

THE USS *BOSTON* PROJECT

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Abstract

In South Carolina, under certain conditions, sports divers are authorized under license to conduct salvage operations on sunken vessels. The USS *Boston* project falls in this category. This project is examined from the resource manager's point of view considering his ethical responsibilities, but also considering the salvors contribution to knowledge.

Introduction

The methodology of managing a State's underwater archaeological resources is determined by many variables. One of these variables is the number of people that can be called upon to assist. Under certain conditions sport divers can fill this role.

This paper deals with one aspect of resource management, the investigation and excavation of a sunken vessel by sport divers under the direction and cooperation of a state agency. The state agency in this instance is the Institute of Archeology and Anthropology of the University of South Carolina. The excavation of a sunken vessel by sport divers is a very controversial issue among those who are by law responsible for the management of underwater archaeological resources. The controversy pits the conservative "hands off" attitude of most resource managers against the "laissez faire" attitude of many sport divers. With state resource management laws under attack and the proposed federal legislation not progressing smoothly through Congress, the solution to the management problem is becoming harder to find. In my opinion, neither viewpoint with their generally undeviating stance can provide a reasonable and workable solution. A compromise must be reached before the resource is destroyed by misplaced priorities of the resource manager, the sport divers, or both.

The South Carolina Underwater Antiquities Act of 1982, and its administration, is a statement for responsible compromise in which the free enterprise system can operate, within definable limits, and the resource can be discovered and studied without the constant confrontation so often found between the state and the individual. This law authorizes the issuance of salvage licenses on a hobby, or a commercial basis. The latter, within narrow restrictions, and under strict Institute control. The commercial exploitation of a shipwreck is authorized on a case by case basis and only on those vessels which, for demonstratable reasons, in the Institute's opinion, are not of primary scientific value. The USS *Boston* is such a vessel (Figure 1). The *Boston* was constructed in 1850 in New York City. She was a steam side-wheeler, 630 tons, 225 feet in length with an oak hull sheathed in copper.

Under Captain Thomas Sanford it carried passengers and freight for many years between Boston, Massachusetts and Portland, Maine.

Historical Synopsis

In April 1861, the Federal Government leased the *Boston* for use as a troop transport. She was the first vessel used to transport soldiers during the Civil War. As the war progressed, the *Boston* participated in numerous military activities in South Carolina, Georgia and Florida. In March 1864, it was purchased by the Federal Government. While on patrol, during the evening of May 25, 1864, the *Boston* struck and grounded on a submerged sandbar in the Ashepoo River several miles above Bennetts Point, South Carolina (Figure 2). She was carrying 300 soldiers of the 34th Regiment of Colored Troops and an unidentified company of cavalymen with their horses. Confederate pickets at nearby Fort Chapman observed the vessel's predicament.

Confederate artillery was brought into position and shelling commenced the next day at dawn with six and twelve pounders. The *Boston* was struck 75 to 80 times and her boiler was punctured. At 10:00 a.m. U.S. Navy gunboats arrived and suppressed the Confederate Battery. Except for the horses, the *Boston* was evacuated, set afire, burned to the water level, and sunk. Six soldiers, two crewmen and the horses lost their lives during the operation.

In January 1866, the U.S. Army issued a salvage contract to a group of private individuals for the purpose of removing the engine and "other valuables yet to be determined". The salvaged material was sold at auction and the proceeds split 50/50 between the salvors and the Government.

During the spring of 1979, Howard Tower and Larry Tipping, two hobby licensed divers from Jacksonville, Florida, determined the probable location of the *Boston* from information developed from Series I, Volume 15 of the Official Naval Records and other sources. In June 1979, a 400 yard section of the Ashepoo River was searched at 50-foot intervals and the vessel's remains located.

Tower and Tipping reported this discovery to the Institute as required by their hobby licenses.

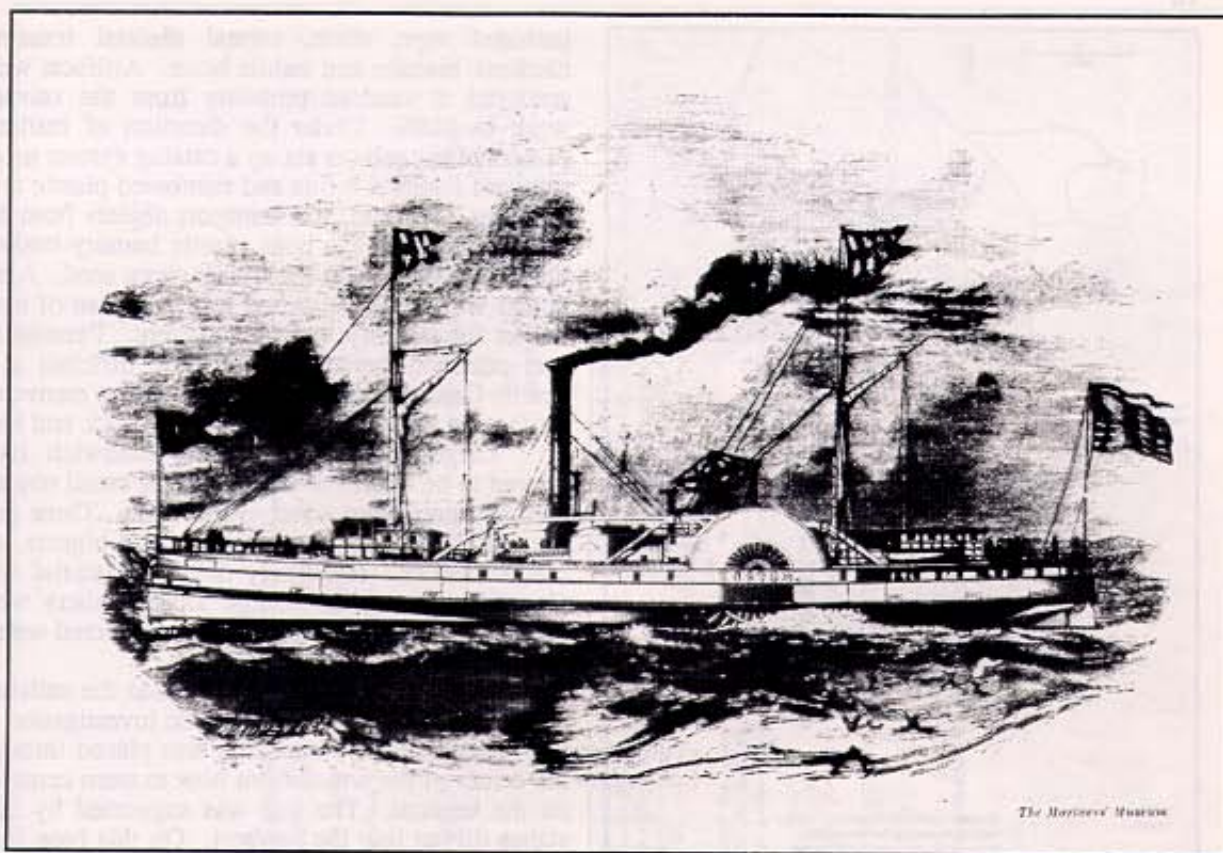


FIGURE 1. USS *Boston* prior to the Civil War.

During the following two months they visited the site, performed cursory observations and recovered objects associated with the vessel—brass spikes, unattached copper sheathing, and skeletal remains of horses. Diving was suspended during the month of August at the request of the Institute until State officials could examine the site.

In October 1979, a staff member of the Institute was taken to the site where he examined the remains and took measurements. Because the site has both Federal and State components, both entities were involved in the licensing process. Charles McKinney of the Federal Antiquities Program was notified and became involved with the project. A meeting to discuss the proposed salvage was held at Columbia, South Carolina in the office of Dr. Robert L. Stephenson, State Archaeologist and Director of the Institute of Anthropology and Archeology. Among those present were Howard Tower, Alan B. Albright, Dr. Robert L. Stephenson, and Charles McKinney. A mutual agreeable understanding was reached by the parties involved: Federal, State, and the private sector.

At that meeting, it was agreed that the Institute would issue a Salvage License to Tower and Tipping and the Federal Government would issue the appropriate license and permit to the salvor and

the Institute. The work would be supervised by the Institute. Because of the high quality and detail of the hobby reports submitted over several years by Tower and Tipping, we were confident that the level of data gathered and reported under this license would be of similar high quality.

Site environment

This wreck is covered by brackish tidal water filled with suspended particulate matter. Visibility varies from 0 to 24 inches with a hand held light, until the bottom is disturbed at which time the water becomes opaque. Current, which is often strong, varies in force and direction with the tides. Depth at low tide is 4 feet at the bow and 7 feet at the stern. Sand covers the interior of the vessel, generally ranging in depth from 6 inches to 5 feet.

The vessel has settled into the sandbar and for the most part is level with the surface. However, along the port side, approximately 100 feet from the bow, a portion of the outer hull is exposed and rises nearly 6 feet from the Channel Floor.

Method of excavation

It was understood during the meeting at the Institute, that excavation methods would depend on an archaeological reconnaissance conducted on

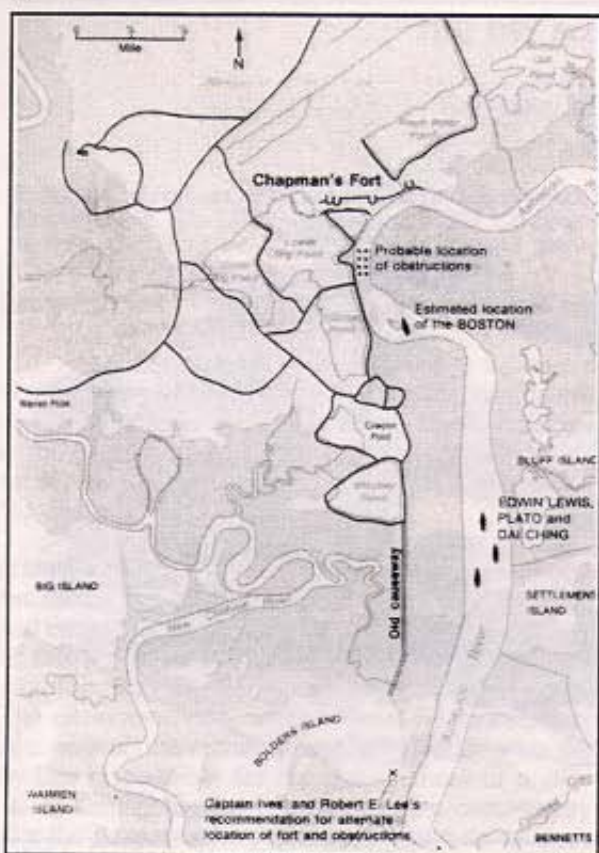


FIGURE 2. Map showing site of action which resulted in the sinking of the USS *Boston*.

initial salvage dives. The Institute required all measurements be in feet and inches and the salvors would excavate the site in five-foot squares. To methodically work the site, the salvors used a small water jet with an adjustable nozzle to vary the force and quantity of the water. This was adequate to penetrate the compacted sand and mud, open small areas for investigation, and allow them to reach the objects lying between the floor timbers. A square, five feet on each side, constructed of angle iron was placed on the site. Several test squares were excavated across the vessel from starboard to port about 40 feet from the bow in order to test the feasibility of this iron grid and water jet method for data retrieval and to demonstrate to the salvors the methodology and controls required by the Institute under this license (Figure 3).

Although the water jet method of gently penetrating the sand and mud and manually feeling for artifacts seemed crude and inefficient, the recovery of many very small objects including an intact rat's skull and inscribed leather and cloth indicated that this method was reasonable for this operation under conditions of zero visibility.

Material recovered from the test squares

included rope, cloth, animal skeletal remains, hardtack biscuits and saddle brass. Artifacts were scattered at random probably from the salvage work in 1866. Under the direction of Institute personnel the salvors set up a catalog system using standard Institute forms and numbered plastic artifact tags. To hold, and transport objects from the wreck to the salvage boat, plastic laundry baskets lined with fine nylon mesh bags were used. A six pound weight was attached to the bottom of each basket for stability in strong current. Permission was obtained from State Wildlife officials at a nearby Game Management Area to store recovered artifacts in a concrete building under lock and key.

Large plastic, self-sealing sandwich bags proved to be excellent containers for small objects and they prevented water evaporation. Three gallon plastic buckets were used for iron objects and conglomerates. Extremely delicate material was placed in glass jars. Large loose timbers were tagged and submerged in a nearby protected waterway to be removed later.

With the test work complete to the satisfaction of the Institute, the systematic investigation of the vessel began. A base line was placed through the center of the wreck from bow to stern centered on the keelson. The line was supported by iron stakes driven into the keelson. On this base line, plastic tags, numbered with water-proof ink, were attached at five foot intervals beginning at the bow. The iron square was positioned at the tip of the bow, centered under the base line between tags "0" and "1", and the excavation was begun. Subsequent squares were positioned sequentially along the baseline. When a square was completed, the iron frame was repositioned along the opposite side of the line between the same tag numbers and the excavation process repeated.

During the course of the excavation data were collected relative to hull measurements and construction whenever possible. The forces of nature occasionally allowed a short diving window with limited visibility for such activity. Strong current coupled with poor visibility made data collection impossible at other times.

Excavation results

The excavation to date has produced a sizeable amount of information about the construction of the vessel and its last voyage. All that remains of this once sleek vessel is a great sliver of hull 194 feet long and averaging 15 feet in width. The vessel was of first class construction. Exterior planking was three inches thick covered with a mixture of tar and animal hair nearly 1/8 inch thick. Over that the hull was covered with copper sheathing secured with copper nails.

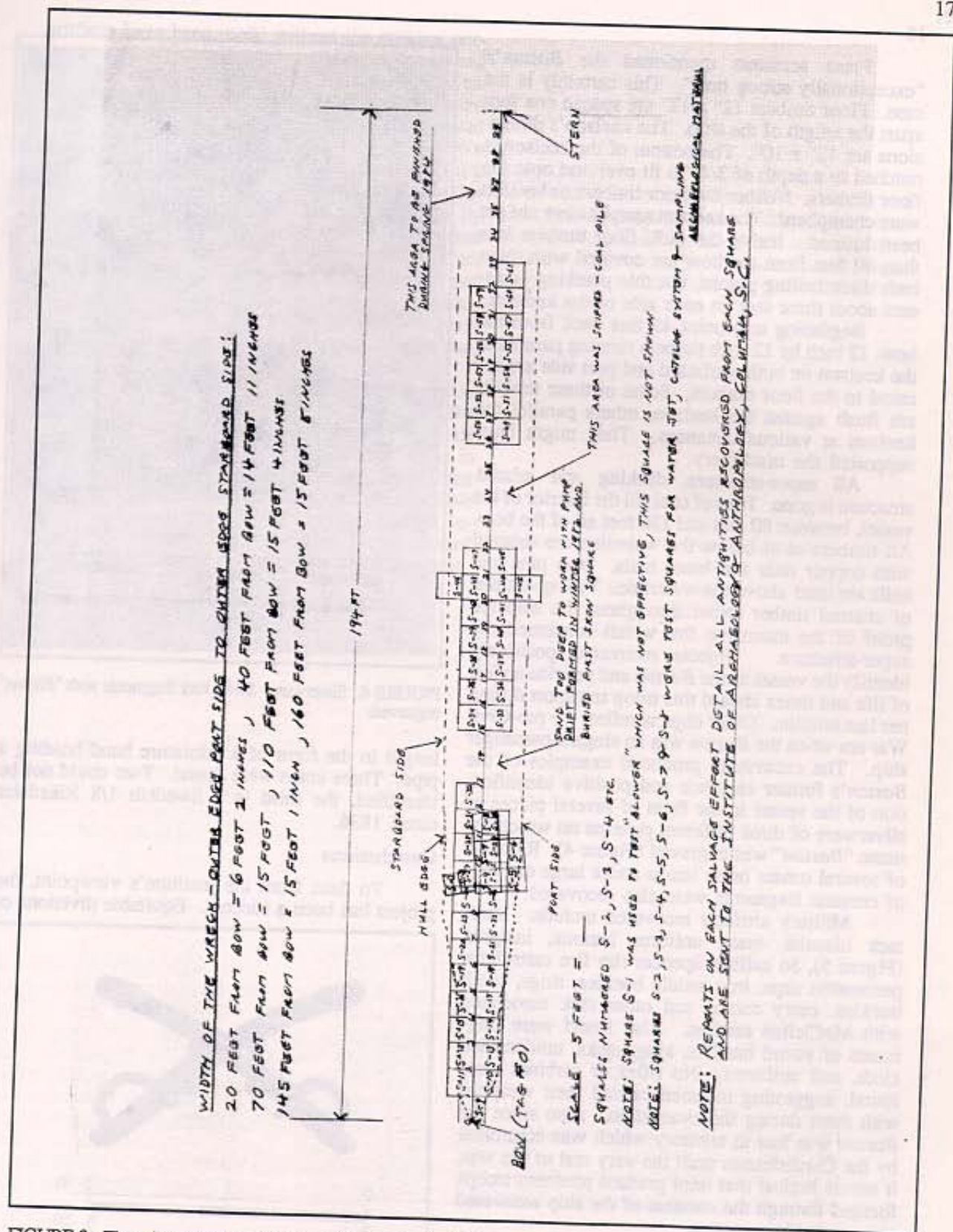


FIGURE 3. The grid as of December 31, 1983. During the 1984 season, the stern area was gridded and carefully examined. The double gridded area near the bow is where a survey trench was made for orientation purposes.

Press accounts mentioned the *Boston's* "exceptionally strong hull". This certainly is the case. Floor timbers 12" x 12" are spaced one foot apart the length of the ship. The keelson's dimensions are 12" x 10". The bottom of the keelson is notched to a depth of 3/4" to fit over and onto the floor timbers. Neither the floor timbers or keelson were chamfered. The keelson scarphs have not yet been located. Inside the hull, floor timbers less than 40 feet from the bow are covered with three inch thick ceiling planks, but this planking is absent about three feet on each side of the keelson.

Beginning at a point 45 feet back from the bow, 12 inch by 12 inch timbers running parallel to the keelson on both starboard and port side are secured to the floor timbers. Some of these timbers are flush against the keelson, others parallel the keelson at various distances. They might have supported the machinery.

All super-structure, decking and related structure is gone. Tons of coal fill the interior of the vessel, between 80 feet and 120 feet aft of the bow. All timbers at or below the waterline are secured with copper rods and brass nails. Iron pins and nails are used above the waterline. Vast quantities of charred timber found throughout the ship are proof of the extensive fire which consumed the super-structure. Objects recovered positively identify the vessel as the *Boston* and provide a view of life and times aboard this troop transport during her last mission. Other objects reflect the pre-Civil War era when the *Boston* was an elegant passenger ship. The excavation produced examples of the *Boston's* former elegance and positive identification of the vessel in the form of several pieces of silverware of three different patterns on which the name "*Boston*" was engraved (Figure 4). Remains of several ornate brass lamps and a large quantity of ceramic fragments were also recovered.

Military artifacts recovered include: hard-tack biscuits, brass uniform buttons, insignia (Figure 5), 56 caliber Spencer rim fire cartridges, percussion caps, iron saddle buckles, rings, cinch buckles, curry combs and other tack associated with McClellan saddles. Also found were fragments of sword handles, knap sacks, unidentified cloth, and uniforms. No rifles or carbines were found, suggesting the men carried their weapons with them during the evacuation. Also since the *Boston* was lost in territory which was controlled by the Confederates until the very end of the war, it seems logical that hard pressed southern troops foraged through the remains of the ship recovered any workable weapons.

Personal effects of the men and crew included pocket knives, fragments of shoes, a bottle, clay pipes and a bronze pipe tamber 1 1/2 inches in

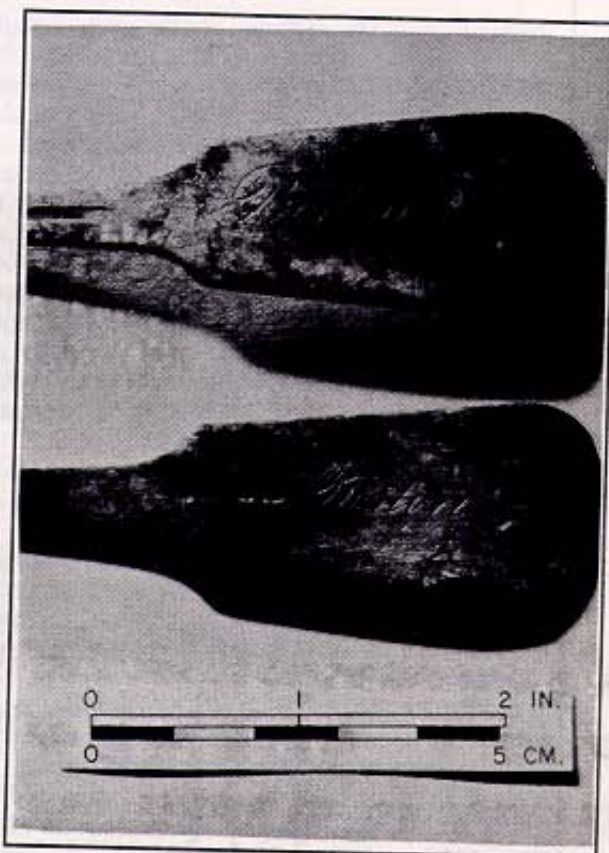


FIGURE 4. Silverware. Silver fork fragments with "*Boston*" engraved.

length in the form of a miniature hand holding a pipe. Three coins were found. Two could not be identified, the third is a Swedish 1/8 Riksdaler dated 1836.

Conclusions

To date, from the Institute's viewpoint, the project has been a success. Equitable divisions of

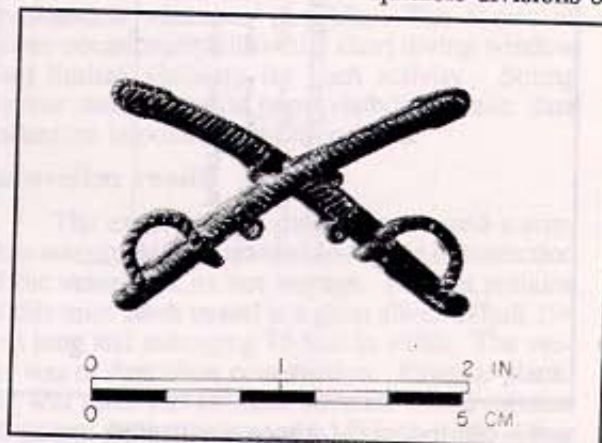


FIGURE 5. Crossed sabres cavalry insignia recovered from the wreck site.

