**Exploring Blackbeard's Cannon** - Cannon C-4 measures five feet, six inches long, weighs 763 pounds, and is the third of five recovered so far from the wreck of Queen Anne's Revenge (QAR). It came up on October 12, 1998 with a four-pound cast iron shot ball stuck in its throat.

Divers brought it up early because it was a different size from the others, and had interesting elements attached to it. From some angles, it appeared to be a big lizard with a funny looking rod and ring sticking out of one end. The four-pound shot was sandwiched in the bore between two wads of cordage, a typical practice for early 18th century ships' cannon. Cordage consisted of heavy towing rope, lines, or fiber from a ship's rigging. The outer wad held the shot in place while the ship was at sea, and the inner wad was used to create a seal between gunpowder charge and shot. Project Conservator Wayne Lusardi, found stitched paper powder cartridge in the bore. In short, C-4 was armed and ready to fire when the ship went down.

Kim Eslinger is a QAR intern and a graduate student in Maritime Studies at East Carolina University. Her task is to remove artifacts that may be in the "interesting elements", or concretion, a heavy layer of debris, mostly sand and shells, bonded by a lengthy rusting process. Careful separation of its contents has so far yielded a tiny gold-plated silver spangle, glass fragments, pig bones, nails, and musket parts.
There was actually a piece of fabric, little more than a fossil, caught between the concretion and a cannon ball, leaving only an impression. An x-ray of one section revealed that links of chain were buried deep inside, indicating that the rod and ring is a dead-eye strop, a part of the ship's rigging.

Such small findings are valuable. The tiniest artifact can be an important piece of a much bigger puzzle. *QAR* archaeologists strongly suspect that they are excavating the wreck of Blackbeard's ship, the Queen Anne's Revenge, known to have been lost after running aground on a shoal near Beaufort Inlet in 1718. Two hundred and eighty-three-year-old gunpowder is not likely to be explosive so that, other than dropping a cannon on one's foot, it is not dangerous work. But it is slow and labor intensive, requiring ingenious methods for removing internal and external concretion from the cannons without destroying valuable artifacts. The primary tools are an air scribe that is used much like a tiny jackhammer, and a dental pick. Project Director Mark Wilde-Ramsing estimates it will take years to excavate the site and conserve and prepare the artifacts for exhibition.

**Support Recognition** - Since late summer 2000, Parker Marine Enterprises of Beaufort has made significant contributions to the project by lining conservation tanks with fiberglass, the same procedure used to waterproof bathtubs and powerboats. When completed, the tanks will help assure the safest and fastest conservation process for cannons, ship's timbers and other large artifacts.

**Project Update** - Great strides have been made in preparing archaeological offices and conservation laboratories at the UNC-CH Institute of Marine Sciences and Carteret Community College. These facilities are designed to document and conserve the hundreds of thousands of artifacts expected to be recovered from *Queen Anne's Revenge* shipwreck site. Although archaeologists have only scratched the surface, these include an exciting array of artifacts: ship's parts, dishes, scientific instruments, guns, cannons and even bits of gold. You can catch up on all the action that has taken place by visiting the *QAR* web page at [http://qaronline.org](http://qaronline.org). To continue research at the shipwreck site the Department of Cultural Resources is seeking annual funding from the General Assembly. A long-term state appropriation is necessary to bring the artifacts associated with the world-famous pirate Blackbeard from the seabed to the exhibit hall. During that process the *QAR* research team is committed to letting you follow along through the use of the latest technology.

**Question of the Month** - *QAR* archaeologists have questions about the wood, probably from the ship's hull, found at the site of the *Queen Anne's Revenge*: What kind and how old is it, and where did it grow? Scientists assisting with the research used a method from the field of dendrochronology. What is that? Dendrochronology is the study of the growth rings that trees form each year and how environmental events may have affected them. It determines the age of a tree by counting its rings. In an interim report, Dr. Mike Baillie from Queen's University in Northern Ireland, stated that the dendro method could not determine the age of the *QAR* wood for two reasons: they are unsure about where it grew, and the ring patterns were too short. Another method, however, radiocarbon dating, indicates that the wood grew between 1630 and 1690, and that a likely construction date for the *QAR* is from 1700 to 1710. Those dates
correspond with the estimated time the QAR was built and are supported by the discovery of a ship's bell dated 1709.

**Announcements** - Preparations are being made and funds being sought for a second QAR "Live Dive" program, to be held during the week of May 7th. This program, "brings the shipwreck to life" by allowing thousands of students and the general public to visit the site via the Internet. During portions of the broadcast registered classrooms can ask divers questions as they explore the shipwreck. We invite everyone to join in the fun. Look for "Live Dive" on the QAR web site to learn more.

**Contributions** - Excavations of the shipwreck, which was discovered in November 1996 by President Phil Masters and Operations Director Mike Daniel of Intersal Inc. of Beaufort, NC, are being conducted by the N.C. Division of Archives and History's Underwater Archaeology Branch in partnership with Maritime research Institute and the North Carolina Maritime Museum. Donations for the recovery, conservation, and display of the artifacts should be directed to Maritime Research Institute, a nonprofit corporation, c/o Carteret County Chamber of Commerce, 801 Arendell Street, Morehead City, NC 28557.

**In the Morehead City/Beaufort/Cape Lookout area?** Visit the North Carolina Maritime Museum at 315 Front Street, Beaufort, NC and see many of the actual artifacts from *Queen Anne's Revenge*. 