

The Queen's Report

Update from the
Queen Anne's Revenge Shipwreck Project
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What to Do With a Drunken Sailor?... Our last newsletter carried an item, **Speaking of Rum** about the *USS Constitution* and the amount of rum its sailor consumed on a quick raid up the English coast. We asked readers to tell us if they thought anything was wrong with the story. Here are



From Mike Eddy: "Yes, it was a neat little story, but some quick rudimentary math would suggest that each crew member would have consumed well over 500 gallons of alcohol during their cruise. This would suggest that each sailor would have spent most of his time drinking approximately 2.5 gallons of rum/wine/whiskey a day for every day they were at sea. The information would also suggest that they would only have consumed an average of 1/10th gallon of water per day per sailor. It's obvious that alcohol is much more appetizing than stagnant water."



From Charles M.: "I read this story while I was in the Navy in the 1970's. It referred to a cruise by John Paul Jones during the Revolution. I do not recall the date of the *USS Constitution's* launch, but it served during the War of 1812. In 1797-98 we were not at war with Britain."



From Doug P.: "My calculations indicate that the sailors on the *Constitution* would have to drink almost a pint of rum an hour to use up the 250,000 gallons in six months. They would have been dead drunk before they got out of sight of land."



From Doug L.: "Were there reports of the ship weaving as it sailed into port? 475 men at sea for 209 days couldn't possibly have survived a voyage where each man averaged drinking more than 2.5 gallons of alcoholic beverage (mostly distilled spirit) per day, particularly while consuming only 1/10 of a gallon of water per man per day. Happy sailors!"

Bingo! We became suspicious when the reference we had said "GO NAVY!" on it. If you want to follow up on this fabrication, check out <http://arrrgh.redeaglespirit.com/archives/001504.html>

Director's Report



With the July edition of the National Geographic containing an article on Blackbeard and the *QAR* project, the release of *Pirates of the Caribbean II*, and our expeditions to the site this May, media attention moved fast and furious. It

never ceases to amaze me the world-wide interest bestowed on shipwrecks, pirates, and

mostly, Blackbeard. A good example has been the recent arrival to North Carolina of an Italian production company that just completed several days shooting for a new documentary film about the pirate Blackbeard for European television.



The company was led by Italian journalist Piero Angela who hosts of the popular history program "Speciali Superquark." "This program features two-hour documentaries based on the biographies and achievements of important historical figures and on important historical events, including Louis XIV, Leonardo da Vinci, Napoleon, Wolfgang Amadeus Mozart, the French revolution and the volcanic eruption that destroyed Pompeii. A segment of the documentary biography of Edward Teach -- Blackbeard - was shot out at the *QAR* site aboard *R/V Capricorn* of UNC-Chapel Hill on July 18th. The company consisted of 13 people including a



make-up person and an interpreter. While it was quite entertaining to watch, the good news is that project archaeologists were able to continue our set-up for the sand berm monitoring project which is described later in the newsletter..

The site continues to remain in a very exposed state, which gave researchers a glimpse of a new feature, an intact line of dead-eye stops from the port side. These ship's elements are large iron loops that help attach the main mast rigging to the side of the hull and provide good evidence of how the ship ended up after sinking. Archaeologists plan to return to the site in the next few weeks and map this newly exposed area in the next few weeks.

Most importantly, the *QAR* project received state funding this year that has invigorated everyone by providing a measure of permanence and allowing the project to move into full recovery mode.

State appropriations enable project to move forward



The Department of Cultural Resources has successfully received state funding to place the four, long-time temporary *QAR* positions on a permanent basis, including an archaeological supervisor, 2 assistant conservators, and a computer technician. These positions will be largely filled by existing personnel. This is an important step in allowing the project to begin full recovery of artifacts from the seabed and transporting them to the conservation laboratory. At the conservation lab, every *QAR* artifact are documented, cleaned, analyzed, and preserved for many years to come.

Funding for the project also includes a non-recurring state appropriation of \$247, 040 for this fiscal year. A large portion of the money will be spent on equipment purchases and renovations at the *QAR* conservation facility in preparation for managing a large volume of artifacts. Arrangements are currently being made with East Carolina University where the laboratory is located to secure needed space. It is estimated that eventually 7,000 concretions will produce 700,000 individual artifacts, plus there will be at least 16 more cannon recovered, as well as 4 anchors, a grapnel hook, and @ 100 square feet of ship's timbers.



Archaeologists are already gearing up for a lengthy fall field season - 8 to 10 weeks in the field - to begin full recovery process. This expedition will be in partnership with NC Marine Fisheries Artificial Reef program, which will provide *R/V Shell Point*, captain and crew. Tentatively, researches will continue work in May 2007 with the assistance of Cape Fear Community College's Marine Tech program and *R/V Martech*.



Overall the plans are to begin at the offshore end of the site and proceed toward the main part of the shipwreck. This will put researchers in the stern of the vessel where many of the scientific instruments, pewter plates, lead shot, and gold have been found in the past. Project goals are to complete excavation of forty 5 X 5 foot units or 1,000 cubic feet of materials. It is estimated that the site contains a total of 7,500 cubic feet and therefore, recovery this year will total 13% of the site. This will double the number of artifacts brought up during all of the past expeditions put together. Recovery is expected to include at least four 6-pounder cannons located in the stern of the vessel.

Exciting times lay ahead. And this is only the beginning of the full recovery process. After this year, progress will be dependent on receiving the same level of funding over the next 3 to 4 years to complete the mission. Furthermore, we hope that during the recovery period, hurricanes do not visit our coast as they have so frequently done since the shipwreck's discovery in 1996. North Carolina has been hit by 15 hurricanes over the past ten years! If the shipwreck site does feel the effects of another storm, perhaps the sand berm deposited just off shore of the shipwreck site provides some protection.

Preservation Study supported by NC Sea Grant and the US Army Corps of Engineers

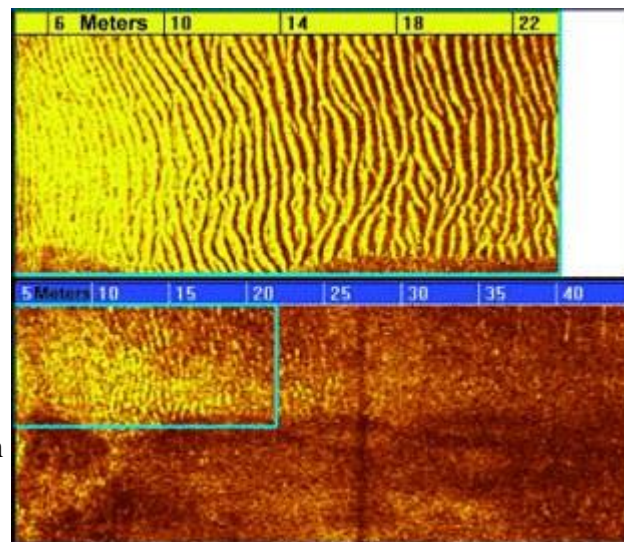


NC Sea Grant recently awarded QAR Project Manager Mark Wilde-Ramsing and UNC-CH Institute of Marine Sciences Dr. Tony Rodriguez a mini-grant to study the experimental sand berm placed near the shipwreck site last February by the US Army Corps of Engineers (USACE). The study, entitled "Using the *Queen Anne's Revenge* Shipwreck Site as a Testing Ground for a New Method of Artifact Protection and Preservation in Shallow-Water Marine Environments", will augment emergency efforts at Beaufort Inlet aimed at providing temporary protection for the early 18th century shipwreck *Queen Anne's*

Revenge from the effects of turbulent waters. The new method entails constructing a berm on the updrift side of the *Queen Anne's Revenge* wreck site to provide protection from storms and provide a local sand source that will eventually cover the shipwreck. If the results of this experiment prove to be positive, the method could be used elsewhere as a means of wreck preservation. Funding supports vessel time, survey supplies, and student research for data processing and results will be disseminated through a conference presentation and a journal article.

Research Hypothesis - The sand berm, constructed on the seaward and updrift side of wreck site will provide short-term protection by dampening storm-induced currents, and long-term preservation by serving as a local sand source that will eventually cover the wreck.

Methods and Expected Outcomes - The hypothesis will be tested by measurement of sand movement and site elevation using periodic echo sounder surveys with enhanced interpretations using side-scan sonar. A series of physically installed vertical reference stakes will be used to periodically measure (by divers) site elevation. These data will be paired with more regional echo sounding surveys. Side-scan sonar surveys will resolve bedforms from which sand transport paths can be measured. These newly acquired data will be tied into the existing archaeological



baseline data set, consisting of systematic sand level measurements collected since 2000. The goal is to complete measurements prior to, during, and after the 2006 hurricane season, a period from May to December 2006. Echo sounder data will be collected by the USACE during their routine bathymetric surveys of the inlet channel. The first site visits in May will be dedicated to setting up measuring stations and recording those levels using divers. In July, September, and November both diver measurements and side-scan sonar data will be collected.

Data will be organized as xyz ASCII files and imported into Surfer® 8.0 for 3-D bathymetric map generation. Maps created throughout the one-year project period will be subtracted from one another to produce maps that quantify accretion and erosion. Side-scan sonar mosaics will be created using software by Chesapeake Technology Inc. and the mosaics will be used to generate sea-floor bedform maps. These maps will show if sand movement is taking place, and the general direction of sand movement. Diver observations and measurements will be used to groundtruth results of the geophysical surveys, and provide high-resolution details (small scale bedforms, sand movement at the wreck site, and sediment samples). Data processing and analysis will take place following the November data collection survey and be completed by March 2007. The findings will be reported at the 2007 Society for Historical and Underwater Archaeology Conference and the 2007 Southeastern Geological Conference and an article prepared for GeoArchaeology or Journal of Archaeological Science.

Research Importance - The proposed study will have a significant impact on the work of underwater archaeologists in the shallow waters of coastal North Carolina and on the underwater archaeology field in general. Global climate changes and sophisticated technology are advancing the potential for study of submerged cultural resources, and many of the most important archaeological discoveries of the decade are submerged sites. Results from this study can be effectively used to manage new discoveries. In many cases, an underwater site can be best preserved in situ at least until a full excavation and recovery operation can be planned and funded. Additionally, some sites are determined to be not significant enough for full excavation, but should, nevertheless, be preserved intact for future study. Findings from this research can provide coastal resource managers greater options when confronted with erosive situations that threaten archaeological sites. In the case of the *QAR* site, any protection that results from this experimental berm will be welcome relief over the next several years as archaeologists proceed toward full recovery.

Eric Nordgren Moves North to the Monitor

We recently spoke to Eric Nordgren, formerly a conservator with the *QAR* Shipwreck Project, who moved in June to the *USS Monitor* Project, a collaboration between NOAA's National Marine Sanctuary Program and The Mariner's Museum in Newport News, VA. The *Monitor* is the ironclad Union ship that sank in a storm on December 31, 1862 off Cape Hatteras, N.C. and currently lies in 240 feet of water. Eric told us the 20-foot wide revolving turret and its two Dahlgren guns as well as its engine, condenser, and propeller have been raised by a joint effort of NOAA and the US Navy but the main section still rests on the bottom. He has had experience



with *QAR's* large metal cannon barrels, but the *Monitor* is largely metal, and he is especially interested in how the corrosion process works on it. Eric is a native of Dartmouth, MA who graduated from McGill University with a degree in archaeology and studied artifact conservation at the University of London's Institute of Archaeology. The move to the *Monitor* Project is typical of Eric, who has spent his career working in a variety of experiences. "The more you do, and can do, the better," he told us. For example, he previously worked in Beirut at the Lebanon National Museum with a team of conservators to restore national artifacts that had been stored during recent wars. He

does not know what may have happened to the Museum or the artifacts as a result of the recent attacks by Israel. He served an internship at the University of Chicago's Oriental Institute, assisting with the restoration of their Iranian and Egyptian collections. He also spent three years at the Institute of Nautical Archaeology in Alexandria, Egypt where he taught courses to Egyptian conservators and working on the conservation of artifacts from a Turkish ship that sank in the Red Sea around 1770. He says the glass bottle fragments found there were quite similar to those found on the *Queen Anne's Revenge*.

In all his experiences, Eric says that wherever you find artifacts, on land or under water, each has its unique difficulties, and the conservation process is essentially the same: to clean, restore, and save them for posterity. A worthy goal. We wish him well.

We would like to "**Welcome**" the New Members of the **Queen's Crew:**
Jennifer and Larry Bower
William Venner

We appreciate you **Support!!**