

Preliminary Report on the Fall, 2001 Expedition and Internet Event

Shipwreck Site 31CR314 Beaufort Inlet, North Carolina

Archaeological fieldwork during the fall of 2001 was conducted at the *Queen Anne's Revenge* shipwreck site between October 1-3 in conjunction with the *QAR DIVE LIVE* Internet broadcast. A small crew returned to the site on October 4th to record elevations and close down the site. Additional broadcasts on October 4th and 5th were conducted from the *QAR* conservation laboratory at the Mariculture Building on the campus of Carteret Community College. The primary archaeological goal of the expedition focused on expanding the results from the 1999 magnetic gradiometer survey. The gradiometer was a Schonstadt Model GUA-30 Underwater Magnetic Locator provided by Surface Interval Dive Company. Secondary archaeological objectives included:

1. Inspecting the site for newly exposed features
2. Placing new marker tags on all exposed cannons and anchors
3. Recording elevations on major features
4. Closing down the site for the winter

Conservation objectives revolved around recording radiograph images of previously recovered concretions.

The fall event was primarily an educational effort designed to reach North Carolina students. *QAR DIVE LIVE* allowed interactive participation during a live question and answer period with scientists at the shipwreck site and in the conservation laboratory, areas that are not accessible to the general public. It provided a blend of scientific study with historical research and discovery. [See *DIVE LIVE 2001*]

Archaeological Activities: The primary survey area encompassed a large linear anomaly from the 1999 gradiometer survey that was located in the northwest quadrant of the site. The survey area encompassed a 15 feet by 50 feet with an east/west orientation. In addition to covering the anomaly it continued far enough to the west to examine the site margins at this location and in turn, to help identify the distribution of small artifacts. East/west lane lines were placed every five feet and with the use of a graded aluminum rod and the sensor stand, readings were taken at every one-foot interval. Divers placed the sensor on a predetermined spot, backed away ten feet from the sensor, signaled the vessel, and returned to move the sensor to the next station. The survey was conducted from R/V *Snapdragon*, where gradiometer technicians recorded numerical readings at each sensor location on a laptop computer in Microsoft Excel. After completion of the gradiometer survey, archaeologists processed the data and generated a magnetic contour map. Preliminary results from this survey show that the original single anomaly recorded in 1999 represents at least three distinct magnetic sources of ferrous metal, which quite possibly are additional cannons. [gradiometer 2001 map]

Tagging major features and recording elevations from the newly established datum completed the archaeological tasks. All moorings and extraneous lines were removed from the site in preparation for winter.

Conservation Activities: On Thursday, October 4th, Marines from the Explosive Ordnance Disposal Unit, Cherry Point, x-rayed twenty four concretions that had been recovered during the 1997 and 2000 field seasons. Radiographs of these heavily encrusted objects allowed archaeologists and conservators to view the interior. Their images are vital to scientists attempting to free individual objects from within the concretion. Without it important artifacts could be damaged or destroyed.



In addition to x-rays, researchers in the laboratory lead by Dr. James Craig, an expert in metallurgy, examined a large container of sediment and shell particles that was recovered during excavations last fall. His goal was to see if any artifacts had been missed during the earlier process of screening and hand sorting. By carefully panning the shell hash by hand he came up with several pieces of lead shot, emphasizing the need for this final step in the recovery process. Another activity that provided insight into the condition of a cannon's interior was the use of a small camera that explored the muzzle of Cannon C3. The exercise confirmed that the cannon was still loaded and provided detail on the wad of cordage that held the cannon ball in place during heavy seas.

More information about the Fall 2001 *QARLIVE* Event below.

QAR DiveLive

QAR DiveLive was a week-long event in the fall of 2000, and 2001- with underwater videocast from the actual wreck site of **Blackbeard's** flagship, the ***Queen Anne's Revenge***, and from the *QAR* Project's conservation laboratory, where the artifacts from the ship are being preserved.

Apple Computer, through their Apple Learning Interchange (ALI), generously agreed to host the 2001 *QAR DIVE LIVE* event. Visit Apple's Exhibit site to view broadcast segments from *DIVE LIVE* 2001: http://newali.apple.com/ali_sites/ali/events/qar/

How Did They Do That?

Here's how it worked!



A sophisticated television "studio" was placed aboard one of the research vessels used by archaeologists who are working to study and recover the shipwreck thought to be Blackbeard's flagship, the *Queen Anne's*

Revenge. Three surface video cameras, plus an underwater camera, will follow the archaeologists and divers as they work on the wreck site. Sensitive microphones pick up what the scientists are saying. A "television director" on board the ship will pick the best camera views to show what's going on.



A special microwave transmitter, the same equipment used to transmit live pictures from stock cars during NASCAR races, will be used to send the television picture and sound back to land. The signal will be picked up by



large antennas located on the roof of the Duke University Marine Science Center in Beaufort and fed to computers located on shore. From our computer on shore, the video signal was "digitized" and transmitted over the internet to special video "servers" located in Raleigh, NC and elsewhere (thanks to our "server" sponsors, like Apple Computer).



From there, the digitized video signal travels (in the same way your EMAIL travels) over the Internet to desktop and classroom computers all over the world. Even if you logged on from Broad Creek Middle School just a few miles from the wreck site in Beaufort, the live video will travel many miles before it reaches your computer!



The signal traveled over telephone lines, fiber optics, microwaves, and copper wires. All this "travel" may slow the video down and the image that reaches your computer may look "funny" or "jumpy" or perhaps it may even stop for a few seconds

Depending on how your computer is connected to the internet, and how "fast" or "slow" the net is that day, you

may receive a good quality video signal with good sound or you may receive a fuzzy image that stops and starts. But even if you receive "slow" video, you will see exactly what scientists and divers on the *Queen Anne's Revenge* are seeing and you'll be able to ask the scientists questions!



Courtesy of [Marine Grafics](#)

Sponsors and Participants in *QARLive*:

(in alphabetical order)

Center for Marine Science-University of North Carolina at Wilmington

Duke Marine Lab

East Carolina University Center for Science and Technology

Intersal, Inc.

Marine Grafics

Maritime Research Institute

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