipwreck.

Monday 10/5



An exciting day of archaeological discoveries was helped by good weather and clear water. Explorations of the ship's timbers indicate that they extend further north than previously thought and to the south are now known to lie in and under the main mound of artifacts. While time will not permit extensive investigations to uncover all the ship's wooden hull structure, researchers are encouraged by the amount that is expected to survive under the sand. On the other front, artifacts from the excavation along the 30-foot transect were numerous and intriguing. The first to come up was a large metal platter (20 inches in diameter) that appeared almost identical to the one recovered last year, except that this one appears in much better condition. As the day went on, several brass items were found. These pieces were well-crafted and, as with Friday's find, resemble parts from a scientific instrument, such as a microscope. One artifact that was recognizable was a brass medical syringe. In addition to these items, lead shot and a wide variety of lead sheet pieces were abundant.

Tuesday 10/6

The R/V *Capricorn* visited the site and made a successful recovery of the current meter. In the next few days they will be examining the data recorded during the last few months, especially the period when Hurricane Bonnie passed over the area. More unique and interesting artifacts were found as researchers continued to work their way west on the south side of the site along the 30-foot transect. These included additional pieces of the large storage jar, a carved lead sinker, and more lead shot of various sizes. The process of recovering wood sample from various structural elements of the ship's hull was begun. These samples must be taken in a manner to provide a solid remnant of the wood it represents, but should not destroy the character of the piece. Researchers look for broken ends or splintered pieces to take samples. These will provide important scientific evidence concerning the type of tree used for ship's construction, the date the tree was cut down, and the deterioration of the wood after the ship wrecked. Small loose pieces uncovered during excavations will be brought to the lab, so that conservators can experiment with preservation techniques. At some time in the future it is likely that they will be faced with treating and stabilizing large sections of the ship's hull. Other activities focused on continuing the 120-foot transect line to the west and preparing cannon C-4 for recovery.

Wednesday 10/7



The richness of this shipwreck site continues to be revealed. During investigations of the box-like feature, three more cannons were located, bringing the total of large cannons to eighteen. The box-like feature may be a portion of the wooden gun carriage attached to C-16. In and around these cannons, archeologists found a pair of navigational dividers, 3 metal plates and a platter, all probably pewter (the total recovered or observed at the site stands at 3 platters and 4 plates), two complete dark glass wine bottles, and an ornate upholstery tack. The fact that these artifacts have remained intact indicates that areas on this site have escaped the ravages of ocean currents. Artifacts from the site range in size from 2,000 pound cannons and large sections of wood hull structure to minute lead shot and tacks. All types of materials are represented, many of which are in an excellent state of preservation. Other activities during the day cannon, included loosening cannon C-4 from the seabed and in preparation for recovery and the use of exploratory excavations, to determine the limits of the buried cultural materials west along the N120 transect line.

Thursday 10/8



The day was spent photographing and conducting preliminary analysis of recently recovered artifacts. The metal plates appear to be made by English pewtersmiths during the late 17th and early 18th century. The hand-blown bottles march up well with English wine bottles made around 1714.

Friday 10/9

During the morning the excursion vessel *Shackleford* brought media divers out to take photographs of the site. While the conditions were not great for photography, video cameras, which "see" better than the human eye, were able to record some of the prominent features on the site. Meanwhile, researchers completed mapping and recovering artifacts from the newly discovered three cannon area. Two large pewter platters and several more pieces of the ceramic storage vessel were among the



items brought to the surface. Archaeologists, using air-filled lift bags, successfully removed cannon C-4 from the shipwreck site and moved it near the west mooring in preparation for Monday's recovery. Accurate measurements were taken on all cannons and profiles were completed for the section of hull timbers. Exploratory excavations were begun on the east side of the exposed mound, during which an area of large ballast stones were found.

Monday 10/12



It was an excellent day for a cannon raising-light north winds, calm seas, and excellent underwater visibility. Once the R/V *Dan Moore* arrived on site, cannon C-4 was brought to the surface with a lift bag and brought to her starboard side. There a crane was hooked to the cannon and it was successfully brought to the surface for the first time in centuries. Stuck to the six-foot cannon were many recognizable objects, such as a piece of ship's rigging, cannon balls, and what may be part of its wooden carriage. It will take many months for conservators to remove this "baggage" and inspect the

cannon itself. After recovery the cannon was taken over and placed in a storage tank at the Gallant's Channel conservation lab. In the meantime the photographers took advantage of the excellent visibility to record large portions of the shipwreck site. Excavations on the east side of the baseline. A large portion of the buried materials, which was only a short distance from the baseline. A large portion of the bottom of the earthenware storage container was recovered.

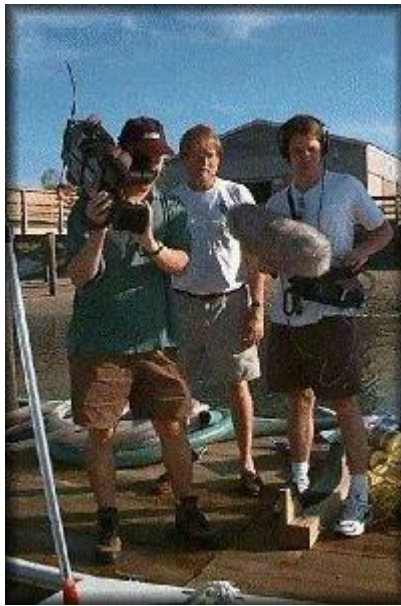
Tuesday 10/13

It took a major excavation to adequately uncover the south anchor for viewing. However, the effort was well worth it because of its condition. The wooden stock was completely preserved, as was the puddening around the ring. Puddening consisted of a small diameter rope wound around the ring to protect the anchor cable from wear and tear. One unusual aspect was the lack of iron bands around the stock, which would have normally been used to keep the wooden stock together and in place on the anchor. The squared ends of the stock indicate that the anchor was built prior to 1780, after which rounded ends were preferred to prevent damage to the side of copper-clad vessels. Laying 400 hundred feet south and set in a direct line to the main shipwreck, it appears that this was wedge anchor put out in an attempt to free the vessel at the time of wrecking. Wood samples were recovered to compare species identification and radiocarbon date results with those taken from other parts of the shipwreck. At the main site general activities included mapping and recovering samples.



Geologists from IMS took sediment samples from beneath several large ballast rocks and wood planking to determine whether recent storms had moved artifacts around on the bottom. Each ballast was smooth on top and had an old growth of barnacles on its underneath side, indicating that sometime after the shipwreck the ballast rock were rolled over and then covered with sand. This most likely occurred soon after the ship wrecked. However, a preliminary report from researchers at IMS examining the current meter data recorded during hurricane Bonnie indicate that during recent storm events the shipwreck site has been subjected to tremendous forces. During this storm currents averaged a steady 2 knots with a back and forth motion producing pressures up to eight knots, strong enough to move large objects across the seabed.

Wednesday 10/14



Today, steps were begun to finish this year's archaeological investigation and close the site. Backfilling, which took place at the south anchor, is accomplished by reversing the dredge operation. Sand is excavating on a shallow plane outside the excavation (generally where the dredge outfall was during excavation), directed out over the area to be filled, and allowed to settle into the hole. It is a slow process-it takes several hours to completely level a hole ten feet wide and three feet deep. The intent is to get the exposed areas covered by several feet of sand, with knowledge that ocean currents during the first good storm will smooth out the bottom surface and complete the job. During the day water samples were analyzed by personnel from Cape Fear Community College. These studies will help determine the water quality at the site, and allow researchers a better understanding of the chemical environment in which the artifacts have been subjected to since sinking to the bottom. Throughout the investigation, archaeologists have been fortunate to have photographers from UNC-TV documenting

their activities and the findings as they are uncovered. The constant stream of high quality digital images will provide a valuable source from which to study and map the shipwreck site. Furthermore, their archival documentation will allow future generations to observe the strategies and methods used to examine the Beaufort Inlet shipwreck.

Thursday 10/15

The shipwreck site 31CR314 was backfilled and secured. The objective of the five-week investigation was to examine this shipwreck to determine its age, origin and type, as well as figuring out the extent and type of remains that archaeologists will be confronted with as they continue their excavations. We now know that materials are confined to a relatively distinct area, approximately 200 feet by 100 feet and are currently either exposed or buried no more than three feet below the sea bed. While much of the site has been tumbled about by catastrophic storms, there are areas where artifacts have been protected and exist in an extremely good state of preservation. The site has yielded remains consistent with a heavily armed vessel dating to the first quarter of the 18th century. It has also provided a wealth of information, both cultural and

environmental, with which scientist can further test to confirm the age and identity of the shipwreck. Is this the pirate Blackbeard's *Queen Anne's Revenge*? Presently, every identification supports that it is. However, analysis of the materials and information collected during the field work and additional historical research is pending. Studies currently underway will delve deep into aspects, such as the source of ballast used to weigh the ship and lead for ammunition, the age and identity of the cannons, pewter plates, and other datable artifacts, and how and when the ship was constructed. Collectively, this information will help us all decide if indeed this is *QAR*. We will keep you posted as the results come in.

The successful completion of this project is due to many dedicated people both in the field and in the office. Many thanks to the Department of Cultural Resources, Intersal and Maritime Research Incorporated, the University of North Carolina at Wilmington, Cape Fear Community College, the Institute of Maritime Studies (University of North Carolina at Chapel Hill), East Carolina University and the Beaufort community. This is truly and exciting time for underwater archaeology in North Carolina.

And thank you for your support and interest.

