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AN ARCHEOLOGICAL RECONNAISSANCE OF AREAS TO BE IMPACTED BY THE WIDENING AND DREDGING OF SAVANNAH HARBOR, GEORGIA

by

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Various members of the Institute staff contributed both technical and advisory services. Dr. Robert L. Stephenson, State Archeologist, and Dr. Paul E. Brockington, Jr., Environmental Impact Archeologist, made many useful comments and suggestions throughout the project. Photographic assistance was provided by Mr. Gordon Brown, Institute Photographer. Darby Erd, Institute Illustrator, prepared figures 1 and 2. The report was edited by Susan Jackson, Editorial Assistant and Sue Jane Alsing typed the manuscript.
The Savannah Harbor archeological survey was conducted to comply with the National Environmental Policy Act of 1970 and Executive Order 11593, at the request of the Savannah District Army Corps of Engineers, from October 12-14 and October 18-19, 1977 by James D. Scurry and Mark J. Brooks of the Institute of Archeology and Anthropology staff. The purpose of this reconnaissance survey was to examine for archeological resources, 13 proposed disposal areas encompassing approximately 1217 acres and a 5.6 mile section of Hutchinson Island of which a 125 foot wide strip will be removed in order to widen and deepen the existing channel (Fig. 1).

It was not possible to survey completely all of the proposed disposal areas because of the extremely dense vegetation and the swampy nature of much of the area. A selective, non-random sampling strategy was implemented involving examinations of each disposal area, with greatest emphasis being placed on areas with highest archeological site potential. Site potential was based primarily on elevation and proximity to creeks/swamps. Field methods consisted of examination of exposed ground surface and limited subsurface testing of those areas where ground surface visibility was not adequate.

Two historic sites were recorded during the survey. The first, 9CH500, located in area F (Fig. 2) contains the remnants of a canal, dating to ca. 1817. This canal was built to allow easy access from Savannah across Hutchinson Island, to the rice fields in Jasper County, South Carolina. The second site, 9CH501, located in area D (Fig. 2), consists of two boat slips built sometime between 1875 and 1906. These slips were used as docking areas to load or unload cargo coming into Savannah Harbor (Karen E. Osvald, personal communication).

Although no prehistoric sites were located in the proposed disposal or widening areas, a search of relevant literature revealed that the Bilbo site, an important Archaic period shell midden, was located in proposed disposal area C (Waring, in Williams 1968: 153) (see Fig. 1). An aerial photograph and information supplied by Dr. William Haag, professor of anthropology at Louisiana State University, enabled us to locate the general area; however, visual examination and subsurface testing failed to locate the site itself.

The use of area D surrounding the boat slips as a disposal site for 20th century construction debris and construction of a network of roads on Hutchinson Island have greatly altered the environmental situation around the historical sites 9CH500 and 9CH501. Because of these modifications, as well as the availability of good historical documentation, it is not felt that the historic canal (9CH500) or boat slips (9CH501) would contribute much information of scientific value. The Bilbo site could possibly contribute some information of archeological value; however, because of the environmental situation in which the site is located, if it still exists, it is felt that further intensive survey to locate the site and subsequent excavation would not be cost-effective. Therefore, no additional archeological investigation is recommended for any of these sites or for any of the proposed impact areas.
FIGURE 1. Map of Savannah area showing disposal areas, 5.6 mile widening area and known archeological sites in Savannah area.
FIGURE 2. Map of project area showing areas D and F where historic canal 9CH501 and boat slips 9CH500 are located.
INTRODUCTION

The Savannah District Army Corps of Engineers is proposing the widening of the Savannah River Harbor by 125 feet along a 5.6 mile section of Hutchinson Island. These modifications extend from Kings Island Turning Basin to Fig Island Turning Basin. Also proposed are 13 locations as potential disposal areas (Fig. 1).

In order to maintain ship channels in the face of heavy sedimentation, Savannah Harbor has been continuously dredged from 1840 to the present. Old rice fields and low marshy ground immediately surrounding Savannah were used as disposal areas up until 1960, after which time the dredged material was deposited in areas further upstream. Recently however, areas in the immediate Savannah vicinity are being reconsidered as potential disposal sites (Mickey Fountain, personal communications). Previous efforts to alleviate the sediment problems have been to construct a sediment basin and tidegate structure on the Back River and to construct a freshwater diversion system for the Savannah National Wildlife Refuge and adjacent areas (Ferguson 1973: 1). The purpose of this construction was to divert the sediment coming from upstream to the Back River, where more adequate disposal sites are located (Ferguson 1973: 1).

The Institute of Archeology and Anthropology, University of South Carolina, conducted a reconnaissance survey of the areas to be impacted by the proposed dredging and widening of the channel. The purpose of the survey was to locate and evaluate the archeological resources that may be affected and to make recommendations pertaining to the preservation or conservation of those resources. Figure 1 shows the location of the disposal areas (designated A-I and 1-4) and the 5.6 mile widening area, as well as sites previously recorded in the Savannah locality. Figure 2 shows areas D and F, in which the historic boat slips (9CH501) and canal (9CH500) are located.

Savannah Harbor, Chatham County, Georgia, is located in the Georgia Coastal Plain at the mouth of the Savannah River. The Coastal Plain was formed as a result of sediment deposition caused by many changes in sea level during the Tertiary and Quaternary periods (Shelford 1974: 3). The most recent submergence of coastal landforms, dating from the Wisconsin glaciation to the present, has combined with the discharge of sediment by the Savannah River to form the marsh-estuarine environment present today (Johnson, et al. 1974: 68).

Archeological evidence suggests that the Coastal Plain of Georgia and South Carolina has been occupied on a continuous basis for at least 12,000 years. The presence of many diverse ecological zones in the Savannah locality presented an optimum resource base to be exploited by human prehistoric populations on a regular, seasonal basis (Dye 1976: 57-59).

European settlement of the area began in the late seventeenth century and by the late eighteenth century, Savannah had become one of the most important rice producing areas of the South. During this plantation period many of the swamps were drained and turned into agricultural fields for rice production (Johnson, et al. 1974: 8).
Several archeological sites have been recorded in the Savannah vicinity, but are outside the proposed impact areas (see Fig. 1). The Deptford, Dulany, and Brewton Hill sites, previously reported by Waring (in Williams 1968), were located within one-half mile of the Bilbo site. Recent construction activities have destroyed all of these sites, except possibly a portion of the Deptford site (Chester De Pratter, personal communication). The Refuge site (Waring, in Williams 1968: 198) was located along the Little Back River on property owned by the Savannah River Wildlife Refuge. Severe erosion from the river has destroyed most of the site (Waring, in Williams 1968: 198); however, as of 1973 at least part of the site was still intact (Leland Ferguson, personal communication). The Irene Mound, located approximately 8.3 km north of Savannah, was excavated by Waring and others under the direction of Joseph Caldwell (Caldwell and McCann 1941). The remains of the mound have since been leveled and are now under a parking lot and warehouse.

More recently, during a reconnaissance survey for the Corps of Engineers, Leland Ferguson of the Institute of Archeology and Anthropology located three prehistoric archeological sites (see Fig. 1; Ferguson 1973: 6-7). Two of the sites, 38JA23 and 38JA24, were in danger of being destroyed; however, the area surrounding 38JA24 was dropped from consideration as a disposal area; and 38JA23, which had already been cut into by the construction of a canal, was enclosed by dikes to prevent further destruction. Site 38JA25 was located away from construction and out of immediate danger (William Young, personal communications).

Although the Savannah Harbor survey provided little direct information toward a better understanding of Coastal Plain prehistory, it is through surveys such as this, in line with directed, ongoing research of the Institute of Archeology and Anthropology, that our understanding of cultural systematics in the Coastal Plain will be furthered.
SURVEY METHODS

It was impossible to survey completely all of the area because of the extremely dense secondary growth/understory vegetation and the swampy nature of much of the area. Figures 3 and 4 illustrate the environmental conditions of much of the survey areas. Following Brooks (1977: 6) the survey strategy was designed to emphasize those places, within each disposal area, that were considered to have high site potential. Those areas considered to have low site potential were not excluded from examination, although the subsurface testing there was less intensive.

The major variable considered in the sampling strategy was site potential, based on proximity to creeks or marsh/swamp type environments. Actual examination of the areas of proposed impact consisted of visual inspection of all exposed ground surface and limited subsurface testing of areas where surface visibility was not adequate. The number and location of subsurface tests was dependent on site potential, ground surface visibility, and accessibility. Stratigraphic cuts, in the form of drainage ditches and canals, were also examined. Figure 5 shows one such drainage ditch that cut through area 2 and was utilized in this manner. Although the survey strategy may have reduced the probability of discovering sites with low artifact density, it was sufficiently systematic to preclude the possibility of missing any large archeological sites, unless they were buried under deep sediments and/or submerged under water.

There are several factors which severely reduced the probability of locating all archeological sites. The first of these factors was vegetational ground cover. The dense vegetation and limited amount of exposed ground surface made it virtually impossible to locate archeological sites through visual examination alone. Under these circumstances, even limited subsurface testing is of little value in locating some sites.

Secondly, modification of the environment, whether natural or artificial, has likely resulted in the inundation of many potential sites. Sea level rose dramatically from the end of the Wisconsin glacial period to around 3000 B.C. (Bloom 1971), and to lesser extent to the present time (Michie 1973; Bloom 1971). Rising sea level has inundated many sites and/or has resulted in the development of marsh environments in areas that were occupied during prehistoric times (Ferguson 1973: 5). In addition man induced modifications of the environment have also contributed greatly to the inundation of sites.

All of the areas inspected are characterized by a maximum elevation of 3 to 5 m above sea level, typically grading into marsh/swamp zones. In the relatively undisturbed areas the vegetation consists of
FIGURE 3. Environmental conditions indicative of much of the project area—low swampland and dense understory vegetation.

FIGURE 4. Environmental conditions typical of much of the project area—low swampland and dense understory vegetation.
an upper story dominated by mixed hardwoods (oak, hickory, sweetgum, etc.), and an understory of extremely dense shrubs, vines, and briars. The ground surface itself was generally covered with heavy leaf litter. As one proceeds down toward the low areas, marsh/swamp vegetation becomes dominant.

The shoreline of Hutchinson Island, bordering on the Front (Savannah) River, has been altered dramatically by the construction of dikes and by the dumping of dredged material and 20th century construction debris along the waterfront. Because of the heavy accumulation of debris, no ground survey was considered necessary for the widening areas except along the boat slips in area D, where disturbance was less extreme.

No subsurface testing was felt necessary for areas E and G. The vegetation had been removed from area E, and the area has recently been plowed, giving 80-90% ground surface visibility. Area G was formerly used as a disposal site and was covered by 3 to 5 m of dredged material from previous work. No examination was thus considered necessary for area G. Areas A-D, F, H-I and 1-4 were surveyed by visual surface examination and subsurface testing based on the sampling strategy described above.
FIGURE 5. One of the various canals and drainage ditches that was examined and utilized as a transect.

FIGURE 6. Remaining wooden pilings of a dock located in the historic boat slip 9CH500.
Two historic sites were recorded during the Savannah Harbor archeological survey. The first, (9CH500) located in area F (Fig. 2), contains the remnants of a canal dating to the plantation period ca. 1817. The purpose of the canal was to allow easy access from Savannah, across Hutchinson Island, to the rice fields in Jasper County, South Carolina (Osva1d, personal communication). The interior stretch of the canal was partially filled during the construction of several roads on the island, and presently, what remains of the canal is being filled by sedimentation from the Savannah River. The canal has been reduced to a small tidal inlet and is only 1 to 1.25 m deep at high tide.

The second historic site, (9CH501) located in area D (Fig. 2) is two boat slips built sometime between 1875 and 1906. The dating of this feature is based on its being shown on a map of 1906 and its absence on a map of 1875. By the late 1870's Savannah had become one of the nation's leading ports, with cotton, lumber, and naval stores being the chief exports. In an attempt to bring more industry and commerce to the Savannah area, improvements of the harbor facilities began in 1873. While the exact relationship between the boat slips and the economy of Savannah is not known, it seems that they are likely related to the harbor improvements which resulted from the tremendous growth experienced by Savannah during this time (McDonough 1891). Wooden dock pilings and a brick structure (Fig. 6) are all that is left of the old docks. The specific function of the brick structure is unknown; however, it is assumed to be associated with the docks.

A shallow, historic oyster shell midden accumulation was found associated with the boat slip, where the docks had been originally connected to the land. The midden is located along the eastern side of the larger slip and roughly corresponds (approximately 55 m in length) with the remaining wooden pilings from the old docks. It probably represents the dumping of shell from vessels that docked there. No cultural material was found in the midden. The present condition of the boat slip area is such that at high tide at least part of the surrounding land is inundated.

Although no prehistoric sites were located during the survey, the Bilbo site, an important Archaic period shell midden, was located in disposal area C (Waring, in Williams 1968: 152-153). The importance of the Bilbo site is threefold. First, the Bilbo site yielded an unusually large and detailed sample of worked bone and lithic material, very similar to the Stallings Island material (Waring, in Williams 1968: 152). Further, Stoltman (1972: 42) suggests that similarities between Stallings Island and Bilbo ceramics are such that Bilbo should be considered a Stallings Island complex site. Second, the Bilbo site produced stratigraphic data suggesting the development of decorated, fiber tempered ceramics from an undecorated prototype (Waring, in Williams 1968: 152). Third, the Bilbo site had excellent preservation
of organic material, especially bone. The climate of the southeastern United States is generally detrimental to the preservation of wood, bone, and other organic material. In shell middens, however, these materials are often preserved by the leaching of calcium from the shells, which helps neutralize an otherwise acidic soil. Therefore, the site is a significant and important resource for study of southeastern prehistory.

The Bilbo site was partially excavated by Antonio Waring in 1939 (Williams 1968) and again by Dr. William Haag in 1957 (Dye 1976). The excavations, which encompassed approximately half of the site, yielded a large assemblage of ceramics, lithics, and worked bone material that has been used for culture-historical reconstruction of the Savannah River area (see for example Dye 1976; Stoltman 1972; Williams 1968; Willey 1966; Griffin 1952).

Information and an aerial photograph supplied by Dr. William Haag enabled us to locate the general area of the Bilbo site; however, surface examination and subsurface testing failed to locate the site itself. Waring (in Williams 1968: 152) reports that at the time of his excavation in 1939, the sewers of Savannah were already being emptied into the existing swamp around the Bilbo site which, in combination with a rising sea level during prehistoric times, left only the top 45 to 60 cm. of the site above the existing water table. In addition, twentieth century refuse has since been dumped in the area in order to fill portions of the swamp. Consequently, the present environmental situation suggests that the Bilbo site, if it still exists, is now totally under water or debris.

Information, such as notes and photographs pertaining to the Savannah Harbor Survey and the two historic sites (9CH500 and 9CH501) are on file at the Institute of Archeology and Anthropology, University of South Carolina. In addition, Georgia Archeological Survey site forms have been completed and submitted to the office of the Georgia State Archeologist.
The general lack of ground surface visibility, due to dense vegetation, swamps, marshes, and past disposal activities, restricted the evaluation of the archeological resources in the proposed impact areas. While survey strategy was sufficiently systematic to preclude the possibility of missing any large archeological sites, it is equally possible that some sites with low artifact densities were not detected. Considering the limitations of subsurface testing for locating low artifact density sites, as well as the limited information of scientific value to be gained, it is felt that further intensive survey of the disposal or widening areas would not be cost effective and is not recommended.

From maps and aerial photographs, the Bilbo site, an important prehistoric shell midden, was found to be located in disposal area C (Waring, in Williams, 1968: 153 and William Haag, personal communication). Attempts to locate the site specifically were unsuccessful during the Savannah Harbor Archeological Survey. Although this site potentially represents a significant resource for the study of Southeastern prehistory, given the present environmental setting, it is felt that further intensive survey to locate remaining portions of the site, if they still exist, would not be cost effective. Therefore, no further archeological reconnaissance to locate the Bilbo site is recommended.

The two historic sites, the canal (9CH500) and the boat slips (9CH501), represent plantation and modern (19th and 20th century) activities in the Savannah area. While they are of interest, they are of little scientific value in terms of the amount of information to be gained as opposed to the cost of future archeological investigation. Therefore, no further archeological work is recommended for either of the two sites.

While the Savannah Harbor archeological survey did not supply much information in the form of new sites located or artifacts recovered, it does not necessarily indicate that no sites are, or at one time were, present. All of the proposed impact areas are presently in low bottomland or swamp, possibly resulting from natural or man-made disturbance. Therefore sites that were on land at the time of occupation may now be under water, marsh, or dredged material. Little previous work, in terms of broad settlement pattern studies, has been conducted in the area, therefore no predictive models could be developed for location of archeological resources. Also, sites with very low artifact density may occur and could not be found with standard survey methods.

In summary, although no prehistoric or historic occupational sites were located during the survey, little can be said, even about the lack of occurrence, because of the heavy previous disturbance and because of the lack of comprehensive archeological study of the area.
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MAPS

1875 Library of Congress map of Savannah area. On file at Georgia Historical Commission, Savannah.

1906 Map of Chatham County, Georgia. On file at the Georgia Historical Commission, Savannah.

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