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# REPORT OF ARCHAEOLOGICAL TESTING AT THE LOVE SITE (SoC 240), SOUTH CAROLINA

## Michael Trinkley

## INTRODUCTION

Early in 1970 Mr. Sammy Lee, Orangeburg, S.C., notified the Institute of Archaeology and Anthropology (University of South Carolina) about a possibly important site in Allendale County on which had been found large quantities of lithic debris, perforated steatite disks, projectile points, drills, atl-atl weights, baked clay objects, and fiber-tempered pottery. This site was given the number 38 A1 10 by South Carolina and since has been SoC 240 by the Research Laboratories of Anthropology. In May, 1970 Dr. Robert Stephenson at the Institute of Archaeology and Anthropology (IAA) visited the site and determined that it should be tested; a year later, in April, Dr. Thomas Hemmings, with a crew of three, excavated two fourfoot squares to a depth of 36 inches.

It has not been possible to locate Hemmings' original squares, but the field notes (on file, IAA) indicate the squares were placed on the south edge of the field and this has been verified by Lee, who worked with Hemmings. The plowzone (level 1) extends to a depth of 10 inches and plow scars (level 2) extend to 12 inches below the surface. Considerable material was encountered in these first levels, but maximum artifact recovery was from a depth of 12 to 15 inches, which was dark, mottled sand. A few flakes were found to a maximum depth of 21 inches by which time the soil was a moist, gray sandy-clay. The water table was hit at a depth of about 40 inches.

Hemmings found quantities of chert and quartzite flakes, projectile points, drills, steatite, fiber tempered pottery and other items similar to those recovered by Lee on the surface (Lee 1971). No formal report was written and the material recovered from this early work has not been described. However, the work convinced Hemmings that the site was important enough to warrant further excavations. Unfortunately, no further work was conducted at the site by the IAA and Hemmings is no longer in South Carolina.

In the Fall of 1974 Lee approached this author, suggesting that the site should be more extensively investigated. After looking at surface collections from the site and reviewing the notes on file at the IAA it was felt that the site had potential for the recovery of large numbers of features which might produce quantities of carbonized food remains from a Stallings context. In December, 1974 James Michie, Sammy Lee, Dennis Hendrix, and the author excavated a 2 meter by 10 meter trench at the site. This paper reports on that work, offers preliminary analysis of the material and makes suggestions for future work at the site. The investigator's interest in the Love Site is part of several ongoing research projects centering on the cultures producing early ceramics in the South Carolina area and subsistence studies of Woodland peoples. The continued assistance of Dr. Robert Stephenson and those who worked at this site is greatly appreciated.

## SITE DESCRIPTION

The Love Site is southwest of Allendale, South Carolina and is located in a large field which has been cultivated since the early 1900's (Figure 1). The land was given to a black family after the Civil War and today the legal ownership includes more than a dozen families, scattered across the United States. Mr. Jerry Dukes, who plants the land and who pays taxes on it kindly gave permission to excavate. The land has not been deeply plowed and has returned to grass several times during this century. Recently Dukes has been planting beans, corn and hay, but has had little success.

The site is in close proximity to a Carolina bay and several fresh water creeks. The origin of Carolina bays has been a heated subject among geologists since the mid-1800's and there is little agreement even today. The bays occur most frequently in the coastal plain of Georgia and the Carolinas, all have similar orientation and shape, and all seem to be of the same age (Middle Pleistocene or earlier) (Straley n.d.). There are a number in the Allendale region and perhaps because of the fresh water they contain aboriginal remains are frequently associated with the bays.

The soils of the region are classified as Orangeburg Series sandy loams and Norfolk Series sandy loams, with colors ranging from red to gray to yellow. Both are formed from the Barnwell Formation of fine to coarse pebbly sand (Cook 1936:91). The Sunderland Formation found in the area is a deposit of Pleistocene age which was formed when the sea was about 170 feet higher than today. These sands are red or yellow in color and occasionally are mottled.

Available water capacity is moderate, infiltration is rapid and permeability is moderately slow in these soils. Organic matter is low and the inherent fertility is moderate. The Orangeburg and Norfolk soils are generally moderately acidic (USDA 1971:20-21).

The area of the Love Site has outcropings of the Flint River Formation which is characterized by broken lumps of yellow vitreous chert in reddishyellow sand (Johnson 1964). This chert is sparingly fossiliferous and seems to have been used by the Indians of the area. The closest known outcrop is on the Savannah River, about 15 miles west of the Love Site.

The soil profile, as revealed by this investigation, collaborates Hemmings' earlier work and shows an A horizon to about 15 inches and a dark brown to grey B horizon (Figure 2). The soil becomes increasingly moist





and clay-like into the B horizon. A large number (32 pounds) of pebble size (4-15 mm.) rocks were found throughout the excavations, but were seemingly concentrated in the thick midden areas. These rocks are characteristic of the Barnwell sands and the heavier occurence in midden areas may be due to aboriginal activity, such as the digging of pits, which would bring the pebbles into the A horizon.

The extant vegetation of the site is the Southern Mixed Forest having dominants of Sweet Gum (Liquidambar styraciflua), Southern Magnolia (Magnolia grandiflora), Slash Pine (Pinus elliottii), Loblolly Pine (Pinus taeda), White Oak (Quercus alba), and Laural Oak (Quercus laurifolia). Within the Carolina bay there are Tupelo (Nyssa aquatica) and Bald Cypress (Taxodium distichum). There are also large numbers of Hickories (Carya sppm) in the vicinity (Küchler 1964).

In a climax forest having an oak-hickory component, the pines are replaced by hardwoods and the composition of the forest is 84-86 per cent oak, 3-7 per cent hickory and 6-7 per cent miscellaneous hardwoods (Shelford 1963). In a second growth forest the pine will appear and Küchler (1964:2) suggests that the "fire trees, e.g...the longleaf pine (*Pinus palustris*) and others of the southeast must all be considered integral parts of their respective phytocenoses." In the area today there are a number of pines.

From the air two circular dark spots which have not been destroyed by plowing can be seen close to the Carolina bay. Each is about 20 meters in diameter and contains concentrations of material. When first visited it was possible to see one dark stain while walking over the field although the other one was not apparent. The total site area is one-half acre, sloping toward the bay.

## **EXCAVATIONS**

When the Love Site was first visited by the author it was not possible to locate Hemmings' old test squares and thus a new datum was placed on the southwest edge of the field. An iron pipe set in the concrete serves as the ORO point with an assumed elevation of 100 meters. A two meter grid was then established following magnetic north-south, east-west lines. Preliminary work was conducted on a 2 meter by 10 meter north-south trench from OR110 to 8R110.

This trench was placed so as to intersect one of the dark stains in the field with about half of the trench within the stained area and the remainder outside the presumed midden, in the lighter-colored plowzone. This would allow the undisturbed subsoil to be examined to verify the existence of a midden as observed in the plowzone and to determine the amount of damage to underlying features. A trench was chosen over a series of separate test squares to afford a view of a relatively large area at one time. It



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is difficult, if not impossible, to locate house structures and features or to develop a coherent view of the unfolding cultural process by excavating random test squares. The more productive approach is to open a continuous area in a spot suspected to have been occupied.

The plowzone was flat shoveled off was flat shoveled off each square until the tops of the plow ridges were seen and all soil was screened through 1/4 inch hardware cloth. This level varied from 19 to 25 centimeters in depth. The next level (termed 2a and 2b) consisted of plow scars and plow ridges and was flat shoveled until the plow scars were, except in a few instances, removed. This level of mixed material varied from 10 to 17 centimeters in depth. At this level the square was troweled and black and white, and color photographs were taken. Features were also plotted at this level.

Square 6R110 was not excavated because of a lack of time, but the change seen from the surface is evident in square 4R110. South of this square the top of level 3 is mottled and heavily disturbed by aboriginal features. The soil is dark brown and contains a quantity of organic matter. North of square 4R110 the soil is mottled light brown or yellow and lacks the cohesive texture of the midden. Several projectile points and a number of flakes were found lying in what the investigator interprets as primary position on top of level 3. Two broken perforated steatite disks were also found lying flat on top of this midden. Unfortunately a lack of time and problems with one of the landowners prevented the excavation of level 3 (the midden) or of any but one of the features (Figure 2).

Seven features were plotted, but only one (Feature 1) was removed. This was a roughly circular, flat bottomed pit, the upper portion of which was slightly disturbed by plowing. The feature fill was dark black and contained a small amount of charcoal. Although the feature had been dug into the midden, making the outline difficult to see, it was possible to follow by texture. Maximum breadth was 29 centimeters, maximum depth was 20 centimeters. This was one of six possible pits located, the seventh feature appearing to be a post hole. Several features are associated with large quantities of fired clay.

Soil samples were taken from each level and from Feature 1. Several of these soil samples have been subjected to water flotation and are reported on in this paper. At the conclusion of this work the top of level 3 was covered with plastic and the squares were backfilled.

## ARTIFACTS

*Ceramics.* All of the pottery recovered from the excavations fit into one, possible two, established types. Thirty-two of the sherds (51%) found are fiber-tempered, placing them in the Stallings Ware, while the remaining 29

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sherds are "non-tempered" (Plate I). Although these sherds fit the Thom's Creek type it is not clear that the lack of observable fiber in the clay of a small sherd indicates a different mental template or a different cultural group (Trinkley 1976).

The Stallings sherds recovered from the Love Site excavations contained quantities of fiber which was burned out during the firing process. No coil fractures were obvious, although there is evidence that some Stallings pottery may have been coiled (Griffin 1943:159; Trinkley 1976). The sherds are compact but all have a hardness of less than 2.5 (Mohs scale) and can be scratched easily with the fingernail. The color ranges from light brown to black with a darker core in most sherds, indicating incomplete oxidation.

The interior and exterior of most of the recovered sherds were well smoothed, a few were only smoothed on the exterior. None of the sherds were decorated.

From the few sherds found only two rim forms are known—a rounded, slightly incurving example and a rounded, straight example. One basal sherd was found—suggesting a shallow, round-bottom bowl shape. No reconstruction of vessel size has been possible. The range of vessel wall thickness is from 3 to 13 millimeters with a mean of 8 millimeters.

Those sherds not readily fitting into the Stallings Plain type may be Thom's Creek pottery. These sherds are basically "non-tempered," although 38% of the sherds show a few fiber tracks. Three sherds have a quantity of quartz inclusions in the clay paste. No coil fractures are obvious in the sample from the Love Site and the sherds are generally compact. The hardness ranges from 2.0 to 3.0, but most can be scratched with the fingernail. The color ranges from buff to brown and most have a dark core, indicating incomplete oxidation.

Most of the sherds in this group were too small to reliably indicate evidence of smoothing, and none of the sherds were decorated. No rims were found, and it is impossible to reconstruct vessel size with the data at hand. The range of vessel wall thickness is 5 to 10 millimeters.

With this information it is not clear that there is a Thom's Creek component at this site, and it might be wise to classify the ceramics recovered into South's (1973) Formative stage, which has a chronological range from 2600 B.C. to about 1100 B.C. During limited surface collecting at the site five sherds were found which are grit-tempered and have cord markings as surface treatment. These sherds can be typed as Savannah Cord Marked and belong to South's Development stage.



Plate I Ceramics and Steatite from the Love Site



Plate II Lithic Artifacts from the Love Site

	OR110		2R110		4 <i>R</i> 110		8 <i>R</i> 110		
Level	1	2	1	2	1	2	1	2	Total
fiber-tempered	3	3	4	9	11	2			32
non-tempered	1	5	4	5	8			3	26
quartz tempered		3							3
unidentified						1			1
	4	11	8	14	19	3	0	3	

Table 1. Ceramics from the Love Site excavations.

*Lithics.* A detailed lithic analysis of the material from the Love Site has not yet been completed, but some preliminary observations are possible. Table 2 shows the distribution of lithic artifacts by square and level.

Table 2. Lithics from the Love Site excavations.

	OR110		2R110		4R110		8R110		
Level	1	2	1	2	1	2	1	2	Total
projectile points	2	4	4	5	7	4	2	1	29
drills			1						1
notched flakes			1						1
adze				1					1
biface						1			1
used flakes	3	1	2	2	1		1		10
flakes	139	179	166	445	183	232	37	81	1462
steatite	6	22	10	22	14	10	2	1	87
cracked quartz			16	16	11	9	3	5	60

All of the projectile points fall into the category of Savannah River Stemmed (Coe 1964) although most of the points have a straight base and all were made from a local chert (Plate II, a-f). A number of the points have extensive wear on the lateral edges, suggesting extensive use, perhaps as knives. Several points have been resharpened until they have taken on a short, squatty appearance with the width to length ratio approaching 1:1 (Plate II,b). Although wear pattern analysis has not been completed it would appear that these tools, besides serving as piercing instruments, also were used as knives (Michie 1975; personal communication).

Only one drill was recovered and the functional interpretation is based on a slight polish on the tip of the artifact (Plate II,h). More work may indicate if this drill was used on stone (steatite), wood or bone. One possible notched flake was recovered during the excavations as was one adze or possible hoe (Plate II,g). More investigation is required before the function of these artifacts is defined. The category of used flakes consists of chips which have been roughly flaked to produce a working edge and those flakes which during their use had small microflakes removed. The category of flakes includes all those pieces which were definitely the result of human activity. The majority of these flakes were chert material, although a low incidence of quartzite and rhyolite flakes was noted. Most of the flakes were thin and small; probably the result of resharpening and blade thinning activities. Some flakes were blocky and highly angular, possibly indicating that the chert had been subjected to high temperatures and exploded as a result. This conclusion is supported by the number of artifacts which appear to have been thermally altered and which have crazing (Plate II,i).

Steatite disks with one or more holes drilled in them were frequent occurences at the Love Site (Plate I,c-d). No intact specimens were found, but several could be reconstructed.

## ENVIRONMENTAL AND SUBSISTENCE RECONSTRUCTION

Environmental reconstruction of the area surrounding the Love Site has been attempted using data revealed by flotation samples from the midden deposit. As described earlier, the environment of the Allendale area today falls into a Southern Mixed Forest biome. The information revealed by paleoethnobotany suggests the environment of the Love Site was very similar during aboriginal occupation (Trinkley 1975). Wood charcoal from two major groupings—pine (*Pinus spp.*) and oak (*Quercus spp.*) predominated the sample with a trace of other types of non-porous woods, perhaps representing cypress (*Taxodium distichum*) or cedar (*Chamaecyparis sp.*), constituents of the fresh water swamp environment of the Carolina bay near the site. The absence of swamp type woods may indicate that the Indians often did not venture into the bay.

The next most frequent item in the flotation samples has been hickory nutshells, accounting for 11.7% of the total sample. No seeds which might have been food sources were recovered. A small quantity of shell, perhaps from a crab, was found in the sample, as was a small quantity of bone (see Table 3). During the excavations only small pieces of unidentifiable bone were recovered, due to the high acid content of the soil. Because of poor preservation conditions it is difficult to construct even a general idea of the subsistence base. However, the data suggests that animals, probably deer (*Odocoileus virginianus*), were exploited as well as large quantities of hickory nuts (*Carya spp.*). No acorns (*Quercus spp.*) were found, which is unusual for a Woodland site, but this may be due to a sampling error. Hickory nuts are fairly dependable with masts occuring every 2 to 3 years and are available from September through December. Acorn crops are less dependable and man is in competition with a number of other animals for this food. Hickory nuts are high in protein and fat (Asch and Ford 1972) and have a caloric value equal to that of most meats (Hutchinson 1928:261).

Table 3. Analysis of flotation sample from the Love Site

	Grams	% of Total Sample
wood charcoal	3.09	86.5
hickory nutshell	.42	11.7
seeds	.01	.3
unidentified	.01	.3
shell	.03	.7
bone	.01	.3
microflakes	.01	.3
	3.58	100.1

### DISCUSSION

The limited work at the Love Site produced a sizable quantity of material and provides a body of data on the only Stallings site reported from an upland environment. Although numerous Stallings sites from the floodplain have been excavated (Stallings Island, Lake Spring, Rabbit Mount, Clear Mount) no sites from an upland zone have been observed and at least one author seems to feel that Stallings sites do not occur inland from the Savannah River. Stoltman (1974:208) states, "there can be little doubt that the primary adaption of the Stallings II-III people was toward a riverine lowland environment." He further states (1974:235), "there is no evidence of plant gatherings....it would seem that plant collecting was a relatively unimportant Stallings subsistence activity." Plant collecting may have been an insignificant part in Stallings subsistence in the floodplain, but this can only be demonstrated by flotation and ethnobotanical analysis, which has not been done at any Stallings riverine site. Furthermore, it would seem, on the basis of the Love Site data, that the primary adaption of Stallings people was perhaps not to the floodplain. The large quantity of daub and the numerous features points to extensive disturbance of the Love Site by aboriginal man and the quantity of carbonized hickory nutshells argues for fall occupation.

With Stallings sites occurring in two different environmental niches while having almost identical artifactual remains, it is a valid possibility that there was a seasonal exploitation round—gathering shellfish in the mid-spring and early summer during periods of dry weather when the Savannah River and its tributary streams were low and clear (Baldwin 1973:24) and gathering plant foods (particularly hickory nuts) in the fall. This concept is only consistent with what is known ethnographically about hunters and gatherers (Service 1966).

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Plate III Squares OR110 to 4R110, Top Level 3

The admixture of fiber and "non-tempered" pottery at the Love Site calls into question the significance of tempering as a cultural indicator during the Formative Period of pottery Ware-Group evolution. Pottery identical in all respects of surface treatment, firing and paste, except temper, have been found in close association at the same site. This may indicate that tempering was a highly variable activity—something which some potters did while others did not, even within the same band. As more intensive research is directed toward this problem it may develop that the distinctiveness of fiber-tempering will be seriously questioned.

From the large amount of lithics at the Love Site several observations stand out. First, a large amount of the material has been thermally altered; that this activity took place at the site is suggested by the quantity of blocky, angular flakes which occur when chert is subjected to a rapid elevation of the temperature (Purdy 1975:135). Several examples of chert show crazing (shrinkage fractures) which occurs when material is subjected to intense temperatures (Purdy 1975:138). Second, a large number of the Savannah River points exhibit a break commonly known as lateral snap, which occurs when "a substantial blow is imparted to a rock whose mass is not adequately supported to absorb the shock" (Purdy 1975:134). This indicates that blanks were being finished at the Love Site. Third, several artifacts exhibit unusual wear patterns that have not been investigated, but which may provide detailed cultural reconstructions. Finally, the frequent occurrence of perforated steatite disks at an inland site should demonstrate to everyone's satisfaction that these items are not "net sinkers."

In summary, the Love Site has excellent potential for providing essential detailed information on a variety of questions surrounding the Stallings period, including subsistence, settlement pattern and technology. The site has a relatively undisturbed midden with a possibility of stratigraphy and is located in an area which would allow tests for interaction between the Stallings people and the Carolina bay biome. This site offers a chance to employ large scale excavation techniques to a Stallings period site with some assurance of success.

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