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AN UNDERWATER ARCHEOLOGICAL SURVEY AND
ASSESSMENT OF CULTURAL RESOURCES OF THE CHICAGO
BRIDGE AND IRON COMPANY'S VICTORIA BLUFF FACILITY,
BEAUFORT COUNTY, SOUTH CAROLINA

by

Newell O. Wright
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Prepared by the
INSTITUTE OF ARCHEOLOGY AND ANTHROPOLOGY
UNIVERSITY OF SOUTH CAROLINA
March, 1977

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Special thanks are due to Lieutenant Governor Brantley Harvey for initiating the project; to Alan Albright, Principal Investigator; and other members of the Institute for bringing it to fruition. Dr. Robert L. Stephenson, Director of the Institute, deserves credit as coordinator of the project and for his much appreciated help on this report.

INTRODUCTION

The Chicago Bridge and Iron Company is planning an industrial development at a site on the Colleton River in Beaufort County, South Carolina known as Victoria Bluff. The development will include an industrial plant on a 140-acre tract of land on the right (southeast) bank of the river and a docking facility at the river's edge to serve the industrial plant (Fig. 1). In order to build the docking facility certain dredging of the bottom and bank of the river will be required. This dredging, as well as the activities on land required for the building of the industrial plant, will disturb the surface of the ground and thus pose a threat to any historic and/or prehistoric remains that may be present. In compliance with the National Environmental Policy Act and other legal regulations for protection of the cultural heritage, an archeological investigation of these areas is required.

An archeological investigation of the land area of the proposed industrial plant was undertaken by the Institute of Archeology and Anthropology at the University of South Carolina in April, 1976 (Widmer 1976). This investigation was a follow-up of a brief reconnaissance of the area done by the Institute in October, 1973 (Ferguson 1973), during which sites of archeological significance were identified. In the 1976 investigation, 11 archeological sites of historic and prehistoric origin were identified and recorded. Three of these sites were determined to be of sufficient significance to be eligible for nomination to the National Register of Historic Places.

Following the land investigation it was learned that the river dredging was planned as a part of the development. The Institute was asked

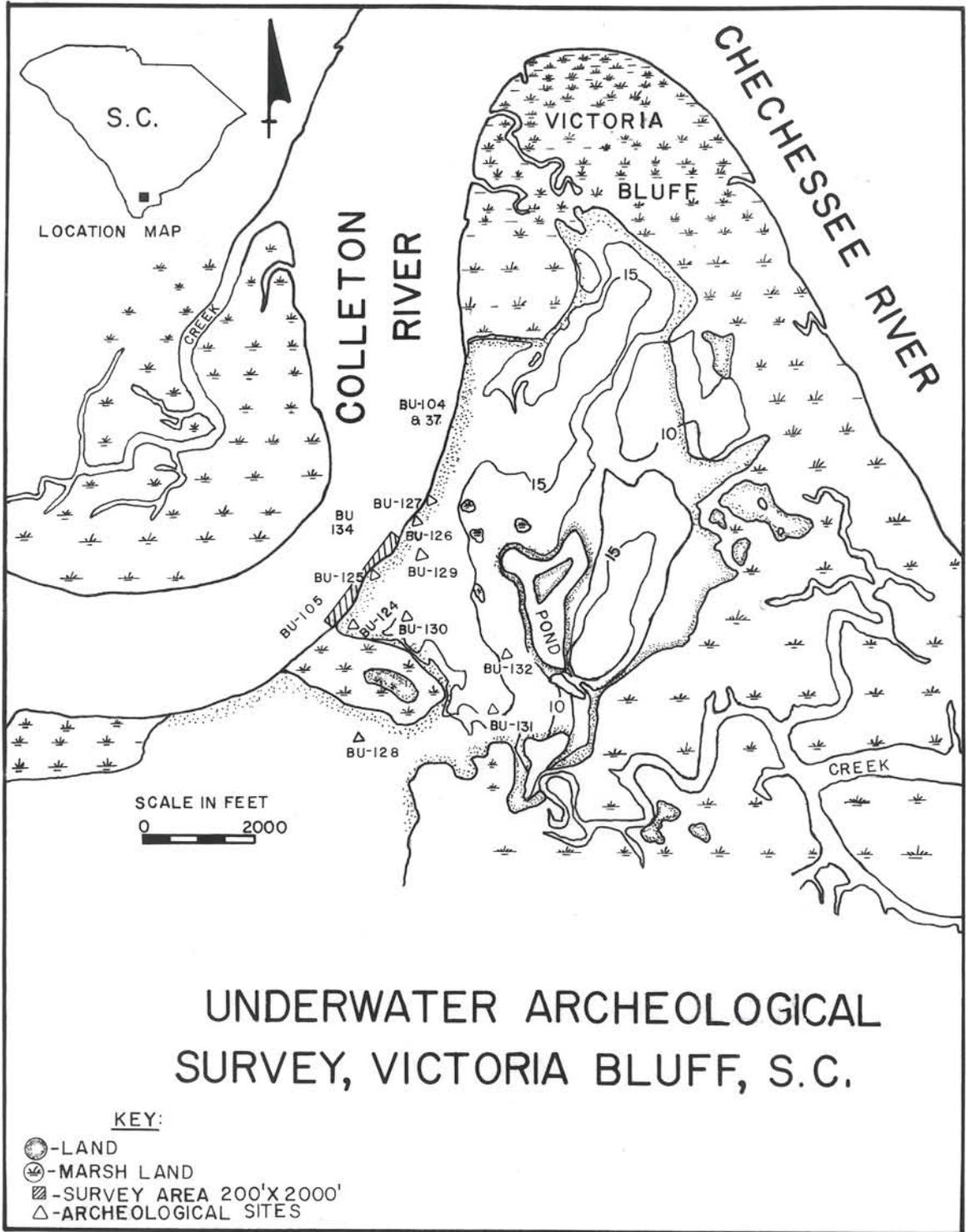


FIGURE 1

to proceed with an underwater archeological investigation of the proposed dredging area by Lieutenant Governor Brantley Harvey, on behalf of the Chicago Bridge and Iron Company. The construction of the docking facility would disturb an area of the Colleton River approximately 2000 feet long and 200 feet wide (Fig. 1).

In response to this request, the Institute conducted an underwater archeological investigation of this area to assess the impact that the construction would have on any cultural resources that might be located in that area or to determine that no cultural resources were present.

The land investigations of 1973 and 1976 had identified cultural resources on the property ranging from occupations of the period of 800 B.C. through historic times. Of especial concern for the underwater work, they also identified areas where the Colleton River was eroding its banks and washing some of the land-deposited cultural materials into the river. This strongly suggested that underwater investigations might well provide substantial information about historic and prehistoric cultures that had once been active in this area. Furthermore, there was the possibility of historic river traffic leaving its remains in this locality in the form of wrecked vessels, lost cargo and other underwater remains.

The Institute conducted the investigation during the week of September 27, 1976, under the direction of Alan B. Albright, with the writer and Ralph Wilbanks, both of the Institute staff, assisting in the work. Analyses of the methodology and results of this investigation were made by the writer following the field work.

ENVIRONMENT

Victoria Bluff is located on the Colleton River in Beaufort County, South Carolina. The environment of Victoria Bluff, as it relates to this survey, is significant for two reasons. The local environment interacted with and directly affected the nature of past human occupations, and the nature of the river had a direct effect on attempts to recover archeological data.

The impact area of the Colleton abuts a late Pleistocene marine terrace, part of the Princess Anne formation (Colquhoun, cited in Widmer 1976a). This terrace is an ecotone between numerous microenvironments that would have attracted human utilization in the past as it does in modern times. In close proximity to Victoria Bluff are the Colleton and Broad Rivers, salt marshes, fresh water ponds, lakes, and oak-hickory forests. The deep rivers and tidal creeks offer many varieties of fish and marine mammals while the fresh water sources provide alligators, turtle and waterfowl. The salt marshes provide shellfish, crabs, shrimp, waterfowl and fish, while the oak-hickory forest provides upland fauna along with acorns and hickory nuts. (For a more complete discussion see Widmer 1976b.) In addition to the rich resources of the area the rivers have offered easy transportation in both prehistoric and historic times.

An examination of the 2000 feet x 200 feet impact area on the U.S. Geological Survey Spring Island quad shows the channel to be up to 37 feet in depth. During the survey, however, the average bottom depth in the channel was found to be about 40 feet, shoaling toward the edge. As the Colleton is a tidal river, it is subject to current reversal but the current was not sufficiently strong during the survey to hinder the work. At the

time of the survey the river was silty, both at the edge and in the channel. This condition is common to tidal rivers and hampered the present survey as it has hampered underwater surveys of other coastal rivers (see Albright 1976).

HISTORIC PERSPECTIVE

The initial search for evidence of cultural activity in the impact area was carried out in the Thomas Cooper and Caroliniana libraries on the campus of the University of South Carolina and in the Institute's Statewide Archeological Site Inventory. No sites from Victoria Bluff appeared on the National Register of Historic Places, and Dr. Donald Sutherland of the office of the State Historical Preservation Officer did not know of any archeological sites in the area. The Beaufort District map in *Mills' Atlas of South Carolina* (1965) was checked for evidence of structures and none was found. If buildings were present on Victoria Bluff, they were either not recorded by Mills, were abandoned prior to his survey, or were built after Mills' survey of the district in 1825. None are present today. Concerning shipwrecks in the Colleton, Bruce Berman's *Encyclopedia of American Ships* (1972), Donald Shomette's *Shipwrecks of the Civil War* (1973) and J. J. Colledge's *Ships of the Royal Navy: An Historical Index* (1969), do not note that any took place. Although these sources did not indicate any shipwrecks, small craft certainly travelled up and down the river and there is the possibility that some of these craft went down in the Colleton. Widmer (1976a) has noted artifacts on the beach that he suggested were ship fittings.

Widmer (1976a) reported mid-eighteenth century material on the beach at Victoria Bluff. He was, however, unable to find any evidence of a

structure in association with the artifacts and suggested that the structural remains might be found in the river. Widmer also noted that many artifacts from prehistoric cultures were washing into the river. Comparing the channel (as mapped by Mills) in 1825 with modern maps, it is obvious that the Colleton has changed its course in the past century and a half. The river is at present, as it was in the past, eroding the face of the bluff. This situation suggests that the Colleton may hide information on historic and prehistoric activity, in this or other areas of the river, that is not revealed by investigations of the present landforms adjacent to the river.

Considering the suggestions from recent archeological surveys and the possibility of unknown material coming to light, the Colleton seemed an excellent place for an underwater archeological survey to recover data that would contribute to the knowledge of the past.

RESEARCH GOALS AND STRATEGY

Archeologists are increasingly concentrating on the interpretation of archeological remains in terms of their significance within a cultural system. Because of the restricted portion of the behavioral spectrum represented in the archeological record, none of the available data can be ignored. As such, the necessity for recovering all aspects of an extinct cultural system has dictated that archeologists turn to sister disciplines for data that have previously gone unrecognized or ignored. In addition to utilizing other disciplines, archeologists are also attempting to expand their own data retrieval capability. The relatively recent development of reliable scuba gear allows man to survive underwater and thus opens up that environment to archeological investigation.

Aspects of man's past that are poorly represented on a terrestrial site may be preserved in the unusual conditions that are often found on the bottom of the waters and may give new and different insights into the understanding of the cultural process. Operating within this frame of reference the Institute of Archeology and Anthropology carried out archeological reconnaissance in the Victoria Bluff area of the Colleton River during the week of September 27, 1976.

The goal of the survey was to recover and analyze all the available archeological data from the impact area. We expected to recover two basically different types of data. One type would be material that was the result of cultural activity on the adjacent land and the second would be material fortuitously deposited at Victoria Bluff that represented cultural activity that took place elsewhere. Due to the nature of the deposition, most of the material, with the exception of that associated with shipwrecks, would be out of original context.

Because of the anticipated lack of temporal and spatial control, the strategy adopted for the survey was to recover the materials and to determine their place in a temporal framework through comparative analysis. Once this framework was determined the data would be interpreted using a cultural-ecological model. This model treats culture as an adaptive mechanism that utilizes the various subsystems of culture as points of articulation between the environment and culture. The articulation between culture and the environment is consistent within a specific cultural system and results in patterned behavior that is discernible in the archeological record. The modification or replacement of one pattern by another is also evident in the record. The identification and interpretation of these patterns can be utilized in the explanation of cultural adaptation and change.

METHODOLOGY

Underwater archeology, a relatively young discipline, is only now developing efficient techniques for locating many types of underwater archeological sites. In addition to the nascent survey methodology, the Victoria Bluff project was hindered by the almost total lack of underwater visibility due to siltation. By relying on more than one survey technique some of the problems were overcome.

Immediately prior to the survey, an inspection of the beach was made to locate the most probable areas for underwater artifact concentrations. It was presumed that underwater areas adjacent to places on land with high artifact concentrations would most likely produce the information we sought. Although these high probability areas were given the most attention, the work was not limited to them.

Since visibility was reduced to zero, the area was searched systematically by a team of divers by feeling the river bottom for artifacts. Divers would enter the water and follow a predetermined path along the bottom of the survey area. This procedure was repeated until the entire area of impact was examined. In order to give the area adequate coverage, four divers worked at this job for four days. A fifth person was utilized as a boat operator to pick up divers at the end of one transect and take them to the next. Because of the possibility of overlooking archeological data using this method, an electronic survey device was also employed.

This phase of the survey involved electronic inspection of the area. Several devices (such as the Side Scan Sonar, the Magnetometer, and the Sub-bottom Profiler) were considered to augment the underwater archeological survey. Each of these would have provided specific types of information not recovered during the visual survey.

The Side Scan Sonar locates and records objects projecting above the floor and on the floor itself of a body of water. As the instrument is pulled through the water, it is able to produce a plan of the area covered. This instrument would have been useful at Victoria Bluff since it could have drawn pictures of objects that were not detectable to the archeologist using only physical inspection.

The Magnetometer would also have had applicability for the underwater survey at Victoria Bluff because it can detect small anomalies in the magnetic field of the earth. Archeological objects such as shipwrecks and ancient structures disturb the natural magnetic field of the earth and are detectable by use of the Magnetometer.

The Sub-bottom Profiler is a seismic profiling device that electronically scans beneath the bottom of a body of water. This instrument delivers information on geologic features and objects that are buried.

Due to fiscal restrictions, we were unable to utilize either the Side Scan Sonar or the Magnetometer, although both would have added to the efficiency of the survey. A Sub-bottom Profiler was made available on loan to the Institute from the Department of Geology at the University of South Carolina. One day was spent at Victoria Bluff searching for cultural remains with a Sub-bottom Profiler. Predetermined transects of the impact area were traversed with the Sub-bottom Profiler until the area was completely surveyed. The profile that resulted was adequate to indicate what lay beneath the bottom of the Colleton.

RESULTS

During the earlier surveys of Victoria Bluff by Ferguson (1973) and Widmer (1976a), ceramics were found that are characterized by sand temper

and checkstamped surface finish. These technological and decorative elements are the defining characteristics of the pottery of the prehistoric cultural period known as the Deptford phase of the period of 800 B.C. to A.D. 500 (South 1973). Since no older pottery or lithics were recovered, the earliest occupation of Victoria Bluff was believed to have occurred during the Deptford phase. The examination of the beach, carried out by this writer as a part of the underwater survey, located artifacts similar to those found in the previous surveys including Deptford material; but pottery characterized by fiber temper was recovered as well. Fiber tempered ceramics are considered to be the oldest pottery found in South Carolina and perhaps the oldest in North America (Sears 1964). Its occurrence at Victoria Bluff suggests that the earliest occupation of the area occurred between 2200 B.C. and 1500 B.C. (South 1973), several hundred years earlier than previously believed.

The underwater survey recovered one six-ounce Coca Cola bottle, one iron pick (15 1/2" long x 3 1/2" wide at the socket) and two bricks (9 1/4" x 4 1/2" x 2 3/8"). Any interpretation of these artifacts is tentative, due to the small sample and absence of an identified cultural context.

Bricks are so variable in color, hardness, and size, even from the same firing, that these characteristics can seldom be used to establish cultural context. There is a tendency, however, for English bricks to be slightly larger than their Colono-American counterparts. The bricks from Victoria Bluff are closer in size to the standard established for English brick by Elizabeth I in 1571 (9" x 4 1/4" x 2 1/4") than to the Colono-American brick which averages 8 3/4" x 4" x 2 5/8" (Noël Hume 1970: 81). The similarity of these bricks to those of the English standard suggests that they may have been imported, perhaps arriving in the area as ship's

ballast. Other than the size of the pick, the only characteristic of note is that it is wrought iron. Wrought iron objects are common in South Carolina from the earliest European occupation into the twentieth century, thus we have too little temporal or cultural control to allow interpretation of this object. The possibility remains that these three artifacts are associated with the colonial artifacts that were reported by Widmer (1976a). The fourth artifact, a Coca Cola bottle, is indistinguishable from those that are now available and we know from the patent date that it was made within the second or third quarter of the twentieth century.

During the Sub-bottom Profile survey, no distinctive anomalies were recorded. The lack of anomalies indicates that there is no cultural material of a size that could be detected by this instrument on the bottom of the Colleton.

The examination of the beach demonstrated that artifacts were washing into the river, yet these artifacts were not recovered in any large quantity. We must, therefore, explain the failure to find artifacts in the river and attempt to produce a probability statement for artifact recovery in similar future situations. One explanation may be that the scatter of artifacts on the beach was light and was probably even lighter on the river floor, thereby making their recovery unlikely. Another explanation is that the poor visibility contributed to the failure to recover substantial archeological information.

Though one instance is insufficient for definitive statements, indications are that when there is a light artifact scatter and poor visibility, recovery of material will be minimal. This indicates the usefulness of electronic devices in this type of survey. In such situations we must rely heavily on electronic survey methods, using divers to check out specific targets rather than in general visual survey. In cases when data recovery

is poor due to adverse conditions, it would be wise to have a representative of the Institute present during the dredging to monitor anything of archeological value that may have been missed.

RECOMMENDATIONS

It is the opinion of this Institute, based upon the data now available, that the dredging in the above described area of the Colleton River will have little or no adverse effect upon archeological resources. Cultural material of significance was not found in this investigation. Despite the limited visibility and the lack of some desirable electronic devices for the search that would have provided a more intensive survey, it is our opinion that the probability of significant cultural remains occurring in this area is minimal.

This Institute has no further objections to the Chicago Bridge and Iron Company proceeding with its plans for dredging in this area preparatory to construction of docking facilities. We do recommend that, during dredging, an effort be made to observe the dredged material and, if artifacts are found in this material, this Institute be notified at once so that an examination can be made. Such findings and examination would be conducted in a manner, at that late date, so that no disruption of construction would be called for.

It must also be kept in mind in connection with this docking facility, that cultural resources have been identified on the river bank and adjacent land areas of the plant site (Widmer 1976a). Mitigation of adverse effect to these sites will be required before archeological clearance of that area may be provided.

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