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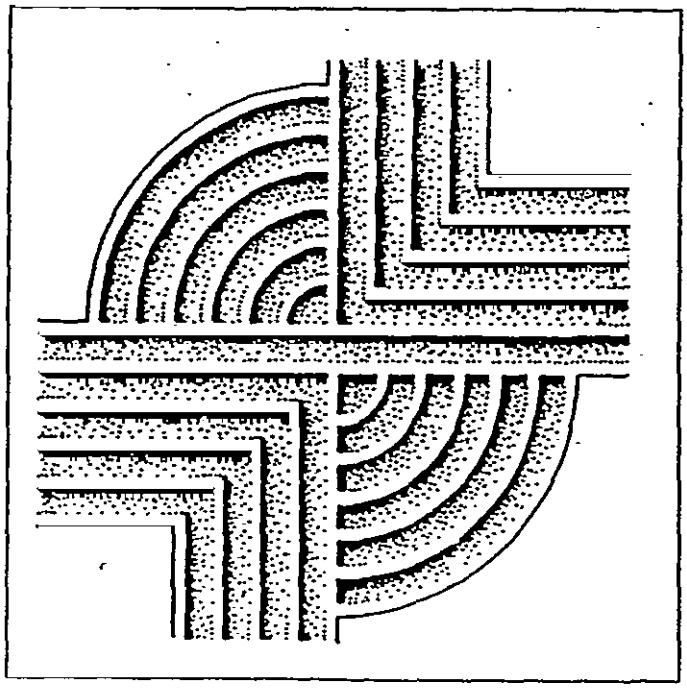

RESEARCH CONTRIBUTION 42

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Chicora Research Contribution 42

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February 5, 1990

Introduction

As a result of an intensive archaeological survey conducted by Chicora Foundation, Inc. on the first phase of the proposed Spring Island development (Trinkley 1989), six archaeological sites were determined by the South Carolina State Historic Preservation Officer (SC SHPO) as eligible for inclusion in the National Register of Historic Places. A Memorandum of Agreement between the SC SHPO and the Callawassie Development Corporation, dated January 5, 1990 stipulated that the six Register eligible sites would be green spaced, subject to data recovery, or, if undeveloped by the completion of the Phase 2 survey on the island, reassessed in light of additionally discovered archaeological sites.

One of the six sites eligible for inclusion in the National Register of Historic Places, 38BU747, was found to be within the right-of-way for the proposed Callawassie-Spring Island bridge. As a result, Chicora Foundation was requested by the developer's agent, Mr. Glen McCaskey, to develop a proposal for data recovery at this site. A proposal for those investigations was submitted by Chicora on December 8, 1989 and the work was approved by the SC SHPO and the developer on January 5, 1990.

This management summary has been prepared immediately upon completion of the fieldwork and does not contain information on artifact or subsistence analyses. It is intended solely to provide a brief descriptive statement of the work conducted by Chicora and to allow the SC SHPO to verify that the proposed work has actually been accomplished. The management summary is minimally necessary for Callawassie Development Corporation to continue to the development of the land encompassing 38BU747. This construction will destroy portions of the site and, of course, created the need for archaeological mitigation activities initially.

Archaeological investigations were begun at 38BU747 by a crew of four on January 15, although excavation work was delayed until January 16 when our equipment was transported to the island. The work continued through January 22, 1990. A total of 134 person hours were spent in the field and an additional 8 person hours were spent on laboratory analysis and field processing. The shellfish consultant for this project, Dr. David Lawrence, spent 6 person hours in the field. As a result of this work 400 square feet of site area were opened and 230.5 cubic feet of soil and shell were moved in primary excavations, all screened through either 1/4 or 1/8-inch mesh.

A representative of Callawassie Development Corporation was notified verbally on January 31 that the work at the site was

completed and that the units could be backfilled.

Previous Investigations

The initial investigations at 38BU747 identified the site as situated on the north edge of the Phase 1 development at UTM coordinates E515600 N3577100. Site size was estimated to be about 225 feet by 140 feet, based on a total of 16 systematically placed shovel tests. Elevation in the site area ranges from 10 to 12 feet above mean sea level (MSL) and the soils are poorly drained Coosaw sands (this poor drainage, in fact, greatly hampered dry screening portions of the midden through 1/8-inch mesh). Materials recovered in the initial shovel tests included two Deptford/Deep Creek Cord Marked sherds.

The site was interpreted to represent a small Deptford phase camp, probably dating about 500 B.C., which was oriented almost exclusively toward shellfish collection. Based on the settlement studies conducted at the conclusion of the Phase 1 survey, this site was suggested to be an example of a Type 2 midden -- a primarily oyster midden situated immediately adjacent to the marsh or other water supply which evidenced numerous shell pile accretions. A site such as 38BU747 might be expected to represent a very early stage of repeated (perhaps seasonal) occupation at an area for the specific activity of shellfish collection. Repeated occupations would result in originally small occupation mounds gradually blending together to create more uniform middens over time.

Because so little is known about Early and Middle Woodland settlement and subsistence strategies, and the site evidenced clear integrity, it was determined to be eligible for inclusion in the National Register of Historic Places. Both Chicora and the SC SHPO, however, recognized that sites such as 38BU747 require excavation and analyses different from many other sites if they are to yield useful data. Specifically, the major thrust of the excavations were to gather valid subsistence samples for dietary, seasonal, and ecological studies. In many ways, the work at 38BU747 is unique in the South Carolina low country and a variety of relatively new techniques were tested at the site to determine those approaches best suited to similar sites on Spring Island.

Excavations

The grid, established using cardinal directions, was tied into several survey points on the South Carolina Plane Coordinate System in order to maintain long-term horizontal control. Since the site is expected to be heavily impacted by bridge construction, no permanent points were established for the grid system. Vertical control was maintained through the use of a mean sea level datum (an iron nail in the base of a live oak at 12.87 feet MSL).

Units were established using a modified Chicago 10-foot grid, with each square designated by its southeast corner, from a 0R0 point at the southwest corner of the site. Thus the southwest corner of square 10R20 would be located north 10 feet and right (or east) 20 feet from the 0R0 point.

Soil from the midden excavations was dry screened through 1/8-inch mesh using mechanical sifters. Dr. Lawrence recommended that the midden be examined for fish scales and other small remains which might not be found as a result of dry screening. In spite of previous success at the recovery of fish bones and scales using dry screening through 1/8-inch mesh, we considered his concerns valid. As a result, we randomly selected a 2.25 by 2.25 foot block within the midden of one unit (representing a 5% sample of the midden), collected all the remains without screening, and transported them off-site for low pressure water screening. This investigation failed to yield any fish bones, fish scales, or other remains not previously detected as a result of mechanical screening.

In addition, a 2.25 foot square sample of each midden was weighed prior to sifting and the shell collected for analysis by Lawrence, was weighed after screening. This provided a quantified statement of shell density for each of the middens. Lawrence also requested that a sample of right oyster valves be collected for more specific seasonal analysis. The qualitative field assessment suggests that the middens are 99% oyster, with only very small quantities of clam, periwinkle, ribbed mussel, and whelk. The low numbers of these species suggests that they were collected by accident during oyster gathering. The examination of the oyster remains will include species diversity, habitat information, season of collection, and preparation techniques. Only a very small quantity of animal bone was recovered from the middens (less than 30 grams is estimated). Charcoal was present in the midden, although the site area has been periodically burned off as a land management technique. Identifiable non-wood ethnobotanical remains include two carbonized hickory nutshells.

Non-midden units were screened through 1/4-inch mesh. The increase in mesh size for these units was based on our belief that small bones, absent the alkaline environment of the shell midden, would not be preserved in the naturally acidic soils. To test this, a 2.25 foot square block was screened (with great difficulty) through 1/8-inch mesh. No faunal remains were identified.

Units were troweled at the top of the subsoil, photographed in b/w and color slides, and plotted. Excavation was by natural soil zones and soil samples were routinely collected. These excavations failed to reveal any cultural features.

Field notes were prepared on pH neutral, alkaline buffered paper and photographic materials were processed to archival standards. All original field notes, with archival copies, will be

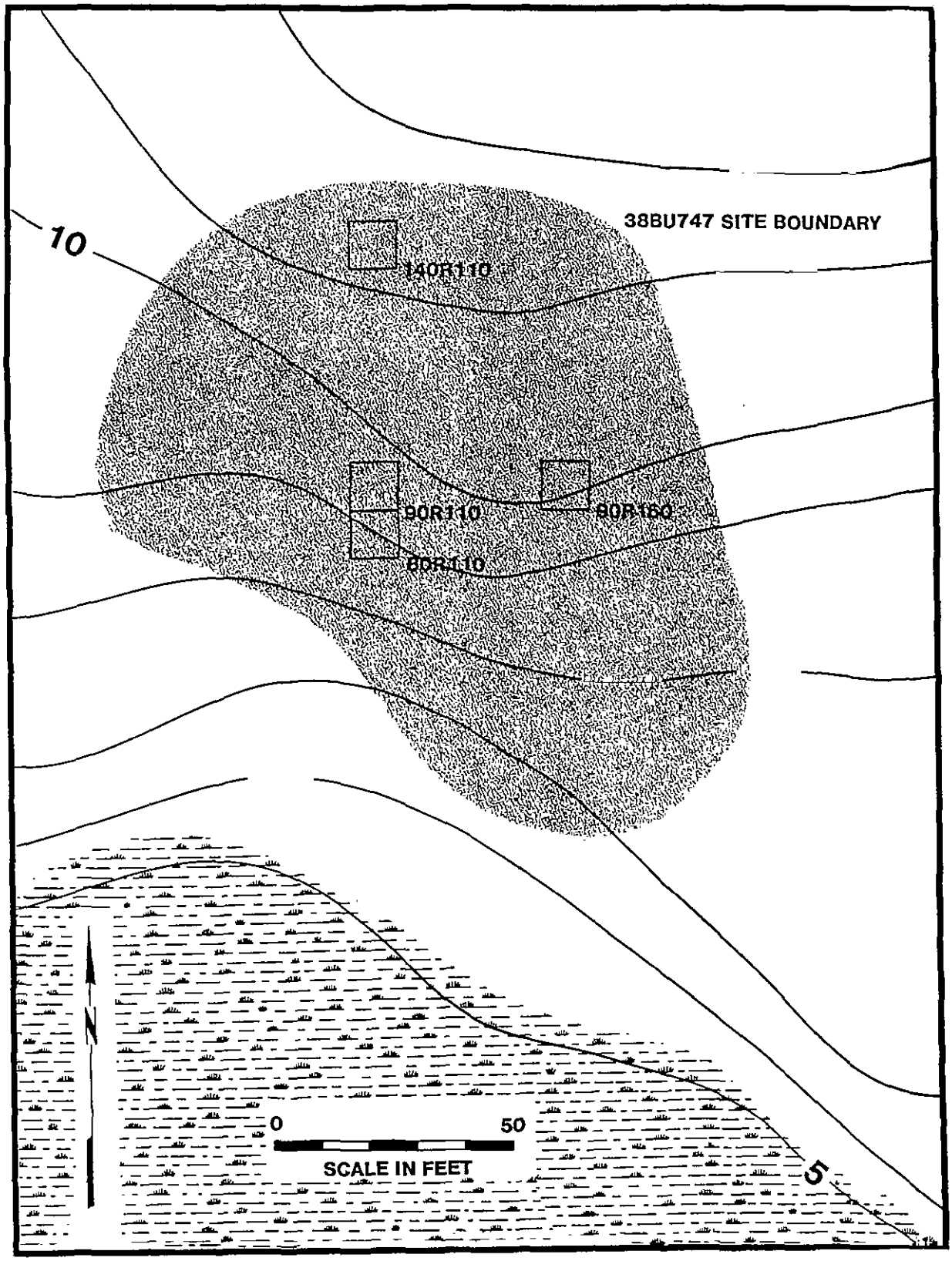

Figure 1. Plan view of excavations at 38BU747.

curated at The Environmental and Historical Museum of Hilton Head Island as Accession Number 1990.2. All specimens will be evaluated for conservation needs prior to curation, although field assessments indicate that all materials are stable.

Two 10-foot squares (80-90R110) were placed in an area thought to represent one of the densest middens in the site, based on what appeared to be a surface mound of shell and an adjacent 3 foot square test unit excavated by Lepionka. These units were excavated in two zones, with Zone 1 representing mixed humic sand and shell midden. Zone 2 represented gray moist sand with very light scatters of shell in pockets. Zone 1 varied from 0.2 to 0.5 foot in depth, while Zone 2 varied from 0.2 foot deep in the north to 0.5 foot deep in the south. The north and west profiles of these units revealed that they were located in the vicinity of two discrete middens. The one to the west was the larger, although the 80-90R110 units intersected only the eastern edge of the midden. The midden to the north, while not as large, was better sampled in the excavations.

The shell midden density in these two units differed considerably. In 90R110 the total shell weight was 961 pounds, although Zone 1 was composed of only 10.8% shell by weight. In 80R110 the total shell weight for Zones 1 and 2 was 288 pounds, although the Zone 1 midden was 34.5% shell by weight.

Unit 90R160 was excavated in what appeared to be a second midden area to the east. In this unit an attempt was made to distinguish between a Zone 1a, consisting of gray-brown humic sand about 0.2 to 0.3 foot in depth, and Zone 1b, consisting of shell in a tan sand also about 0.2 to 0.3 foot in depth. The midden in this unit was even more obviously deposited as small piles or pockets of shell, rather than a continuous midden. The total weight of shell recovered from both Zone 1a and Zone 1b was 65 pounds, while shell in Zone 1b was found to comprise 11% of the midden by weight.

The final unit, 140R110, was placed in a level area inland from the marsh edge. There was no obvious surface indications of shell and previous shovel tests had failed to reveal midden deposits. The stratigraphy revealed a zone of brown humic sand grading into a tan sand at a depth of about 0.5 foot, overlying yellow subsoil. The total shell weight in this unit was 9 pounds, with the bulk of this coming from two very small pockets of shell in the northeast and southeast corners of the unit.

As previously mentioned, these excavations failed to reveal any evidence of cultural features, although at least 12 tree stains were observed at the base of the excavations.

Interpretations

The pottery recovered from these excavations spans the period

from about 500 B.C. to A.D. 1200, although the excavations revealed very discrete loci of occupation. Units 80-90R110 produced only Deptford/Deep Creek pottery (DePratter 1979; Trinkley 1983). Examination of the material reveals that a number of sherds are mends or matches, suggesting a very small number of original vessels and very minimal disturbance to the site. Unit 90R160 also revealed only Deptford/Deep Creek pottery, although a chert Caraway projectile point was recovered from Zone 1a. Unit 140R110, located inland from the other three, produced the widest range of materials, including Deptford/Deep Creek, St. Catherines, and Savannah wares (the latter perhaps associated with the Caraway projectile point in 90R160).

The predominant surface treatment of the Deptford/Deep Creek pottery was cord marking, although two distinct varieties are present. One is a relatively neatly twisted fiber, while the other is very loosely twisted and frayed. In addition, small numbers of Deptford/Deep Creek Fabric Impressed and Simple Stamped sherds were also recovered.

Other artifacts present at the site include only several fragments of burnt clay or daub. No lithic materials or shell tools were found associated with the Deptford/Deep Creek middens.

The only subsistence remains encountered in quantity were shellfish. Animal bone is exceedingly rare, as are ethnobotanical food remains. No evidence of fish bones was recovered from either the 1/8-inch dry or low-pressure wet screening. Although the flotation samples from the midden have not yet been processed, initial observations indicate that the only carbonized food remains are two hickory nutshells.

These preliminary observations suggest that subsistence was very focal at 38BU747. The low density and diversity of artifacts, coupled with the absence of shellfish steaming pits or postholes for structures, suggests that the site was used for a very brief period of time. The presence of two varieties of Deptford/Deep Creek cordage occurring in two discrete middens, suggests reuse of the site on two separate occasions, probably by a small group staying at the location for perhaps no more than two or three days.

Additional investigations will serve to clarify some of the issues raised in this study. Initial review of the data, however, clearly indicates that this site, and similar shell middens, are capable of yielding significant data on subsistence and settlement questions for the Early and Middle Woodland periods on Spring Island.

Future work should continue to use 1/8-inch mesh, in spite of the apparent absence of faunal remains. Not only does this screen size provide excellent shellfish recovery, but it ensures that faunal material will not be overlooked. In addition, the use of

column samples to quantify shell midden density and to provide samples of known quantity for shellfish studies should be continued at additional sites. Work at other sites should attempt to more precisely identify locations of discrete middens prior to excavation, so that larger samples may be examined. Ideally, at least two entire middens (which are thought to represent short-term disposal episodes) should be examined for comparative purposes.

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