# PREHISTORIC POTTERY

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These excavations produced a total of 3541 prehistoric low-fired earthenwares, representing seven recognized series -- Stallings, Thom's Creek, Refuge, Deptford, Mount Pleasant, St. Catherines, and Irene. These wares document aboriginal occupation at or visits to the Fish Haul site from at least 1700 B.C. to about A.D. 1500. The Stallings series represents the largest collection of identifiable pottery (N=1481), comprising 83.8% of the total. The Deptford series, the next largest collection (N=181), accounts for only 10.2% of the identifiable pottery. The Thom's Creek series (N=74) accounts for 4.2% of the identifiable pottery, while the Mount Pleasant (N=14) and St. Catherines (N=13) sherds together account for 1.5% and the Refuge (N=2) and Irene (N=2) account for the remainder.

## Typology

### Stallings Series

The Stallings series is recognized by the occurrence of fiber tracks, the result of plant material which oxidized during the firing process. Recent work by Simpkins and Allard (1986) indicates that the bulk of this plant material was Spanish moss, intentially added to the clay probably as a binder. It seems unlikely that there was any intentional effort to promote porosity as has been previously suggested. Also characteristic of this series is the general absence of obvious coil fractures, which has been interpreted as an indication of a modeling technique of construction. Recent work by Trinkley (1980c:46-48) documents that coiled Stallings pottery is found, presumably toward the end of the phase. Decoration includes a variety of punctation modes, incising, and minor numbers of simple stamping and finger pinching.

Although not presently typed, Wauchope (1966:45) has noted the occurrence of both cord marked and net impressed specimens from northern Georgia, and Fairbanks (1942:228) reports two sherds exhibiting fabric impressions. Waring also referenced "Griffin Impressed" as fiber-tempered ware "made by modeling the clay inside of large, rough baskets" (Williams 1968:216,220). As late as 1978, however, Griffin noted that this pottery "was a gag on Waring's part" (James B. Griffin, personal communication 1978). In spite of this, work at Fish Haul (Trinkley and Zierden 1983:22-23,

Figure 8B) has revealed Stallings pottery with cord impressions. Similiarly impressed Stallings pottery has also been observed in the collections from Ford's Skull Creek shell ring (38BU8).

The Stallings series type site is Stallings Island, in the Savannah River immediately north of Augusta, Georgia (Claflin 1931). The distribution of Stallings pottery has been previously discussed (see Figure 9) and sites containing Stallings are most abundant in South Carolina within the Savannah drainage and in the Beaufort County, South Carolina area (Anderson 1975:181-183), although they are found throughout the coastal plains of Georgia, South Carolina, and into North Carolina. The occurrence of this pottery is bracketed by two generally accepted radiocarbon dates: 2515±95 B.C. (GO-345) from Rabbit Mount in Allendale County, South Carolina and 1060±80 B.C. (UGA-1686) from Cunningham Mound C in Liberty County, Georgia.

Originally Waring (Williams 1968:160) argued that a distinction should be made between the fiber tempered pottery found inland (which he called Stallings) and that found on the coast (which he called either Bilbo or St. Simons). This distinction was based on four beliefs: first, that the inland pottery was thinner and had more uniform vessel walls; second, that the inland pottery had smaller, neater, more varied forms of punctations; third, that the inland pottery evidenced crude "simple stamping" on many bases; and fourth, that flanged, carinated bowl forms were found only at inland sites. DePratter continues to hold the opinion that the Stallings type "should only be applied to inland ceramics because of major differences between coastal and inland ceramics (Waring 1968a, p. 160 [Williams 1968:160])" (DePratter 1979b:113). Stoltman has disagreed with Waring, noting that the first two differences (thickness and style of punctations) were subjective and impossible to apply consistently (Stoltman 1974:19). Waring himself noted that "ornamentation [at the coastal Beaufort County, South Carolina Chester Field site] . . . is much more elaborate than at the mouth of the Savannah River . . . " (Williams 1968:255). Stoltman (1974:19) also noted that flanged carinated bowl forms supposedly characteristic of inland Stallings pottery were not present at Groton Plantation. Consequently, at this time there seem to be no convincing typological reasons for separating Stallings from either Bilbo or St. Simons. These discussions will refer to all fiber tempered ceramics from Fish Haul as Stallings.

Previous investigations have uniformly identified Stallings pottery as modeled, pinched or drawn -- some technique other than coiling. Since pottery forming techniques are frequently not easy to determine based on visual macroscopic examination, it is likely that the previous evaluations of Stallings as non-coiled have been based on the absence of coil fractures. Rye (1981:67-68), however, notes that coiling produces separations along coil lines only if the vessel was joined when the clay was too dry, otherwise coiled vessels do not tend to break differently than either pinched or drawn vessels. The near absence of coil fractures on Stallings sherds is probably related to the water retension and binding attributes of Spanish moss, as discussed by Simpkins and Allard (1986:114).

A careful analysis of the Fish Haul collection has revealed that most of the surface evidence of forming techniques was either difficult to interpret or had been obliterated by smoothing and decorating operations. As a result, it was decided to use radiography to study the forming techniques. Rye (1977) suggests that x-ray photographs are useful to study the orientation of inclusions, which are distinctive for each forming technique. He notes that in coiled pottery, inclusions orient parallel to one another along the centers of coils when the pottery is x-rayed normal to the surface. Pinched pottery produces no obvious horizontal or vertical orientation. Drawn vessels indicate a vertical orientation of inclusions (Rye 1977, 1981:68-72).

A preliminary study, similar to that outlined by Rye (1977; see also Carr 1986), was conducted using a small number of Stallings sherds. The purpose was to determine whether the x-ray technique would be successful at identifying manufacturing techniques for the Stallings pottery. Rye (1977:206) notes that particles must be at least 0.04 inch (1 millimeter) in diameter and must not be spherical, since for the purposes of this technique temper particles must be visible and must be able to assume an orientation during the vessel manufacture. While "prismatic, needle-like (acicular) and plate-like particles" are best, I felt that the fiber tracks (which would appear as black voids on the x-ray film) would serve. Rye also indicates that sherds at least 4 inches (10 centimeters) in size are necessary to observe temper orientations (Rye 1977:207).

Some modifications in Rye's (1977:209-211) suggested methods were required because of the limitations imposed by the available equipment. These modifications, however, do not significantly alter the fundamental principles of the methodology, especially as this work is viewed as a pilot study. Kodak T-Mat G film with a Lanex Regular screen was used. Lead sheeting was also used on the bench top to reduce backscatter. Film processing was automated to Kodak standards. The source-film distance was standardized at 37 inches (94 centimeters), which gave full coverage of the 9 x 11 inch (22.8 x 28 centimeter) plates. In these trials the milliamperage varied from 1.6 to 2.5 and the kilovoltage was standardized at 56kV. This work suggests that thick sherds (or curved sherds not in contact with the film) are best exposed at 56 kV and 2.5 mA, while thin sherds are best x-rayed at 56kV and 1.6mA.

The results of this study would be enhanced by the use of a fine grain film (such as the Kodak AA suggested by Rye) and the study of a larger number of sherds (23 Stallings sherds and three non-Stallings sherds were examined). The results, however, are encouraging and suggest that while not all Stallings pottery at Fish Haul evidences coiling, some sherds clearly evidence inclusions orienting parallel along the coils (Figure 51). It may be that the mixture of different manufacturing techniques is natural for this early stage of pottery technology. Coiling may have been the preferred technique for larger vessels. This preliminary study clearly reveals that further work would be profitable and would provide valuable information on the technology of Stallings pottery production.

Fiber was a common inclusion and vermiculation is apparent in cross section and on the interior surfaces. Exterior surfaces appear to have been smoothed, promoting the flotation of clay particles to the surface, so fiber tracks are not as obvious as on the interior. The clay is composed of uniformly very fine sand and no coarser inclusions were observed in any of the sherds. Coarse inclusions, however, are seen in several of the radiographs. The Fish Haul specimens, as previously noted (Trinkley and Zierden 1983:19), tend to be relatively hard, about 3.0 on the Mohs scale. Texture is generally fine and friable, and the paste is contorted.

The ceramic cores of the Stallings ware from Fish Haul are typical of those one would expect from open firing at temperatures below 1832°F (1000°C). The cores also provide some indication of the atmosphere of firing (Rye 1981:114-118; see also Crusoe 1971:113-114). Three combinations of temperature and atmosphere were observed in the Fish Haul collection. About half of the collection was suggestive of organic clays fired in an oxidizing atmosphere with incomplete oxidation. The remaining collection was indicative of either organic clays fired in a reducing atmosphere throughout the firing and cooling, or firing in a reducing atmosphere with subsequent removal and cooling in an oxidizing atmosphere. This range of firing is suggestive of simple and relatively uncontrolled techniques. Such a situation is not unexpected for the Stallings ware, but should not be equated with primitive or unskilled, for as Rye notes, "[a]lthough open firing involves no building or maintenance of structures, it requires a high degree of skill and observational ability to be successful" (Rye 1981:97-98). The firing of pottery in pits, noted by Rye (1981:98) and Shepard (1956:75-76), may help to explain the number of Stallings phase pits with no other obvious function. No obvious examples of firing faults or wasters

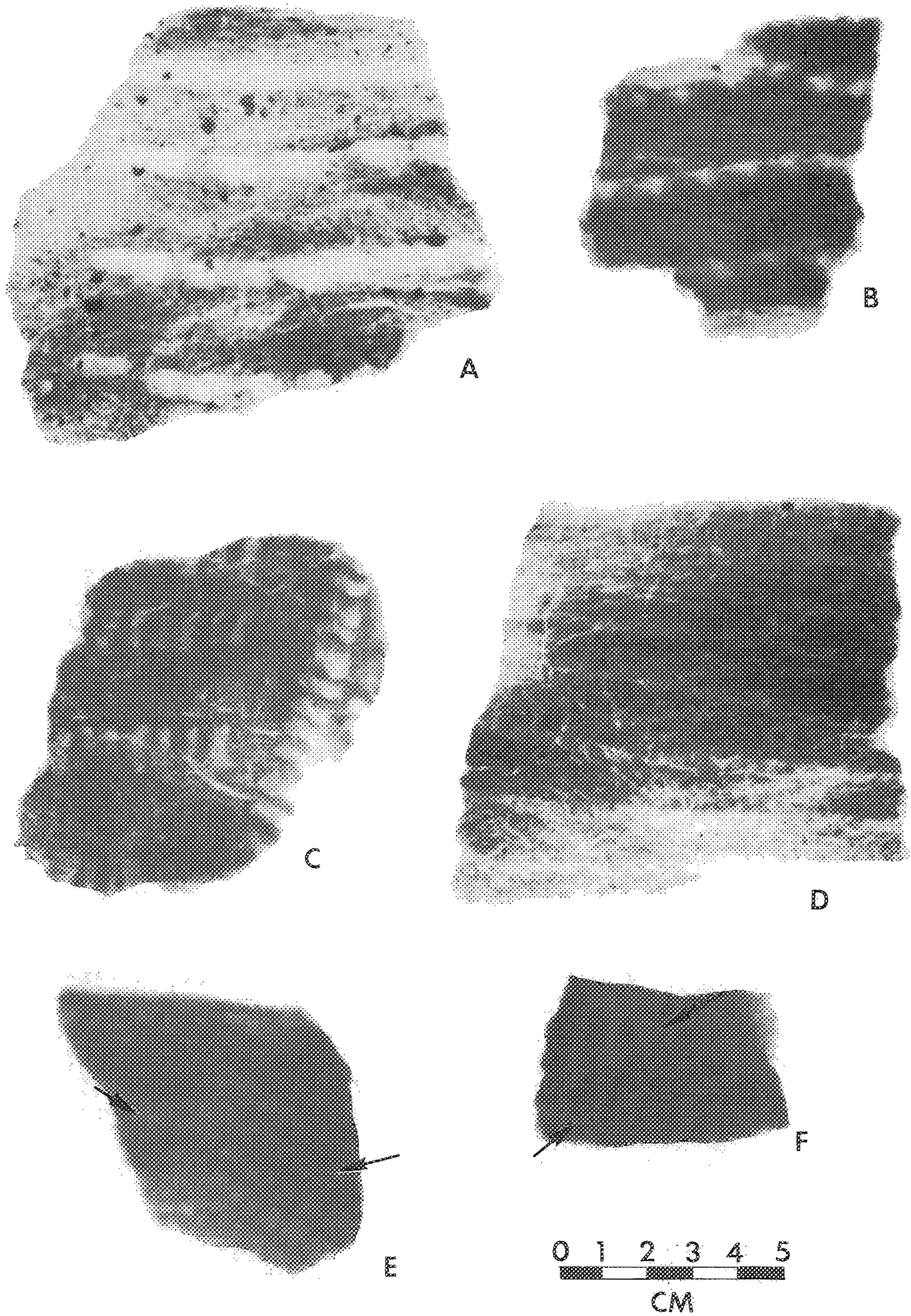


Figure 51. Radiographs of Stallings pottery. A-B, Stallings sherds which evidence inclusions oriented parallel along coils; C-D, Stallings sherds which evidence random orientation of inclusions; E-F, Deptford sherds which evidence voids between coils (visual inspection reveals "coil fractures").

were identified at Fish Haul, so the pottery may have been brought to the site from elsewhere.

Colors range from pale browns to reds to reddish yellows to yellowish reds and browns. Interior and exterior colors are occasionally mottled, but fire clouding was not noted. As previously mentioned, the Fish Haul sherds suggest that the vessel exterior was more carefully smoothed than the interior and a few examples evidence considerable care in preparation. None of the sherds evidence any form of interior scraping. Some even indicate that no attempt was made to smooth interior bulges caused by over zealous punctating.

Decoration of Stallings pottery at Fish Haul was limited to punctation (N=860;58.1%) and incising (N=76;5.1%). Plain pottery (N=538) accounts for 36.3% of the collection. The remainder of the collection (N=7;0.5%) consists of a cord impressed type. Previous investigators have chosen to lump together all varieties of punctations (shell, reed, and drag and jab), although the punctations have sometimes been classed as linear, random, individual, or curvilinear. This analysis takes a slightly different approach, separating punctations motifs made with a shell from those made with reeds or sticks. The most common shell punctation is the conical form made with the tip of a marsh periwinkle (N=163, 11.0% of the total collection, 18.9% of the punctated specimens) (Figure 52A-B). Punctations made with reeds and sticks are usually square or triangular (Figure 52C-F), although round punctations occur (N=403; 27.2% of the total collection, 46.9% of the punctated specimens) (Figure 52G-H). Punctations may be individually applied without any overlap (Figure 52A-H) or may be arranged into rows using a drag and jab technique (N=294; 19.9% of the total collection, 34.2% of the punctated specimens). Investigations at Fish Haul suggest the drag and jab technique was only used with the reed punctate varieties and that its application is inconsistent, varying from individual punctations to classic drag and jab punctations (Figure 52I-K). Individual punctations may be arranged in rows or may be more randomly applied, particularly toward the bottom of the vessel. Both shell and reed punctations may cover the entire vessel, although they are frequently found restricted to the rim area. Occasionally examples of zoned punctations (Figure 52C) and curviliniar motifs are discovered.

The distinction between shell and reed punctation was first used to advantage in the analysis of Thom's Creek pottery (Trinkley 1980b). It was discovered that the Thom's Creek series could be seriated such that a transition from plain to reed punctate to shell punctate to finger pinching was observed at a variety of sites (see also Trinkley 1980c). Because of the partial contemporaneity of the Stallings and Thom's Creek series it seems reasonable to to

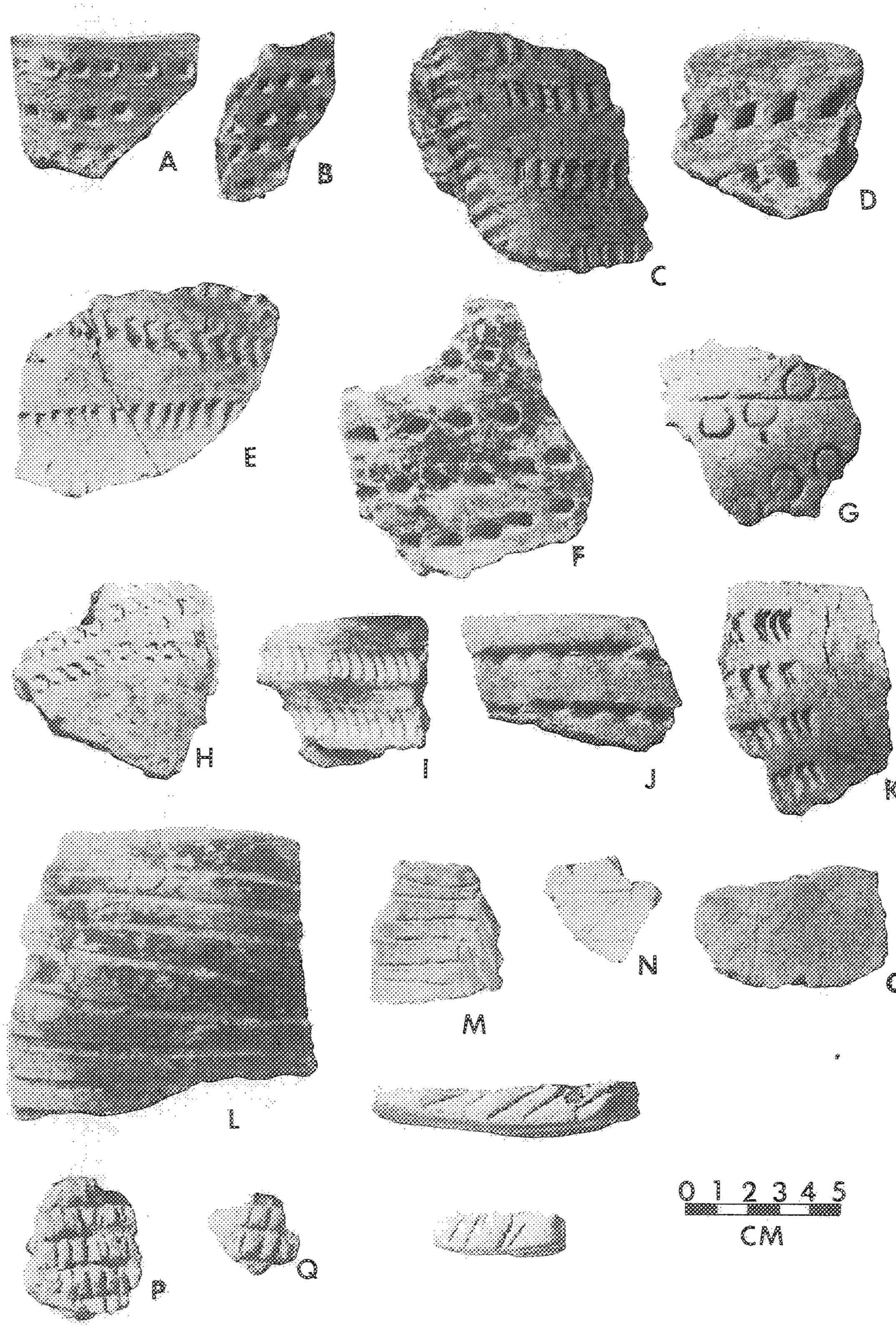


Figure 52. Stallings pottery. A-B, Stallings Shell Punctate; C-H, Stallings Reed Punctate; I-K, Stallings Drag and Jab; L-O, Stallings Incised; P-Q, cord impressed; R-S, lip decoration.

predict that a stratigraphic separation of shell and reed punctate pottery would be present at Fish Haul. A preliminary study (Trinkley and Zierden 1983:20-22) did, in fact, suggest that plain pottery decreases through time, shell punctate increases, although reed punctate was equivocal. The patterns observed in the 1982 and 129-141 blocks will be discussed in the following section.

Incising is a minority decoration, found on only 76 sherds. Virtually every example from Fish Haul reveals the application of incising when the clay was leather-hard -- the margins of the incisions are even and clean. Examples of incision include broad, parallel lines (Figure 52L) and medium to narrow lines in geometric patterns (Figure 52M-O).

Previous research found six sherds from Fish Haul which "exhibit a considerable number of cordage fragment impressions" (Trinkley and Zierden 1983:23). Further investigations, on a much larger scale, have revealed only seven additional sherds, all from the 1982 block. It appears likely that all of these specimens came from one vessel. Description of the collection is identical to that offered in 1983. The cordage ranges from 1/8 to 3/16 inch (1.5 to 2 millimeters) in diameter and has from 5 to 10 twists per inch (2 to 4 twists per centimeter). All of the cords have a Z or left final twist which is at an angle of about 35 degrees (tight). The cords were applied in parallel, crossing bands, but were not knotted. Several of the cordage impressions are so deep and clear they may have been created by the cords burning out during firing of the pottery (Figure 52P-Q). It is clear that this is not accidental, although it represents a distinct minority in the collection.

Two hundred sixty three Stallings rim sherds were recovered from these excavations at Fish Haul. Three lip forms have been previously identified from Fish Haul -- rounded, flattened, or combination (straight interior wall with a gently rounded exterior wall). These lip forms are paralleled by the Thom's Creek series (Trinkley 1980b: 10-13), although the bulbous, T-shaped rim has not been identified at Fish Haul. Previous work at Fish Haul demonstrated that lip treatment varied on single vessels, suggesting that there was no cultural preference involved in lip preparations. The one possible exception to this is lip decoration (Figure 52R-S). Flattened lips were occasionally decorated (10 of the 263 rims, or 3.8%, were decorated), usually with simple stamping at an angle to the rim. Phelps (1968:25) notes a similar decoration for the Savannah drainage Thom's Creek, although such motifs are generally absent from coastal Thom's Creek sites (Trinkley 1980b). Phelps also observes that this was one of the few decorative rim motifs found in the Stallings Island collections (Phelps 1968:26).

Although 15.4% (2 of 13) of the Stallings incised rim sherds were decorated, the sample is probably too small to be a viable indicator of preference. Decoration on other rims of other motifs (plain, shell punctated, reed punctated, and reed drag and jab) ranges from 2.4% to 7.4%.

Rim forms vary from straight to slightly incurvate. The typical vessel appears to be a simple, large, wide-mouthed bowl, with vessel diameters ranging form about 8 to 20 inches (20 to 51 centimeters). Previous studies (Trinkley and Zierden 1983:19) suggest slightly rounded and thickened vessel bases. Vessel height for one specimen was estimated at 8 inches (20 centimeters). Vessel wall thickness varies considerably (1/4 to 5/8 inches [6 to 16 millimeters]) with the rims tending to be slightly thinner.

These vessels were apparently used over open fires for cooking, based on the carbonized material present on the exterior of sherds (Figure 52L). Although less common, carbonized remains are also found adhering to the interiors of a few sherds. Curiously, these Stallings vessels do not seem to be an optimum design for cooking (see Linton 1944:370). By the succeeding Thom's Creek and Deptford stages vessels tend to be larger and give the appearance of being better adapted to cooking.

### Deptford

From its earliest description the Deptford series has been characterized by a fine to coarse sandy paste and check stamped surface (Caldwell and Waring in Williams 1968:116-119; Waring and Holder in Williams 1968:135-151). Also characteristic along the South Carolina coast is a cylindrical vessel form with a conoidal base. The Deptford series, developed during the WPA era of southeastern archaeology, has gone through a variety of typological metamorphoses, but has been recently discussed by DePratter (1979a) and Trinkley (1983a).

The Deptford collection from Fish Haul includes 181 sherds. Coiling seems to have been almost exclusively used, although coil fractures are uncommon in the collection (see Figure 51E-F). The paste contains quantities of fine to medium coarse sand, although these aplastics are probably native to the clay sources being used by the potters. This resulted in a fine and compact texture, frequently with a gritty feel.

The Deptford ware exhibits essentially an identical color range to that found in the Stallings pottery. Firing atmosphere for the bulk of the Fish Haul collection was reducing, which leaves the pottery black throughout in cross section. A few sherds indicate that some reduced vessels were removed from the fire and allowed to cool in air, resulting in thin layers of natural colored clay at the surface. Generally the exterior has a wider band of post-firing oxidation which suggests the interior was less accessible to air (i.e., that the pot was placed mouth down).

Surface treatments include plain (N=71, 39.2% of the Deptford series), check stamped (N=54, 29.8%), simple stamped (N=38,26.6%), cord marked (N=25, 13.8%), and incised (N=1, 0.6%). The plain pottery was apparently smoothed while the clay was leather hard, and while there is some variation in the quality, none have a gritty interior finish. No evidence of combing or scraping was found. The Deptford Check Stamped specimens have been impressed with a wooden paddle which was carved with parallel lines crossing each other, generally at right angles (Figure 53A-C). This motif of small checks with raised lands is characteristic of the series. The simple stamped motif was applied with either a carved paddle (Figure 53D-F) or a thong wrapped paddle (Figure 53G) to produce a series of grooves in the vessel surface. These impressions are both parallel to each other (Figure 53G) and also overstamped (Figure 53F). The stamping is usually at a slight angle to the vessel rim.

The exterior of the Deptford Cord Marked type is stamped with a cord wrapped paddle (Figure 53H-I). The stamp is distinct and consists of a series of roughly parallel line twisted cord imprints. Overstamping was rare in this collection, and cross-stamping was not identified. Cord size ranges from fine to heavy (1/32 to 7/64 inch [0.8 to 2.8 millimeters]) and the number of twists ranges from 5 to 10 per inch (2 to 4 per centimeter). The twist is uniformly tight and the cordage exhibits a Z or left final twist (see Hurley 1979). The single incised specimen is otherwise plain. The incisions were made in an apparently random fashion by an instrument about 1/64 inch (0.4 millimeter) in width while the clay was leather dry.

Deptford lips in the Fish Haul collection were either flattened or, more often, rounded with a slight exterior overhang. No lip treatments were recovered and the rims are usually straight and vertical, although several examples are weakly outflaring. Vessel form is only suggested by this small collection, but a deep, cylindrical jar with straight to slightly outflaring walls and a conoidal base is suggested. Several vessels at Fish Haul had rim diameters of from 6 to 10 inches (15 to 25 centimeters).

## Other Prehistoric Wares

The remaining 93 sherds have been classified as Thom's Creek, Refuge, Mount Pleasant, St. Catherines, and Irene. None of these collections, however, is sufficiently large to

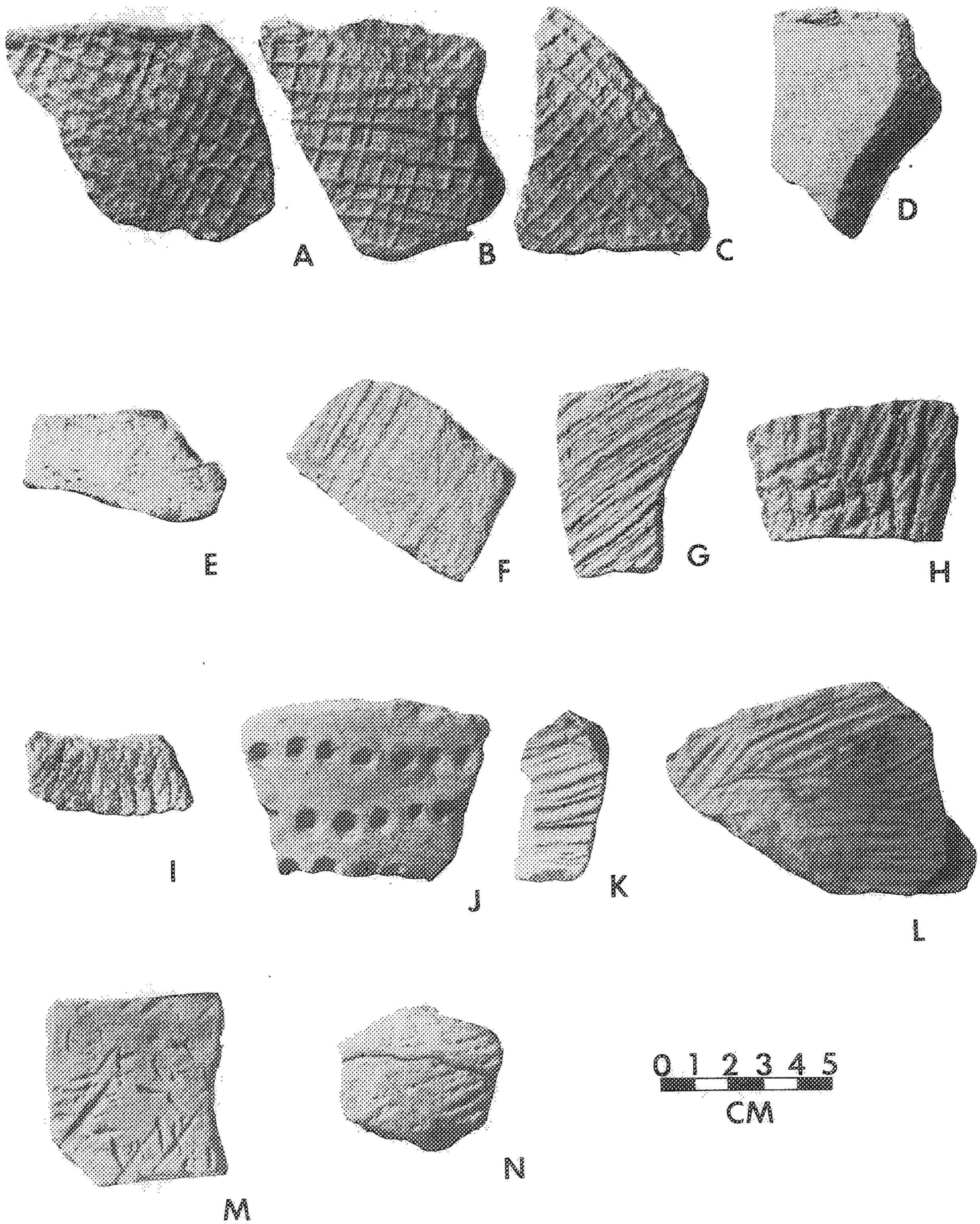


Figure 53. Deptford and other pottery. A-C, Deptford Check Stamped; D-G, Deptford Simple Stamped; H-I, Deptford Cord Marked; J, Thom's Creek Shell Punctate; K-L, Thom's Creek Simple Stamped; M, Refuge Random Punctate; N, Mount Pleasant Cord Marked.

warrant a detailed analysis; the remains suggest only very occasional use of the Fish Haul tract by these groups.

The Thom's Creek series has been discussed by Phelps (1968) for the Savannah River drainage and Trinkley (1980b, 1980c) has discussed the Thom's Creek pottery from the South Carolina coastal area. The Fish Haul specimens (Figure 53I-L) are typical of this series and plain, simple stamped, shell punctate, and reed punctate motifs have been identified. Trinkley (1984) has recently discussed the place of simple stamping in the Thom's Creek series.

The Refuge series has been recently discussed at length by DePratter (1979a) Lepionka et al.(1983), and Trinkley (1982). Examples from Fish Haul are limited to two sherds of a random punctate motif on a very sandy and friable paste. One sherd has sharp dowel or stick stamp impressions in the lip (Figure 53M).

The Mount Pleasant series on the South Carolina coast is characterized by a fine sandy paste with few or no inclusions. While originally typed from North Carolina by Phelps (1984:41-44), its application in South Carolina is discussed by Trinkley (1983a). Both plain (N=6) and cord marked (N=8) specimens are identified from Fish Haul (Figure 53N).

DePratter (1979a) discusses the St. Catherines series and Trinkley (1981) discusses the excavation of a small St. Catherines midden on Victoria Bluff, Beaufort County, South Carolina. The Fish Haul specimens include only plain (N=9) and cord marked (N=4) examples.

The Irene series at Fish Haul is represented by two sherds -- one plain and one complicated stamped. The Irene pottery was typed by Caldwell and Waring (in Williams 1968:119-125) and was further discussed by Caldwell and McCann (1941). Work in the Hilton Head area has identified a major site on Skull Creek (Calmes 1967a), but generally sites of this time period are not common in the area.

Distribution of Stallings Pottery

The distribution of the Stallings pottery may be viewed both horizontally (either across the site or within a single block) and vertically (by either elevation or zone and level). Table 3 provides information on all of the prehistoric pottery recovered from the site. Two blocks, 1982 and 129-141, provide the most complete information for the Stallings pottery and will be the most thoroughly examined by these discussions.

| | STALLINGS | | | | | | THOM'S CREEK | | | | | DEPTFORD | | | | | MOUNT PLEASANT | | ST CATHERINES | | IRENE | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PLAIN | SHELL PUNCTATE | REED PUNCTATE | REED DRAG & JAB | INCISED | CORD IMPRESSED | PLAIN | SIMPLE STAMPED | SHELL PUNCTATE | REED PUNCTATE | REFUGE RANDOM PUNCTATE | PLAIN | CHECK STAMPED | SIMPLE STAMPED | CORD MARKED | INCISED | PLAIN | CORD MARKED | PLAIN | CORD MARKED | PLAIN | COMPLICATED STAMPED | UID | SMALL | |
| AUGER TEST 13 | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| 47 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 71 | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| 95 | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 99 | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 106 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 110 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 111 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 126 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 129 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 135 | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 139 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 140 | 2 | 4 | | | | | | | | | | | | | | | | | | | | | | | |
| 142 | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| 152 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 156 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 157 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 159 | | | | | | | 1 | | | | | | | | | | | | | | | | | 5 | |
| 161 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 164 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 168 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 169 | 17 | | | | | | | | | | | | | | | | | | | | | | | | |
| 176 | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| 190 | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| 217 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 220 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 223 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 225 | | | | | | | 1 | 3 | | | | | | | | | | | | | | | | | |
| 245 | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Subtotals | 23 | 6 | 1 | - | - | - | 4 | 3 | - | - | - | 1 | - | - | 2 | - | - | - | - | - | - | - | 1 | 19 | 60 |
| % | 38 3 | 10 0 | 1 7 | - | - | - | 6 7 | 5 0 | - | - | - | 1 7 | - | - | 3 3 | - | - | - | - | - | - | - | 1 7 | 31 6 | 100 |

Table 3. Prehistoric pottery recovered from Fish Haul, by provenience.

| | STALLINGS | | | | | | THOM'S CREEK | | | | | DEPTFORD | | | | | MOUNT PLEASANT | | ST CATHERINES | | IRENE | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PLAIN | SHELL PUNCTATE | REED PUNCTATE | REED DRAG & JAB | INCISED | CORD IMPRESSED | PLAIN | SIMPLE STAMPED | SHELL PUNCTATE | REED PUNCTATE | REFUGE RANDOM PUNCTATE | PLAIN | CHECK STAMPED | SIMPLE STAMPED | CORD MARKED | INCISED | PLAIN | CORD MARKED | PLAIN | CORD MARKED | PLAIN | COMPLICATED STAMPED | UID | SMALL | |
| TEST PIT 5 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 14 | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| 15 | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| 16 | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| 18 | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 19 | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Subtotals | 2 | 1 | - | - | - | - | 2 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 5 | 11 |
| % | 18 2 | 9 1 | - | - | - | - | 18 2 | - | 9 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 45 4 | 100 |
| 177 BLOCK | | | | | | | | | | | | | | | | | | | | | | | | | |
| 177-OR30(OR25), Zone 1 | | | | | | | 1 | | | | | | | | 3 | | | 2 | | | | | | 3 | |
| Subtotals | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 3 | - | - | 2 | - | - | - | - | - | 3 | 9 |
| % | - | - | - | - | - | - | 11 1 | - | - | - | - | - | - | - | 33 3 | - | - | 22.2 | - | - | - | - | - | 33 3 | 99 9 |
| 218 BLOCK | | | | | | | | | | | | | | | | | | | | | | | | | |
| 218-42R10 Zone 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 218-42R10, Zone 2 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 218-40R20 Zone 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 218-40R20, Zone 2 | 3 | | | | | | 4 | 3 | | | | 5 | | | 1 | | | | | | | | | | |
| 218-40R30 Zone 2 Level 1 | 5 | | | | | | 2 | | | | 1 | 14 | | 14 | 2 | | | | | | | | | 21 | |
| 218-40R30 Zone 2 Level 2 | 3 | | | | | | 3 | | | | | 7 | | 6 | | | | | | | | | | 19 | |
| 218-40R30 Zone 2 Level 3 | 1 | | | | | | 1 | | | | | 2 | | | | | | | | | | | | | |
| 218-40R30 Zone 2 Level 4 | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Subtotals | 16 | - | - | - | - | - | 10 | 3 | - | - | 1 | 30 | - | 20 | 3 | - | - | - | - | - | - | - | - | 40 | 123 |
| % | 13 0 | - | - | - | - | - | 8 1 | 2 4 | - | - | 0 8 | 24 4 | - | 16 3 | 2 5 | - | - | - | - | - | - | - | - | 32 5 | 100 |

Table 3 (cont.). Prehistoric pottery from Fish Haul, by provenience

| | STALLINGS | | | | | | THOM'S CREEK | | | | | DEPTFORD | | | | | MOUNT PLEASANT | | ST CATHERINES | | IRENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PLAIN | SHELL PUNCTATE | REED PUNCTATE | REED DRAG & JAB | INCISED | CORD IMPRESSED | PLAIN | SIMPLE STAMPED | SHELL PUNCTATE | REED PUNCTATE | REFUGE RANDOM PUNCTATE | PLAIN | CHECK STAMPED | SIMPLE STAMPED | CORD MARKED | INCISED | PLAIN | CORD MARKED | PLAIN | CORD MARKED | PLAIN | COMPLICATED STAMPED | UID | SMALL |
| 1982-90R90 Zone 2, Level 1 | 2 | 1 | 1 | | | | | | | | | | 1 | | | | | | | | | | | 3 |
| 1982-90R90 Zone 2, Level 2 | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 1982-90R90 Zone 2, Level 3 | 1 | 1 | 3 | 3 | | | | | | | | | | | | | | | | | | | | 5 |
| 1982-90R90, Zone 2, Level 4 | | 2 | 1 | 2 | 1 | | | | | | | | | | | | | | | | | | | 4 |
| 1982-90R90, Zone 2, Level 5 | 2 | 1 | 7 | | | | | | | | | | | | | | | | | | | | | 7 |
| 1982-90R110 Zone 2, Level 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | 3 |
| 1982-90R110, Zone 2 Level 2 | 2 | 2 | 2 | 2 | | | | | | | | 4 | 10 | | | | | | | | | | | 15 |
| 1982-90R110, Zone 2 Level 3 | 10 | 6 | 14 | 7 | 1 | 2 | | | | | | | 3 | | | | | | | | | | | 38 |
| 1982-90R110 Zone 2, Level 4 | 2 | 1 | 1 | 2 | | 1 | | | | | | | | | | | | | | | | | | 13 |
| 1982-90R110, Zone 2, Level 5 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | 6 |
| 1982-100R110, Zone 2, Level 1 | | | | | | | | | | | | | | | | | | | | | | | | 6 |
| 1982-100R110, Zone 2, Level 2 | 12 | 5 | 6 | 7 | | | | | | | | 7 | | 3 | | | | | | | | | | 40 |
| 1982-100R110 Zone 2, Level 3 | 26 | 11 | 14 | 7 | 4 | | | | | | | 1 | | | | | | | | | | | | 40 |
| 1982-100R110 Zone 2, Level 4 | | | 1 | 1 | 3 | | | | | | | | | | | | | | | | | | | 7 |
| 1982-100R110 Zone 2, Level 5 | 3 | 1 | | | | | | | | | | | | 1 | | | | | | | | | | 5 |
| 1982 block profits | | 1 | 2 | 1 | | | | | | | | | | | | | | | | | | | | |
| Subtotals | 186 | 71 | 198 | 126 | 23 | 6 | 4 | 1 | | | | 14 | 51 | 8 | 1 | | | | | | | | | 559 |
| % | 14 4 | 5 5 | 15 4 | 9 8 | 1 8 | 0 5 | 0 3 | 0 1 | | | | 1 1 | 3 9 | 0 6 | 0 1 | | | | | | | | | 46 5 |
| 130-131 BLOCK | | | | | | | | | | | | 2 | 2 | | 2 | | | | | | | | 1 | 7 |
| 131-45R50 Zone 1 | | | 1 | 1 | | | | | | | | | | | 6 | | | | | | | | | 19 |
| 130-0R50, Zone 1 | 1 | | | | | | 1 | | | | | | | | | | | | | | | | | 6 |
| 130-10R50, Zone 1 | 3 | | 3 | | | | 1 | 12 | | | 1 | | | | 1 | | | | | | | | | 18 |
| 130-20R50 Zone 1 | 10 | 3 | | 6 | 3 | | 1 | 1 | | | | | | | | | | | | | | | | 25 |
| 130-20R50 Zone 2, Level 1 | 3 | | 3 | | | | 2 | | | 1 | | | | | | | | | | | | | | 12 |
| 130-20R50, Zone 2, Level 2 | | | 1 | 5 | | | | | | | | | | | | | | | | | | | | |
| 130-20R50, Zone 2 Level 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Subtotals | 17 | 3 | 8 | 12 | 3 | | 5 | 13 | | 1 | 1 | 2 | 2 | | 9 | | | | | | | | 1 | 87 |
| % | 10 4 | 1 8 | 4 9 | 7 3 | 1 8 | | 3 1 | 7 9 | | 0 6 | 0 6 | 1 2 | 1 2 | | 5 5 | | | | | | | | 0 6 | 53 1 |

Table 3 (cont.). Prehistoric pottery from Fish Haul, by provenience.

| | STALLINGS | | | | | | THOM'S CREEK | | | | | DEPTFORD | | | | | MOUNT PLEASANT | | ST CATHERINES | | IRENE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PLAIN | SHELL PUNCTATE | REED PUNCTATE | REED DRAG & JAB | INCISED | CORD IMPRESSED | PLAIN | SIMPLE STAMPED | SHELL PUNCTATE | REED PUNCTATE | REFUGE RANDOM PUNCTATE | PLAIN | CHECK STAMPED | SIMPLE STAMPED | CORD MARKED | INCISED | PLAIN | CORD MARKED | PLAIN | CORD MARKED | PLAIN | COMPLICATED STAMPED | UID | SMALL |
| 129-141 BLOCK | | | | | | | | | | | | | | | | | | | | | | | | |
| 141-0R50 Zone 2, Level 1 | 3 | | 1 | | | | | | | | | | | | | | | | | | | | | 5 |
| 141-0R50 Zone 2 Level 2 | 5 | | 1 | | | | | | | | | | | | 1 | | | | | | | | | 6 |
| 141-0R50 Zone 2, Level 3 | 10 | 1 | 4 | 11 | | | | | | | | | | | | | | | | | | | | 26 |
| 141-0R50 Zone 2 Level 4 | 6 | 2 | 7 | 3 | | | | | | | | | | | | | | | | | | | | 25 |
| 141-0R50, Zone 2, Level 5 | 5 | | 3 | 10 | 1 | | | | | | | | | | | | | | | | | | | 24 |
| 141-10R50, Zone 2, Level 1 | | | 1 | | | | | | | | | | | | | | | | | | | | | 4 |
| 141-10R50 Zone 2, Level 2 | 1 | 1 | 3 | 4 | | | | | | | | | | | | | | | | | | | | 20 |
| 141-10R50, Zone 2 Level 3 | 19 | 3 | 27 | 29 | | | | | | | | | | | | | | | | | | | | 78 |
| 141-10R50 Zone 2, Level 4 | 4 | 3 | 8 | 1 | | | | | | | | | | | | | | | | | | | | 9 |
| 141-10R50 Zone 2 Level 5 | | 1 | | | | | | | | | | | | | | | | | | | | | | 4 |
| 129-0R50, Zone 2, Level 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 129-0R50, Zone 2, Level 2 | 4 | | 1 | | | | | | | | | | | | | | | | | | | | | 13 |
| 129-0R50, Zone 2, Level 3 | 3 | 2 | | 5 | | | | | | | | | | | | | | | | | | | | 9 |
| 129-0R50 Zone 2, Level 4 | 4 | | 6 | 3 | | | | | | | | | | | | | | | | | | | | 18 |
| 129-0R50, Zone 2 Level 5 | 2 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | 19 |
| 129-0R50 Zone 2, Cleaning | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | 2 |
| 129-10R10 Zone 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 129-10R10 Zone 2, Level 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | 5 |
| 129-10R10 Zone 2, Level 2 | 5 | 1 | 2 | 1 | | | | | | | | | | | | | | | | | | | | 20 |
| 129-10R10 Zone 2, Level 3 | 8 | 7 | 9 | 6 | | | | | | | | | | | | | | | | | | | | 56 |
| 129-10R10 Zone 2 Level 4 | 16 | 5 | 2 | | | | | | | | | | | | | | | | | | | | | 39 |
| 129-10R10 Zone 2, Level 5 | 7 | | | | | | | | | | | | | | | | | | | | | | | 37 |
| 129-10R20 Zone 2 Level 1 | 1 | | 2 | | | | | | | | | | | | | | | | | | | | | 16 |
| 129-10R20 Zone 2 Level 2 | 9 | 1 | 1 | 5 | | | | | | | | | | | | | | | | | | | | 38 |
| 129-10R20, Zone 2, Level 3 | 8 | 1 | 6 | 4 | 2 | | | | | | | | | | | | | | | | | | | 38 |
| 129-10R20, Zone 2 Level 4 | 6 | 6 | 2 | 3 | 2 | | | | | | | | | | | | | | | | | | | 44 |
| 129-10R20 Zone 2 Level 5 | 5 | | 1 | 3 | | | | | | | | | | | | | | | | | | | | 21 |
| 129-10R20 Zone 2, ph 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 129-10R20 Zone 2, ph 2 | 3 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | 6 |
| 129-20R20, Zone 1 | 2 | 1 | | 8 | | | | | | | | | | | | | | | | | | | | 10 |
| 129-20R20 Zone 2, Level 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | 13 |
| 129-20R20 Zone 2 Level 2 | 8 | 2 | 7 | 5 | 4 | | | | | | | | | | | | | | | | | | | 44 |
| 129-20R20 Zone 2 Level 3 | 13 | | 2 | | 5 | | | | | | | | | | | | | | | | | | | 42 |
| 129-20R20, Zone 2, Level 4 | | 2 | 2 | | | | | | | | | | | | | | | | | | | | | 3 |

Table 3 (cont.). Prehistoric pottery from Fish Haul, by provenience.

| | STALLINGS | | | | | | THOM'S CREEK | | | | | DEPTFORD | | | | | MOUNT PLEASANT | | ST CATHERINES | | IRENE | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PLAIN | SHELL PUNCTATE | REED PUNCTATE | REED DRAG & JAB | INCISED | CORD IMPRESSED | PLAIN | SIMPLE STAMPED | SHELL PUNCTATE | REED PUNCTATE | REFUGE RANDOM PUNCTATE | PLAIN | CHECK STAMPED | SIMPLE STAMPED | CORD MARKED | INCISED | PLAIN | CORD MARKED | PLAIN | CORD MARKED | PLAIN | COMPLICATED STAMPED | UID | SMALL | |
| 129-20R20 Zone 2, Level 5/6 | | | 4 | | | | | | | | | | | | | | | | | | | | | | |
| 129-20R20 Zone 2, ph 1 | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | 15 | |
| 129-20R20 Zone 2, ph 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Subtotals | 164 | 40 | 106 | 104 | 14 | - | - | - | - | - | -- | - | - | - | 1 | - | - | - | - | - | - | -- | - | 692 | 1121 |
| % | 14 6 | 3 6 | 9 5 | 9 3 | 1 2 | - | - | - | - | - | -- | - | - | - | 0 1 | - | - | - | - | - | - | -- | - | 61 7 | 100 |
| 161-162 BLOCK | | | | | | | | | | | | | | | | | | | | | | | | | |
| 162-0R25, Zone 1 | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| 162-0R25, Zone 2 | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| 162-5R25, Zone 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 163-5R25, Zone 2 | 1 | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | |
| 162-10R25, Zone 1 | | | | | | | | | | | | | | | | | | | | | | | | 7 | |
| 162-15R25, Zone 2 | 5 | | | | 8 | | 1 | | | | | | | | | | | | | | | | | 1 | |
| 162-15R25 ph 1 | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| 162-20R25 Zone 1 | 5 | | | | 1 | | | | | | | | | | | | | | | | | | | 3 | |
| 162-20R25 Zone 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 162-25R25, Zone 2 | | | 2 | 1 | | | | | | | | | | | | | | | | | | | | 3 | |
| 162-30R20, Zone 1 | | | 1 | | | | | | | | | | | | | | | | | | | | | 6 | |
| 162-30R20, Zone 2 | | | 2 | | | | | | | | | | | | | | | | | | | | | 1 | |
| 162-30R30, Zone 1 | 3 | | 1 | | | | | | | | | | | | | | | | | | | | | 3 | |
| 162-30R30 Zone 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 162-30R40, Zone 1 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | 6 | |
| 162-3-R40, Zone 2 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 162-30R40 Zone 2 ph 1 | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 162-40R20 Zone 2 | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 162-40R30, Zone 1 | 1 | | | | | | | | | | | | | | | 1 | | | | | | | | | |
| 162-40R30, Zone 2 | | 1 | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 162-40R40 Zone 1 | 2 | 4 | | | | | | | | | | | | 1 | | | | | | | | | | | |
| 162-40R40 Zone 2 | 1 | 2 | 1 | | | | | | | | | | | | | | | 1 | | | | | | 10 | |
| 162-0R30 Zone 2 | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 162-0R30 ph 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 162-0R40 Zone 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 162-0R40 Area A | 4 | 1 | | | | | | | | | | | | | | | | | | | | | | 2 | |
| 162-0R40 Zone 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subtotals | 27 | 13 | 9 | 1 | 9 | - | 2 | 1 | - | - | -- | 1 | - | 1 | 1 | 1 | - | 1 | - | - | - | -- | - | 51 | 118 |
| % | 22 9 | 11 0 | 7 6 | 0 8 | 7 6 | - | 1 7 | 0 8 | - | - | -- | 0 8 | - | 0 8 | 0 8 | 0 8 | - | 0 8 | - | - | - | -- | - | 43 5 | 99 6 |

Table 3 (cont.). Prehistoric pottery from Fish Haul, by provenience.

| | STALLINGS | | | | | | THOM'S CREEK | | | | | DEPTFORD | | | | | MOUNT PLEASANT | | ST CATHERINES | | IRENE | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PLAIN | SHELL PUNCTATE | REED PUNCTATE | REED DRAG & JAB | INCISED | CORD IMPRESSED | PLAIN | SIMPLE STAMPED | SHELL PUNCTATE | REED PUNCTATE | REFUGE RANDOM PUNCTATE | PLAIN | CHECK STAMPED | SIMPLE STAMPED | CORD MARKED | INCISED | PLAIN | CORD MARKED | PLAIN | CORD MARKED | PLAIN | COMPLICATED STAMPED | UID | SMALL | |
| 91-92 BLOCK | | | | | | | | | | | | | | | | | | | | | | | | | |
| 92-30R10, Zone 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| 92-30R10 Zone 2 | | | 1 | | | | | 1 | | | | | | | | | | | | | | | | | |
| 92-40R10 Zone 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 92-40R10, Zone 2 | | | 1 | | | | 1 | | | | | | | | | | | | | | | | | 7 | |
| 92-0R5, Zone 1 | | | | | | | 1 | | | | | | | | | | | | | | | | | 4 | |
| 92-0R5, ph 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 91-0R10, Zone 2 | | | | | | | | | | | | 1 | | | | | | | | | | | | 1 | |
| Subtotals | 3 | - | 2 | - | - | - | 2 | 1 | - | - | --- | 1 | - | - | - | - | - | - | - | - | - | -- | - | 12 | 21 |
| % | 14 3 | - | 9 5 | - | - | - | 9 5 | 4 8 | - | - | --- | 4 8 | - | - | - | - | - | - | - | - | - | -- | - | 57 1 | 100 |
| 110-123 BLOCK | | | | | | | | | | | | | | | | | | | | | | | | | |
| 123-20R50, Zone 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 123-20R50, Zone 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 123-30R50, Zone 1 | 1 | | | | | | 1 | | | | | | | | | | | | | | | | | 7 | |
| 123-40R50, Zone 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 123-40R50, Area A | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | 4 | |
| 123-40R50 Zone 2 | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| 110-35R10 Zone 1 | 13 | 4 | 2 | | | | 6 | | 8 | 2 | | | | | | | | | | | | | | 15 | |
| 110-35R10 Zone 2 | | | | | | | | | | | | | | | | | | | | | | 1 | | 2 | |
| 110-35R10 ph 3 | | | | 1 | | | | | | | | | | | | | | | | | | | | 3 | |
| 110-35R10, ph 5 | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| Cleaning 110-123 Block | 4 | | | 1 | | | | | 1 | | | | | | | | | | | | | | | 1 | |
| Subtotals | 20 | 4 | 2 | 3 | - | - | 7 | - | 9 | 2 | --- | 1 | 1 | - | 1 | - | - | - | - | - | - | 1 | - | 33 | 84 |
| % | 23 8 | 4 8 | 2 4 | 3 6 | - | - | 8 3 | - | 10 7 | 2 4 | --- | 1 2 | 1 2 | - | 1 2 | - | - | - | - | - | - | 1 2 | - | 39 2 | 100 |

Table 3 (cont.). Prehistoric pottery from Fish Haul, by provenience.

| | STALLINGS | | | | | | THOM'S CREEK | | | | | DEPTFORD | | | | | MOUNT PLEASANT | | ST. CATHERINES | | IRENE | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PLAIN | SHELL PUNCTATE | REED PUNCTATE | REED DRAG & JAB | INCISED | CORD IMPRESSED | PLAIN | SIMPLE STAMPED | SHELL PUNCTATE | REED PUNCTATE | REFUGE RANDOM PUNCTATE | PLAIN | CHECK STAMPED | SIMPLE STAMPED | CORD MARKED | INCISED | PLAIN | CORD MARKED | PLAIN | CORD MARKED | PLAIN | COMPLICATED STAMPED | UID | SMALL | |
| 39-40-47-48 BLOCK | | | | | | | | | | | | | | | | | | | | | | | | | |
| 48-40R50 Zone 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 48-40R50, Zone 2 | | | | | | | | | | | | | | | 1 | | | | 8 | | | | | 2 | |
| 40-45R5, Zone 1 | | | | | | | | | | | | 2 | | | | | | 4 | 1 | | | | | 4 | |
| 40-45R5 Zone 2 | | | | | | | | | | | | | | | | | 3 | | | | | | | | |
| 47-0R50 Zone 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| 39-0R50, Zone 1 | 1 | | | | | | | | | | | | | | | | 2 | | | 1 | | | | | |
| 39-0R50 Zone 2 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 39-0R05, ph 1 | | | | | | | | | | | | 1 | | | | | | | | | | | | 1 | |
| | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| Subtotals | 2 | - | 1 | - | - | - | - | - | - | - | -- | 4 | - | - | 1 | - | 5 | 4 | 9 | 1 | - | --- | - | 8 | 35 |
| % | 5 7 | - | 2 9 | - | - | - | - | - | - | - | -- | 11 4 | - | - | 2 9 | - | 14 3 | 11 4 | 25 9 | 2 9 | - | --- | - | 22 9 | 100 |
| FEATURES | | | | | | | | | | | | | | | | | | | | | | | | | |
| Feature 3 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Feature 4 | | 1 | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Feature 5 | 3 | 7 | 2 | 1 | | | | | | | | | | | | | | | | | | | | 5 | |
| Feature 6 | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| Feature 7 | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Feature 8 | | | | | | | | | | | | | | 1 | 2 | | | | | 3 | | | | 9 | |
| Feature 9 | 5 | | 1 | 2 | | | | | | | | | | | | | | | | | | | | 6 | |
| Feature 10 | | | | | | | | | | | | | | | | | 1 | | | | 1 | | 1 | 2 | |
| Feature 11 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| Feature 12 | | 7 | 5 | 2 | 8 | | | | | | | | | | | | | 1 | | | | | | 17 | |
| Feature 13 | 2 | | | | 1 | | | | | | | | | | 1 | | | | | | | | | | |
| Feature 15 | | | | | | | | | | | | 16 | | | | | | | | | | | | | |
| Feature 17 | 7 | | | 2 | 2 | | | | | | | | | | | | | | | | | | | 9 | |
| Feature 18 | 16 | 7 | 27 | 25 | | 1 | | | | 1 | | | | | | | | | | | | | | 81 | |
| Feature 19 | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Feature 20 | 3 | | 4 | 4 | 3 | | | | | | | | | | | | | | | | | | | 9 | |
| Feature 21 | 23 | | 22 | 7 | 12 | | | | | | | | | | | | | | | | | | | 25 | |
| Feature 22 | 1 | 1 | 4 | | | 1 | | | | | | | | | | | | | | | | | | 12 | |
| Feature 23 | 6 | | 3 | | | | | | | | | | | | | | | | | | | | | 17 | |

Table 3 (cont.). Prehistoric pottery from Fish Haul, by provenience.

| | STALLINGS | | | | | | THOM'S CREEK | | | | | DEPTFORD | | | | | MOUNT PLEASANT | | ST CATHERINES | | IRENE | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PLAIN | SHELL PUNCTATE | REED PUNCTATE | REED DRAG & JAB | INCISED | CORD IMPRESSED | PLAIN | SIMPLE STAMPED | SHELL PUNCTATE | REED PUNCTATE | REFUGE RANDOM PUNCTATE | PLAIN | CHECK STAMPED | SIMPLE STAMPED | CORD MARKED | INCISED | PLAIN | CORD MARKED | PLAIN | CORD MARKED | PLAIN | COMPLICATED STAMPED | UID | SMALL | |
| Feature 24 | | | | 4 | | | | | | | | | | | | | | | | | | | | | |
| Feature 27 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Feature 28 | 9 | 2 | 7 | 1 | 1 | | | | | | | | | | | | | | | | | | | 24 | |
| Subtotals | 78 | 25 | 76 | 48 | 27 | 1 | 1 | - | - | 1 | -- | 17 | - | 1 | 3 | - | 1 | 1 | - | 3 | 1 | --- | 1 | 222 | 507 |
| % | 15 4 | 4 9 | 15 0 | 9 4 | 5 3 | 0 2 | 0 2 | - | - | C 2 | -- | 3 4 | - | 0 2 | 0 6 | - | 0 2 | 0 2 | - | 0 6 | 0 2 | --- | 0 2 | 43 8 | 100 |
| TOTALS | 538 | 163 | 403 | 204 | 76 | 7 | 38 | 22 | 10 | 4 | 2 | 71 | 54 | 30 | 25 | 1 | 6 | 8 | 9 | 4 | 1 | 1 | 3 | 1171 | 3541 |
| % | 15 2 | 4 6 | 11 4 | 8 3 | 2 1 | 0 2 | 1 1 | 0 6 | 0 3 | 0 1 | 0 1 | 2 0 | 1 5 | 0 8 | 0 7 | - | 0 2 | 0 2 | 0 3 | 0 1 | - | - | 0 1 | 50 0 | 99 9 |

Table 3 (cont.). Prehistoric pottery from Fish Haul, by provenience.

## Vertical Distribution

As discussed earlier, previous research at Fish Haul suggested that the 1.3 foot (0.5 meter) of Stallings deposits might yield stratigraphic information on the development of the different motifs. This was based on the belief that these deposits were gradually accumulated during periods of successive occupation. The first indication that this interpretation might be incorrect was provided by the computer mapping of the auger tests, which suggested discrete loci of limited duration. This subsequent analysis of the Stallings type distribution by levels within Zone 2 tends to support the interpretation of a short duration occupation in different site areas and fails to support the original contention (Trinkley and Zierden 1983) that changes in pottery type frequencies could be observed stratigraphically. While there are some anomalies in the distributions, these may be best explained by the relatively small simple sizes. The possibility remains that shell, reed, and drag and jab motifs may be temporally sensitive; there is simply too little time depth associated with the discrete horizontal clusters at Fish Haul for this hypothesis to be tested.

Figure 54 illustrates the distribution frequency of various Stallings decorative motifs by levels in the 1982 and 129-141 blocks. It will be observed that for most motifs, in both blocks, there is a peak in occurrence in Zone 2, level 3 with the frequency of the motif decreasing both in lower and higher levels. For most decorative styles, in other words, there is an attenuated battleship curve with the bulge corresponding to level 3 of Zone 2. There are only two exceptions -- the drag and jab motif in the 1982 block which gradually builds to a maximum popularity in level 2, and the shell punctate motif in the 129-141 block which appears to decline in popularity from a maximum in level 4. These two exceptions may represent sampling problems (although at least the drag and jab sample from the 1982 block is relatively large, representing 20.8% of the pottery from that block).

Figure 54 is interpreted to suggest that the major period of Stallings cultural activity is represented by level 3 of Zone 2 and that the levels below and above this are more weakly associated with the Stallings occupation. Part of the "blurring" is the result of the archaeological levels failing to conform perfectly with the actual Stallings cultural level. It is difficult, given the sandy soils of the site, to refine the stratigraphy, but several clues are offered.

In the 1982 block, Zone 2, level 3 is found mainly from 12.60 to 13.10 feet MSL (3.88 to 4.03 meters MSL) and the tops of the various Stallings features are found from 12.70 to 13.14 feet MSL (3.91 to 4.04 meters MSL). The bulk of

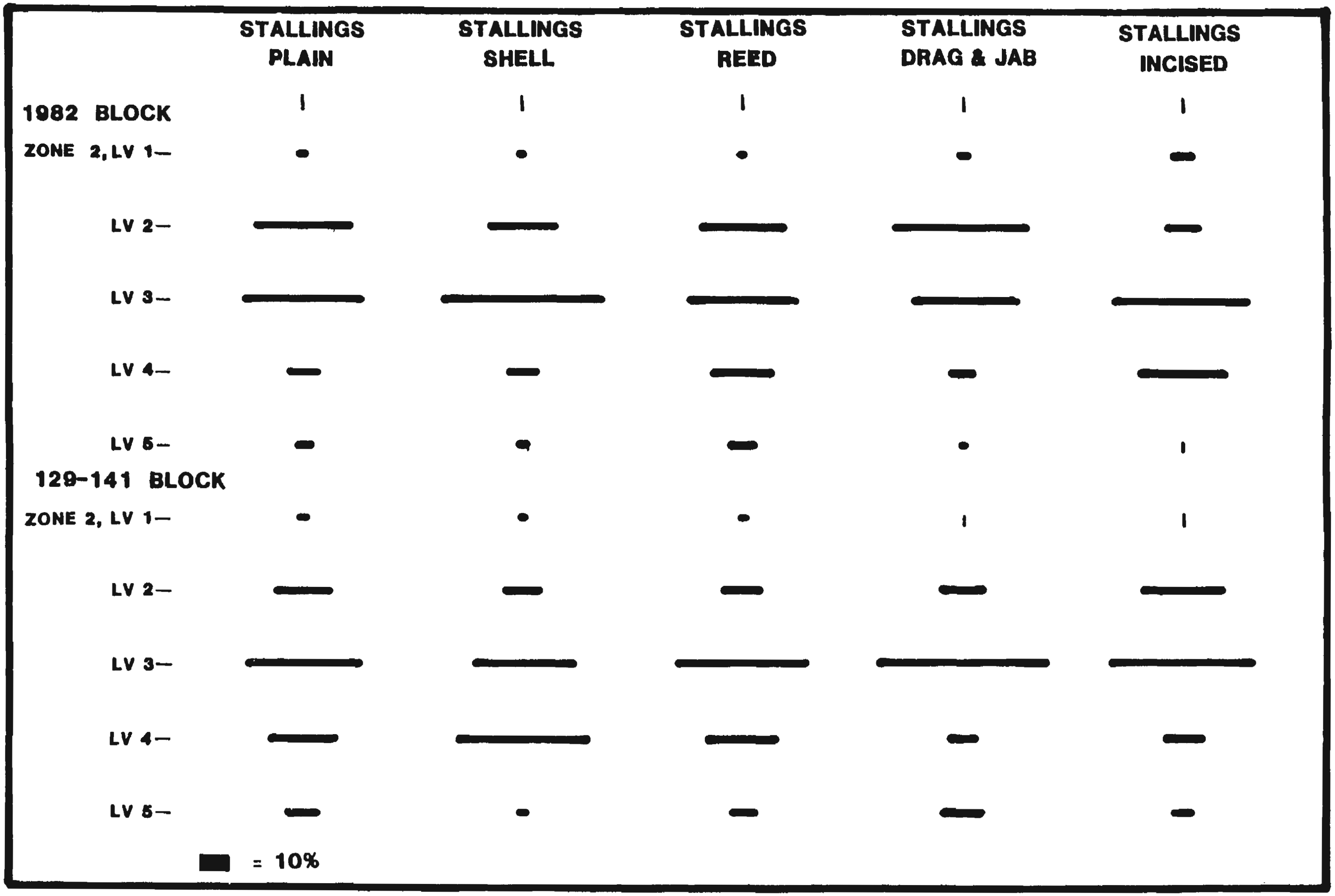

Figure 54. Distribution of Stallings motifs by levels.

the Stallings material, however, appears to be found in the 1 foot (0.3 meter) of soil between the elevations of 12.40 and 13.37 feet MSL (3.01 to 4.11 meters MSL). Certainly a portion of this foot, however, must represent upward and downward migration of artifacts due to both natural and cultural actions. In the 129-141 block, Zone 2, Level 3 was found within the elevations 12.75 to 13.50 feet MSL (3.92 to 4.15 meters MSL), although the tops of most features were found between about 13.10 and 13.80 feet MSL (4.03 to 4.25 meters MSL). While the mean top elevation of features in the 1982 block is 12.95 feet MSL (3.98 meters MSL), the mean for the 129-141 block is 13.42 feet MSL (4.13 meters MSL). The single date from the 129-141 block places it about 400 years younger than the mean of the two dates from 1982 block, which suggests that between 1750 and 1330 B.C. about 0.5 foot of soil was deposited in the area.

Another manner of viewing the vertical distribution of the Stallings pottery is to use the simple, but quite useful, technique discussed by Anderson (1982:218), called the "average depth." Anderson notes that,

> [s]imply put, the average depth of a taxa equals the number of sherds of that taxa in a given level times that levels' basal depth, summed over all levels, with the resulting figure divided by the total number of sherds of that taxa in all levels (Anderson 1982:218).

In the case of the Fish Haul collection the "average depth" is calculated using the level designations rather than basal depths, to yield a figure representing not the actual depth in MSL, but the average level of occurrence.

In the 1982 block the Stallings types have average levels ranging from 3.1 to 1.6, and if the various punctates are combined, the average level of occurrence ranges from 2.8 to 2.9. The overlying Deptford pottery exhibits a less collapsed stratigraphy, with plain and check stamped types occurring at an average level of 2.2 and Deptford Cord Marked at an average level of 1.0. Turning to the 129-141 block, the Stallings wares are found distributed from average levels of 3.3 to 3.0. The 218-40R30 square, from a more inland site area, reveals that the Stallings Plain has an average level of 2.2, the Thom's Creek Plain has an average level of 1.8, while the Deptford Plain and Simple Stamp have average levels of 1.5 and 1.3 respectively. Thus, while site depth decreases inland from the marsh, the integrity of site's stratigraphy appears to remain relatively intact.

In summary, the vertical distribution of Stallings pottery at Fish Haul suggests that the two major blocks examined in this study probably do not represent long, continuous occupations, but rather are loci of short duration occupations. The vertical distribution of pottery in these blocks is the result of both cultural and natural actions, including prehistoric ground surface disturbances (such as the digging of unrecognized pits and the trampling of refuse into the sandy soil), erosion and deposition, and animal and plant soil movements.

## Horizontal Distribution

If the two prehistoric blocks represent spatially and temporally discrete occupations then it is anticipated that the frequency of various taxa will differ between the two areas. While an examination of the total collection from the two blocks does reveal frequency differences, they range from as little as 0.4% for incised to only 7.7% for reed punctate (Table 4). Computation of the chi-square test for independence reveals a x of 44.74, which is significant at the .001 level. It is therefore likely that the observed

| | Plain | | Shell Punctate | | Reed Punctate | | Drag & Jab Punctate | | Totals |
|---|---|---|---|---|---|---|---|---|---|
| 129-141 | 156 | 39.8% | 39 | 9.9% | 103 | 26.3% | 94 | 24.0% | 392 |
| 1982 | 186 | 32.2% | 78 | 13.5% | 196 | 34.0% | 125 | 21.7% | 577 |
| Totals | 342 | | 109 | | 299 | | 219 | | 969 |

Table 4. Distribution of Stallings types by block (exclusive of Stallings Incised).

differences between the two areas are significant. Most of the x2 (28.92) was derived from the reed punctated pottery, which suggests that this Stallings type is relatively more sensitive (or at least spatically skewed) than the other taxa.

The 1982 block, which contains the greater frequency of Stallings Reed Punctate pottery, has also produced two radiocarbon dates older than the one available for the 129-141 block. In addition, the percentage of Stallings Reed Punctate pottery decreases from 37.5% in the 1982 block features to 30.3% in the 129-141 block features. While the results are far from clear, the spatial distribution of pottery between the two blocks may reflect the various motifs' temporal sensitivity and further research should concentrate on an examination of larger collections from Fish Haul and additional radiocarbon dating of samples from the site, as well as on obtaining better stratigraphic samples from other sites.

The horizontal distribution of Stallings sherds in the 1982 block reveals declining densities to the northwest and increasing densities to the south and possibly the northeast. While there does not appear to be a correlation between Stallings sherds and the posited Stallings structure in squares 1982-80R90-100, greater numbers of small (i.e.; under 1 inch [2.5 centimeter] in diameter) sherds are found in these squares and immediately to the south. This suggests that activity in the vicinity of this possible structure created greater fragmentation of pottery.

The 129-141 block revealed a slight increase of large sherds to the north, but a very clear increase in small sherds south to north. The increase in the density of small sherds may relate to activity which took place in the vicinity of the square 129-20R20, which is the locus of five features (Features 17-20).

# LITHIC ANALYSIS

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## Introduction

Analysis of the Fish Haul lithic assemblage was developed with several goals in mind: (1) to describe the materials; (2) to examine the technology; (3) to make inferences about the use of curated tools; and (4) to place the site in a regional framework related to current research examining mobility models.

Archaeological research throughout North America, including the Southeast, has focused on development of regional chronologies. Early research concentrated largely on ceramic artifacts (Caldwell and Waring 1939; Griffin 1952; Waring and Holder 1940) and development of projectile point types considered to reflect the ". . . activities of a particular group of people at a particular period of time" (Coe 1964:6). With hindsight we can observe the error in this assumption, however, it was not until Coe's (1964) excavations at the Doerschuk and Hardaway sites, initiated in the 1940s, that the first well documented, stratified sites with diagnostic single components were identified. This seminal work serves as the basis for chronological interpretations of ceramics and projectile points in the region. Although the importance of lithic material types has been recognized for some time (Goodman 1944), Coe (1964) and Stoltman (1974) brought the issue to the forefront, again serving as the foundation for later contributions (Blanton 1983; Novick 1978). Only with well developed chronological frameworks and descriptions is it possible to address behaviorally oriented questions.

Our major interest, beyond describing the assemblage, is examining the Fish Haul lithics from a regional perspective. While Griffin (1952) and others posed hypotheses about site differences and site use several decades ago, the necessity of examining site diversity and variability (Binford and Bindford 1966) has received more attention lately as a result of increased CRM work (Glassow 1977; Mathis 1979). Small sites, probably task specific sites or short term occupations, are no longer glossed over. Rather attempts are made to fit them into regional models (Binford 1983). A number of models integrating organizational strategies and lithic materials have been proposed (Cable 1982; Kelly 1985; Torrence 1983) based on Binford's (1980) forager-collector model as it relates to environmental variables of resources and temperature. In addition to these models, diachronic studies of lithic materials play an important role in refining regional interpretations of land use patterns (Anderson et al. 1979, 1972; Anderson and Schuldenrein 1985; Claggett and Cable 1982; Goodyear 1979; House and Ballenger 1976; House and Wogaman 1978; Tippitt and Marquardt 1984).

Although Waring (1968:245) recognized the increase of late Archaic projectile points along the coast, lithic assemblages from coastal sites generally are minimal (May 1987; Milanich 1971). Consequently the size of the Fish Haul collection, including both tools and debitage, makes it anomalous and allows us to propose some interpretations. Thus a contextual framework exists, including both a well developed chronology and research questions, within which the Fish Haul analysis may be fitted.

Due to the late project involvement of the authors the analytical results are descriptive and preliminary in nature. Analysis of the hafted bifaces/projectile points, large stone tools, and debitage was conducted respectively by the authors. The introduction is followed by a general statement of analytical methods and description of lithic materials. Particular attributes and analytical results of the assemblage subsets are presented, followed by interpretations and inferences about manufacturing strategies and formation of the assemblage.

## Analytical Methods

Certain analytical procedures were used for the entire assemblage and are detailed below. Each artifact was analyzed individually and measured using metric calipers. All weights were recorded in grams. A Nikon binocular microscope aided identification of platform preparation and edge damage.

### Lithic Material

A preliminary examination of the artifacts led us to conclude that most of the material represents varieties of Allendale chert. Similar materials are found in archaeological contexts throughout the region, beginning in early Holocene times, and are readily identified as Oligocene-age fossiliferous cherts of the Flint River formations of South Carolina and Georgia (Cooke 1936). Those sources are widely recognized in the regional literature as "Coastal Plain," "Allendale," or "Briar Creek" cherts, and have been recorded at a number of sites throughout the lower Savannah region and surrounding areas (Anderson 1979; Anderson et al. 1982; Brockington 1971; Kelly 1954; Moore 1898; Stoltman 1974; Waring 1968).

Since some of the large chert tools were dominated by particular colors, our analysis separated lithic material by color, texture, and grain. A variety of fossiliferous cherts were separated by color and include buff/yellow, pink, gray, brown and pink, pink and gray, and white and gray.

Some material is so siliceous that it appears to be more like chalcedony than chert. Consequently it was separated and includes a tan, brown, and gray fossiliferous chalcedony, a clear and white chalcedony, and a pink chalcedony. Jasper, an opaque uniformlly textured and colored chert, was also included as red or burgundy and brown.

Minor occurrences include dark gray fossilized wood, gray rhyolite, white quartzite, a dark gray granular material with vesicles, and an unidentified pale brown material. The last material is so highly weatered that it is often difficult to distinguish flake characteristics on the patinated pieces.

## Thermal Alteration/Heat Treatment

The use of heat treatment (Crabtree and Butler 1964; Flenniken and Garrison 1975) during reduction may vary between technologies, therefore its occurrence was monitored in an effort to determine where it occurred in the various reduction schemes for specific lithic materials. Lithic materials were initially separated by such attributes as color and degree of glossiness so this variable monitored actual, more discrete evidence of heat treatment.

<u>Remnant heat treated surface</u> or color change is a visible textural difference on the dorsal surface of the flake. The original stone surface is dull, while the flake scar indicative of post heat treatment removal is glossy and smooth. This dull, pre-heat treatment surface is not to be confused with cortex; it often exhibits dull dorsal surface scars, indicative of reduction <u>prior</u> to heat treatment. Color change is where an actual color difference is visible on the dorsal surface of the flake. Color differences are visible within flake scars as well as between remnant surfaces and post-heat treatment flake scars.

<u>Burned stone</u> displays pot lid fractures and <u>crazed</u> stone is cracked from heat, often in a series of rectangular patterns similar to the way a ceramic glaze cracks when it burns. Some flakes had crazed exteriors and chalky interiors.

<u>Waxy</u> texture was recorded as being possible evidence for thermal alteration as was a "semi-waxy" texture.

Dull texture is characteristic of quartzites regardless of their thermal state and for cherts that have not been thermally altered. However, the fine quality of some cherts give them an almost glossy appearance although they may not be thermally altered.

Heat fractured stone includes debitage or tools that have been heat fractured and display characteristic crazed or crenated fractures. Inference plays a critical role in archaeological interpretation; consequently, when a lithic artifact displays these characteristics it is difficult to assess its culture significance. Such an artifact may have been over heated when it was thermally altered. Alternatively, the tool may have been left on a ground surface upon which a fire was built, then rediscovered and pressure flaked to rejuvenate the edges. Thus the tool may result from a series of scenarios and it would be difficult to know which of these is correct.

Additional attributes particular to certain artifacts were recorded for the three subsets of artifacts and are detailed below.

## Hafted Biface Analysis

A total of 21 complete or nearly complete biface speciments were available for analysis, plus a smaller number of bifacial tool fragments (Table 5). The following discussions are primarily descriptive in nature, due to limitations of time and sample sizes.

### Typology

All (21) of the complete projectile points, or hafted bifaces, can be categorized as one of three "types" defined in the regional literature. These include Savannah River Stemmed (6 specimens), Small Savannah River Stemmed (12 specimens), and Gypsy Stemmed (3 specimens) (Coe 1964; Oliver 1981).

The several blade fragments (n=8) undoubtedly are broken portions of biface types identical to the three named varieties, but cannot be classified because of their fragmentary nature and lack of diagnostic haft elements. Occurrence of such fragments is predictable (Ahler 1971; Frison and Bradley 1980) and most likely results from fragmentation of larger bifaces during: (1) use as projectiles; (2) use as multipurpose cutting, scraping or perforating tools; or (3) failed attempts to rejuvenate broken or worn specimens. The nature of raw materials utilized, which frequently contain natural stress lines,

| CAT.NO. | ST | MXL | MXW | THK | PTK | BLS | BL | BW | HS | HL | HW | HE | BS | RM | MM | TB | TYP | HT | RW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ARCH-123 | 1 | 44 | 26 | 6 | 4 | 9 | 34 | 26 | 2 | 10 | 16 | 2 | 3 | 6 | 3 | 5 | GYP | N | Y |
| ARCH-134 | 2 | 0 | 20 | 6 | 6 | 9 | 35 | 20 | 2 | 0 | 14 | 10 | 0 | 1 | 3 | 6 | GYP | N | Y |
| ARCH-135/1 | 1 | 86 | 37 | 10 | 2 | 2 | 74 | 37 | 2 | 12 | 20 | 2 | 3 | 1 | 3 | 1 | SR | N | Y |
| ARCH-135/2 | 1 | 74 | 40 | 9 | 4 | 14 | 60 | 40 | 2 | 14 | 19 | 15 | 3 | 1 | 3 | 1 | SR | N | Y |
| ARCH-135/3 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 3 | 7 | BLF | N | N |
| ARCH-141 | 1 | 28 | 38 | 11 | 2 | 14 | 33 | 38 | 2 | 15 | 24 | 11 | 1 | 2 | 3 | 2 | SSR | Y | Y |
| ARCH-142 | 1 | 68 | 36 | 9 | 6 | 14 | 55 | 36 | 2 | 13 | 21 | 4 | 0 | 5 | 3 | 2 | SSR | N | Y |
| ARCH-154 | 5 | 0 | 31 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 3 | DRF | N | N |
| ARCH-167/1 | 1 | 89 | 51 | 11 | 7 | 2 | 77 | 51 | 2 | 12 | 29 | 11 | 3 | 5 | 3 | 7 | SR | N | Y |
| ARCH-195 | 1 | 31 | 22 | 8 | 6 | 11 | 21 | 22 | 2 | 10 | 11 | 1 | 2 | 1 | 3 | 1 | GYP | N | Y |
| ARCH-197 | 1 | 76 | 28 | 12 | 6 | 6 | 62 | 28 | 2 | 14 | 21 | 11 | 3 | 1 | 3 | 2 | SR | Y | Y |
| ARCH-207 | 1 | 57 | 34 | 8 | 2 | 2 | 40 | 34 | 2 | 17 | 18 | 11 | 1 | 1 | 3 | 1 | SSR | N | N |
| ARCH-213 | 1 | 83 | 40 | 12 | 6 | 6 | 66 | 37 | 2 | 17 | 20 | 11 | 3 | 1 | 3 | 2 | SR | N | Y |
| ARCH-171 | 4 | 58 | 37 | 8 | 2 | 10 | 44 | 37 | 2 | 14 | 20 | 4 | 3 | 3 | 3 | 1 | SSR | N | N |
| ARCH-173 | 4 | 69 | 32 | 10 | 6 | 7 | 55 | 32 | 2 | 14 | 18 | 4 | 3 | 1 | 3 | 2 | SSR | Y | Y |
| ARCH-52 | 5 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 2 | BIF | N | Y |
| ARCH-223 | 4 | 70 | 30 | 12 | 4 | 5 | 53 | 30 | 2 | 17 | 16 | 2 | 3 | 1 | 3 | 3 | SSR | N | Y |
| ARCH-225/1 | 7 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 3 | 1 | BLF | N | Y |
| ARCH-225/2 | 4 | 107 | 52 | 14 | 2 | 5 | 94 | 52 | 2 | 13 | 19 | 11 | 3 | 1 | 3 | 5 | SR | N | Y |
| ARCH-225/3 | 3 | 0 | 32 | 9 | 4 | 5 | 0 | 32 | 2 | 0 | 17 | 11 | 0 | 4 | 3 | 14 | SSR | Y | N |
| ARCH-219 | 3 | 0 | 31 | 10 | 6 | 14 | 0 | 31 | 3 | 0 | 14 | 13 | 0 | 2 | 3 | 5 | SSR | Y | Y |
| ARCH-239 | 1 | 58 | 37 | 11 | 2 | 2 | 41 | 37 | 3 | 17 | 16 | 3 | 2 | 1 | 3 | 2 | SSR | N | Y |
| ARCH-249 | 4 | 61 | 28 | 12 | 4 | 14 | 50 | 28 | 2 | 11 | 19 | 4 | 3 | 1 | 3 | 3 | SSR | N | Y |
| ARCH-270 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | BLF | N | N |
| ARCH-311 | 5 | 36 | 30 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 4 | BIF | N | Y |
| ARCH-315 | 5 | 34 | 35 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 2 | 3 | BLF | N | N |
| ARCH-320 | 4 | 68 | 26 | 10 | 6 | 1 | 53 | 26 | 2 | 15 | 17 | 11 | 1 | 5 | 2 | 7 | SSR | Y | N |
| ARCH-324 | 5 | 33 | 21 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 2 | 5 | BIF | Y | N |
| ARCH-423 | 1 | 38 | 30 | 9 | 6 | 6 | 23 | 30 | 2 | 15 | 15 | 10 | 2 | 1 | 3 | 5 | SSR | Y | Y |

KEY

ST = Status

1. Complete sepcimen
2. Basal fragment with blade complete
3. Basal fragment with portion of blade
4. Base with portion of blade
5. Bifacial fragment
6. Undetermined/Incomplete
7. Blade fragment

MXL = Maximum length (in mm)
MXW = Maximum width (in mm)
THK = Maximum thickness (in mm)
PTK = Placement of maximum thickness

1. Midpoint of specimen along longitudinal axis
2. Midpoint of blade
3. Midpoint of haft
4. Junction of blade and haft
5. Uncertain
6. Between midpoint of specimen and junction of blade
7. Between midpoint of specimen and tip

BLS = Blade shape

1. Triangular lateral edges straight
2. Triangular lateral edges excurvate
3. Triangular lateral edges incurvate
4. Triangular lateral edges serrated
5. Asymetrical, straight/recurvate
6. Asymetrical excurvate/recurvate
7. Asymetrical, incuravate/recurvate
8. Uncertain
9. Asymetrical triangular edges excurvate/straight
10. Asymetrical triangular edges straight
11. Asymetrical triangular edges excurvate/recurvate
12. Asymetrical triangular edges excurvate
13. Asymetrical triangular edges straight/incurvate
14. Asymetrical triangular recurvate/recurvate

BL = Blade length (in mm)
BW = Blade width (in mm)
HS = Haft status

1. Blade and base intersect
2. Straight stemmed
3. Contracting stemmed
4. Side-notched
5. Corner-notched
6. Bifurcate stemmed
7. Basally notched
8. Uncertain

HL = Haft length (in mm)
HW = Haft width (in mm)
HE = Shape of lateral haft edge

1. Straight
2. Slightly expanding
3. Contracting
4. Slightly contracting
5. Shallow subcircular side-notch
6. Deep subcircular side-notch
7. Shallow subcircular corner-notch
8. Deep subcircular corner-notch
9. Narrow elliptical corner-notch
10. Asymetrical straight and expanding
11. Asymetrical straight and slightly contracting
12. Uncertain
13. Asymetrical, straight/contracting
14. Asymetrical, stem and corner-notch
15. Asymetrical, recurvate/contracting

BS = Base shape

1. Straight
2. Excurvate
3. Incurvate
4. Bilobate
5. Bifurcate
6. Uncertain

RM = Raw material

1. Buff/yellow chert
2. Pink chert
3. Gray fossiliferons chert
4. White chalcedony
5. Yellow/tan chert
6. Rhyolite
7. Undetermined
8. White chert w/yellow/tan jasper inclusions

MM = Method of Manufacture

1. Percussion flaking
2. Pressure flaking
3. Percussion and pressure flaking
4. Uncertain

TB = Tranverse cross-section of blade

1. Symetrically biexcurvate
2. Asymetrically biexcurvate
3. Triangular/excurvate
4. Planar
5. Recurvate/excurvate
6. Birecurvate
7. Excurvate/planar
9. Bitriangular
10. Triangular/planar
11. Asymetrically bitriangular
12. Excurvate/incurvate
13. Uncertain
14. Recurvate planar

TYP = Typological assignment

- SR. Savannah River Stemmed
- SSR. Small Savannah River Stemmed
- GYP Gypsey Stemmed
- BLF Blade fragment
- BIF Biface fragment
- DRF Drill fragment

HT = Heat treatment

- Y. Yes
- N. No

RW = Reworked lateral edges

- Y Yes
- N. No

Table 5. Projectile point analysis.

crystalline-filled vugs, and other impurities, suggests that manufacturing breaks would be anticipated.

Basic metric data (Table 5) on the complete biface specimens fall easily within standard published ranges of variation for similar typed examples from the lower Savannah region (Stoltman 1974; Waring 1968). Indeed, recognition and sorting of the various examples into the types commonly defined for Late Archaic and Early Woodland sites in the region, as elsewhere in North America, proceeds not so much from radical changes in overall morphology, hafting devices or raw materials, but most commonly is predicated on perceived reduction of gross metric categories such as length, width, and thickness (Fenenga 1953; Thomas 1978). The concept of flaked stone tool life-cycles, particularly blade attrition, has become accepted (Claggett and Cable 1982; Goodyear 1974); however, there has been some debate about which hafted biface attributes are least likely to change through time. Most agree that haft elements, with attributes such as haft length to haft width ratios, are most resistant to change and are therefore most diagnostic (Thomas 1981, 1986; Claggett and Cable 1982; Oliver 1981); while others argue, on the basis of experimental data, that haft elements are most susceptible to breakage and subsequent rejuvenation and change (Flenniken and Raymond 1986). At the present time archaeological data support the former argument.

Simple metric data available in Table 5 would tend to support this exercise in grouping, as Table 6 demonstrates.

| | mean haft width | mean blade width | mean thickness |
|---|---|---|---|
| Savannah River | 21.6 | 72.2 | 11.3 |
| Small Savannah River | 17.9 | 44.7 | 9.9 |
| Gypsy | 13.7 | 30.0 | 6.7 |

Table 6. Mean metric data (in mm) for Savannah River, Small Savannah River, and Gypsy points.

Given these statistics, it can be seen that overall measures such as haft width, thickness, and blade length do decrease through the categories and, according to the accepted typology, through time. Other metric data show similar patterning, at least between the identified historical types.

Similar patterning in this evolutionary trend has been identified at a number of sites (Oliver 1981, 1982, 1985). At the Doerschuk, Gaston, Thelma, and Warren Wilson sites in

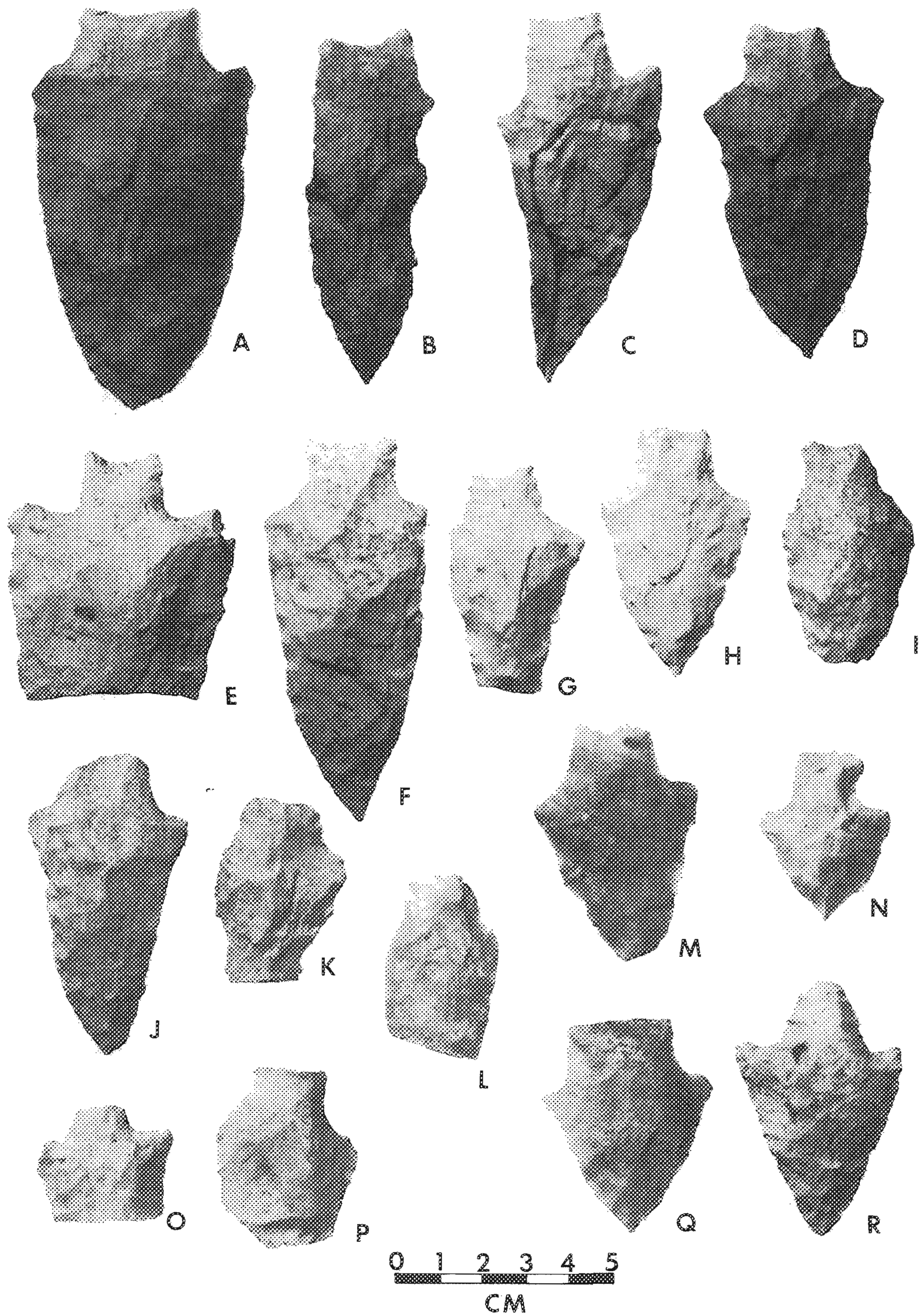


Figure 55. Savannah River and Small Savannah River Stemmed projectile points.

North Carolina, a sequence of Savannah River, Small Savannah River, and Gypsy Stemmed was identified from the early portion of the Late Archaic ("classic" Savannah River), to the latter portion of the period (Small Savannah River), and into the Early Woodland (Gypsy). Earlier, Bullen and Greene (1980: 13-14) observed a similar sequence in that Stallings Island, Type 3 points overlay Stallings Island, Type 1 points and " . . . the extinction of Type 3 points as the digging penetrated the base of the fiber-tempered ceramic deposits was quite noticeable . . . . " In this comparison, Type 1 points appear to represent an equivalent of the "classic" Savannah River, while Type 3 points represent an equivalent of the Small Savannah River. Stallings Island, Type 3 or Small Savannah River also share similar radiocarbon dates of 1780 B.C. at Stallings Island and 1565 B.C. at Warren Wilson -- both well within what may be considered the latter stages of the Late Archaic period. At all of these sites the Small Savannah River/Type 3 point underlies a smaller, more crudely worked type. Bullen and Greene (1970) recognize a Stallings Island, Type 4 point while Oliver (1981) identifies the Gypsy Stemmed.

Similarities are noted not only in morphology and stratigraphic provenience, but also in the frequency of resource materials. Examination of point assemblages from a variety of sites in the North Carolina Piedmont and Mountain provinces demonstrate that temporal changes in lithic material utilization occur (Oliver 1982). The earliest Late Archaic points are dominated by rhyolite and quartzite. With time lithic materials become more diverse, until the Early Woodland when chert (in the Mountain region) and fine-grained metavolcanics (in the Piedmont) become the predominant resource materials. Since all but one of the Fish Haul projectile points are made of Allendale chert, such a comparison about material change through time is impossible. These trends of lithic material as they relate to implications about mobility, however, will be addressed at the end of the chapter. With respect to typology, a similar trend is apparent between the Fish Haul hafted bifaces (Table 7) and the decrease in point size observed in analyses of other temporally comparable assemblages (Bullen and Greene 1970; Oliver 1982).

Of the three types identified, Small Savannah River Stemmed predominates (n=12;57%), followed by Savannah River (n=6;29%) and Gypsy Stemmed (n=3;14%). Two additional statistics are notable: (1) 86% (n=6) of the specimens identified as heat treated or heat altered were classed as Small Savannah River; (2) approximately two-thirds of the entire sample (chipped stone and tool fragments) exhibited evidence of reworking. Reworking was occasionally observed on blade margins, but was most often observed as flake scars originating along the edges of the blade which extended across the dorsal and ventral faces towards the median of the blade.

| Assignment | Number | Heat Treatment | Reworked |
|---|---|---|---|
| Savannah River | 6 | 1 | 6 |
| Small Savannah River | 12 | 6 | 8 |
| Gypsy | 3 | 0 | 3 |
| Blade fragment | 4 | 0 | 0 |
| Drill fragment | 1 | 0 | 0 |
| Biface fragment | 3 | 1 | 2 |
| SUBTOTAL | | | |
| Chipped Stone | 21 | 7 | 17 |
| Tool Fragments | 8 | 1 | 2 |
| TOTAL | 29 | 8 | 19 |

Table 7. Typological and categorical assignments, Fish Haul Site.

With the exceptions of a single whole biface (ARCH 123) and four biface fragments (Table 5), all specimens of whole or broken bifaces could be identified as one of several color variations of fine-grained, Allendale chert.

## Manufacturing and Maintenance

Trajectories for prehistoric manufacture of the biface collection from the Fish Haul site are difficult to define, given the limited sample and the apparent single-purpose nature of the site that exhibits little evidence of tool production.

Much, if not all, of the present appearance of the Fish Haul biface collection can be readily explained in terms of breakage or wear on implements sufficient to render them unusable unless rejuvenated. Periodic resharpening of blade edges, "repointing" of damaged distal ends (blade tips), and corrections to flaws in haft element design are some examples of contingency responses (cf. Claggett and Cable 1982; Frison 1978; Kelly 1986). Eventually, of course, tool forms reached a point (barring accidental loss -- considered unlikely) where measures to revive edges, points, etc. became ineffective relative to perceived or actual costs (energy expenditure) of creating wholly-new tools (at the quarry/workshop sites). At such junctures the broken/exhausted tools were discarded. Only one specimen from Fish Haul (ARCH 154) exhibits definite alteration from one functional mode to another (hafted biface to drill or perforator). All other specimens appear to have been maintained within a single behavioral trajectory as cutting, scraping, or projectiles from initial manufacture to discard. None of the excavated specimens exhibit impact-type fractures on their distal ends, as evidence of spear or dart points, although the few examples of transverse blade fractures could have resulted from such usage as readily as from failed attempts to rework blade elements due to "end shock" (Callahan 1979; Crabtree 1972).

Whatever the actual function of the several Fish Haul biface specimens, even cursory examination of metric and discrete attribute data suggests that very real maintenance strategies were in place and shared by the site occupants. Two distinct modes of tool maintenance are observable, either within the traditional typological schemes discussed earlier, or, alternatively, as a means to explain internal variations and inconsistencies within those frameworks.

In terms simply of blade maintenance -- length of cutting edges, acute edge angles, minimal blade edge thickness, etc. -- the Fish Haul bifaces illustrate two contingency response patterns. The first involves axial blade shortening, or reduction of blade length, probably as a response to a snapped or transversely fractured blade during use as a knives or, equally likely, as a result of failed attempts to resharpen blade edges by percussion. The proposed second method of blade reduction (usually in combination with the first) involved lateral edge reduction by percussion and/or pressure flaking to "sharpen" worn edges in the absence of distal blade breakage.

If either, or both, of those procedures consistently explains biface reduction leading to eventual discard within a single, temporarily discrete tradition ("phase"), then other metric elements could be expected to remain constant or vary independently from other typologically-dependent constructs. Again, however, without engaging in more sophisticated statistical analyses, such hypotheses for the Fish Haul data must remain untested.

Measurement and monitoring of edge angles (at discard) through what are assumed to be several temporally-discrete types could likewise inform on type validity versus simple reduction/discard behavior within a single cultural-temporal tradition. By holding raw material and other elements such as thermal alteration relatively constant, it should be possible to better define the situations under which "perfect" bifaces were rejected due to increased edge angles and/or inabilities to reduce overall blade thickness by continued resharpening.

Haft element design among the three biface types is nearly unvarying. Except for measurable differences in haft length, haft width, etc., the basic form of square to subrectangular stems is constant within and between the typed specimens. Little or no evidence of haft element damage or repair is evident indicating that failure of those tool portions was an uncommon cause for discard (Claggett and Cable 1982; Oliver 1981; Thomas 1981). If maintenance occurred while the specimen was hafted, we would expect gross blade reduction of the lateral margins and little alteration of the haft element. This latter possibility parallels the observations of this portion of the analysis. Specifically, the Fish Haul hafted biface assemblage indicates rejection due to either gross or, more commonly, quite subtle changes in blade morphology that rendered them unsuitable for chosen tasks.

## Large Stone Tools Analysis

Ten specimens (Table 8) were classified as large stone tools. Of this number four (40%) were categorized as hammerstones, three (30%) were unmodified rock, one (10%) was a large flake produced from bipolar reduction, one (10%) was a modified/worked flake, and one (10%) was a large fragment of heavily heat-altered fossiliferous chert. Few meaningful statements can be made concerning such a small number of specimens. However, there are three specimens that deserve special mention.

ARCH 155 (Figure 56G), is a pitted, roughly six-sided hammerstone of a highly weatered, unidentified material which may be causally identified as a "nutting stone." Based upon the results of microscopic analysis (10X-30X) of the pits within the stone, such an identification would be inaccurate. Our examination found no indication of crushing or grinding within these depressions. The analysis, however, did identify substantial edge-wear on the cortical surface. Therefore, until more sophisticated analysis is conducted we shall refer to the specimen as a hammerstone.

Two additional specimens deserving mention are ARCH 198 (Figure 56F), a large quartzite cobble fragment, and ARCH 226 (Figure 56E), a hammerstone of petrified wood. Although the material is unusual, it has been reported in assemblages in the interior Coastal Plain (Anderson et al. 1982:130). Specimen ARCH 198 appears to represent a distinctive by-product of bipolar reduction and as such may represent a rare insight into the optimal response pattern of the site occupants.

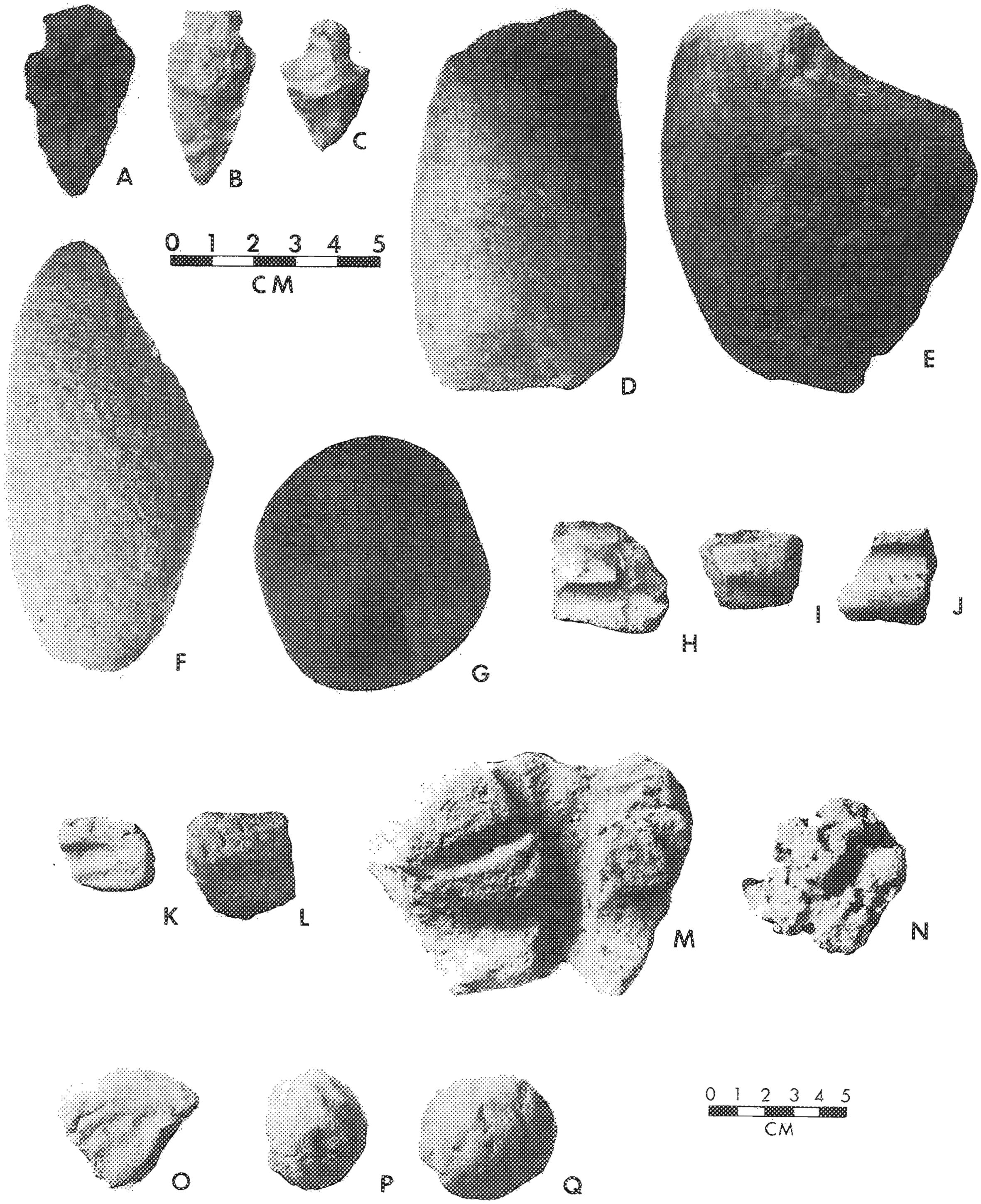


Figure 56. Miscellaneous Stallings phase tools. A-C, Gypsy Stemmed points; D-E, hammerstones; F, possible evidence of bi-polar manufacturing; G, pitted hammerstone; H-L, sherd hones; M-N, sandstone hones; O-Q, baked clay objects.

| Cat. No. | Category | Measurement (in mm) | Resource Material |
|---|---|---|---|
| ARCH 155 | hammerstone | 54x45 | undetermined |
| ARCH 172 | rock | 46x28x25 | undetermined |
| ARCH 169 | hammerstone | 68x66x40 | undetermined |
| ARCH 198 | bipolar flake | 100x48x20 | quartzite |
| ARCH 307 | rock | 80x47x40 | quartzite |
| ARCH 226/1 | hammerstone | 70x69x40 | petrified wood |
| ARCH 130 | rock | 48x32x23 | undetermined |
| ARCH 158 | modified flake | 61x52x19 | buff/yellow chert |
| ARCH 227 | hammerstone | 65x39x35 | fossiliferous chert |
| | fire-cracked | 110x70x61 | fossiliferous chert |

Table 8. Large stone tools.

Large stone tools from the Fish Haul site reflect occupations of limited purpose and short duration. The practice of bipolar reduction is suggested by the presence of at least one artifact, perhaps future research gathering a larger sample may further elaborate on this observation. At the present time, we may do little other than speculate that the appearance of this artifact represents a response to the scarcity of lithic material in the Fish Haul area.

## Debitage Analysis

The debitage analysis methods are based on several previous analyses of Southeastern assemblages (Novick 1982, 1984) as well as with some additions geared specifically to technological questions that would be helpful in interpretations of stone tool curation. Since the Fish Haul assemblage is a biface technology rather than a blade technology or specialized flake technology, emphasis is placed on New World (Binford 1963, Binford and Papworth 1963, Callahan 1979, Crabtree 1971, White 1963) lithic studies rather than Old World (Tixier 1974) studies. Collins's (1974) dissertation, a comparison of lithic assemblages from Texas and France, illustrates a nice blend of Old World and New World approaches. Although we agree with much of Collins's (1974) discussion, much Old World terminology which is often specialized would be superfluous here.

Since this lithic analysis was designed for computer analysis anticipation of new artifact categories was inevitable and a certain amount of flexibility was built into the actual analysis and coding procedures. Debitage, chippage, flakes or the waste by-products of chipped stone tool manufacture were separated into six major categories: primary, secondary, non-cortical, pressure, notch and miscellaneous/flake fragments.

## Flake Categories

Primary flakes (White 1963:5) are generally the first flakes struck from a pebble, nodule, or tabular piece of material with a dorsal or outer surface completely covered with cortex.

Secondary flakes (White 1963:5) are the second flakes struck from a pebble, nodule, or tabular piece of stone with a dorsal surface that is only partially covered with cortex.

Non-cortical flakes exhibit no cortex on their dorsal surface. These were separated into two basic groups based on their longitudinal cross section: flat or curved, with the latter interpreted as biface thinning flakes. Flat non-cortical flakes were distinguished by a variety of morphological attributes including shape, number of dorsal ridges and orientation. One type of flake has no dorsal surface ridges and is interpreted as representing platform preparation or small, initial strikes from a flake blank.

Bifacial thinning flakes are curved in cross-section and generally exhibit no cortex on their dorsal surface. Characteristic attributes representative of the parent core or biface surface topography are single or multiple dorsal ridge with two or more flake scars.

Pressure flakes are generally some of the smallest flakes in any assemblage. They are thin with small platforms and bulbs of percussion. The classic pressure flake has one or two ridges running the length of the dorsal surface with lamellar, lateral edges and a tapered, feathered distal end; however, most pressure flakes were less than perfect. Examination of pressure flaked tools indicates that many pressure flakes are short and wide with distal ends that are as wide or wider than the medial section of the flake.

Notch flakes are small, crescent-shaped flakes with a cone-shaped cross section (Titmus 1985) which are the by-product of notching a tool's base, side, or corner. Their platforms are small, v-shaped in cross section, and often crushed. In plain view the platform is semi-lunar or crescent shaped, although in some cases they form an almost complete 360 degree circle.

Miscellaneous flakes include non-cortical flake fragments, shatter and pot lids.

## Flake Size

Flake size (weight or length) is one of the most important variables in this analysis. It has been found to be particularly useful in examining lithic material types and relationships about reduction and curation of stone tools (Magne 1983; Miller, Green and Hattori 1984; Novick 1982, 1984; Pokotylo 1978). Each flake was sized on a square grid composed of 12 size classes ranging from 3 millimeters to 80 millimeters (Table 9).

## Platform Categories

Since tool curation and manufacture are problem domains in this study, platform preparation was examined to provide data from which interpretations about tool use and manufacture techniques could be proposed. Curated tools used at the site leave debitage as their only evidence of use and resharpening activities. Consequently it was anticipated that platforms of these flakes would exhibit evidence of grinding, damage, and/or polish. Manufacturing debris exhibits platform preparation in the form of abrasion damage, although certain flakes were removed without platform preparation. Platform preparation strengthens the edge of the tool from which the flake is being struck, enhancing the success of its removal (Callahan 1979:117). Unfortunately platform edge preparation is difficult to observe as a result of different lithic materials, weathering, and other variables. Abrasion easily seen on obsidian may be difficult to distinguish on other siliceous rocks. The platform categories defined below are a combination of morphological and technological attributes.

<u>Cortical platforms</u> are entirely covered by cortex and are indicative of initial flakes struck from a pebble or cobble. Thus they provide insights about procurement and production of lithic materials used for flaked stone tool manufacture.

<u>Single facet platforms</u> exhibit one flat surface which is the part of the core or biface that was struck to form the flake.

<u>Bifacial platforms</u> exhibit a number of previous flake scars on both faces of the platform. These platforms are indicative of a bifacial edge (generally assumed to be a biface), however, some cores may be bifacially reduced resulting in the same type of platform preparation. Dorsal surface typography and flake cross section aid in determining from which type of core flakes were removed.

| Flake Size Class | Flake Size (mm) | # | % | Cumulative # | Cumulative % |
|---|---|---|---|---|---|
| 1 | 3 | 1 | .1 | 1 | .1 |
| 2 | 5 | 1 | .1 | 2 | .3 |
| 3 | 8 | 23 | 3.8 | 25 | 4.1 |
| 4 | 10 | 149 | 24.9 | 174 | 29.1 |
| 5 | 15 | 278 | 46.5 | 452 | 75.7 |
| 6 | 20 | 110 | 18.4 | 562 | 94.1 |
| 7 | 30 | 26 | 4.3 | 588 | 98.4 |
| 8 | 40 | 5 | .8 | 593 | 99.3 |
| 9 | 50 | 3 | .5 | 596 | 99.8 |
| 10 | 60 | 1 | .1 | 597 | 100 |
| 11 | 70 | 0 | 0 | 597 | 100 |
| 12 | Over 70 | 0 | 0 | 597 | 100 |

Table 9. Flake size distribution.

Crushed or collapsed platforms retain, if anything, only a small remnant platform. These result when a problem with the percussor develops and most of the platform is destroyed. For example, when too much force is exerted platforms crush, while a glancing blow may collapse the platform.

Triangular platforms have more than one facet with the dominant feature being a triangular ridge in the center, right, or left part of the platform. These often represent the remnant dorsal ridge selected by the knapper to serve as a guide for the force from the percussor that removes the flake (Callahan 1979:53).

Alternate platforms occur on flakes removed using an alternate flaking technique. One flake is struck from the first face of a flake blank or biface. The tool is turned over and another flake is struck from face two using the previous flake scar as a platform.

Concave platforms are crescent shaped and result from attempts to strike a second flake from a single platform. Often, but obviously not always, these flakes are not removed because the platforms collapse.

Prepared platforms exhibit some form of preparation that was not readily distinguished.

In some instances a platform appeared to be bifacial but may have simply been multiple faceted.

Broken platforms were recorded and in the case of shatter no platform had existed.

## Edge Damage

No formal unifaces, such as hafted end scrapers, were discovered in the Fish Haul assemblage. Minor edge damage was observed on a number of flakes and one modified flake scraper was identified within the analysis of large stone tools. On the basis of experiments (Brose 1975) and observations (Gould et al. 1971) it is argued that caution is in order for interpretations of edge modification. The study of post excavation edge damage resulting from screens, bag retouch, etc. has indicated potential problem areas. Brose (1975) argues that flakes used in butchering develop fat accumulations that protect their edges from damage. Thus flakes may be used as tools and exhibit no visible traces of wear. Similarly, edge wear studies that were gaining popularity in the late 1970s (Hayden 1979; Keeley 1980) have failed to produce conclusive, replicable results. Edge modification resulting from trampling has been investigated with various results (Tringham et al. 1974; Flenniken and

Stanfill 1980). Consequently, a separate variable was recorded rather than assigning a catalog number to each flake that exhibited damage.

Edge damage, for the present analysis, consists of the presence of a series of flake scars, crushed edges, etc. Flakes were oriented dorsal surface up and proximal end towards the investigator. Evidence of damage was studied on both dorsal and ventral surfaces.

Sample type is a measure of the degree of completeness of the flake. The classes include complete, bulb only, medial section, distal end, flake fragment, fragment/shatter, and possible bifacial fragment/shatter.

## The Debitage

A total of 610 flakes, flake fragments, and small tool fragments were examined during the analysis. Small tool fragments (n=34) include biface edges, tangs, stems, and tip fragments. Twenty percent of all debitage consists of complete flakes (n=114). Flakes are dominated by proximal fragments still retaining the platforms (n=196, 34.4%). Medial sections (n=72, 12.6%) and distal fragments (n=29, 5%) compose only a relatively small proportion of the debitage. Flake fragments that could not be distinguished comprise 8% (n=46) of the debitage while shatter is relatively common at 112 pieces. Since the brown weathered material could not be distinguished by flake classes it tends to skew the distribution.

Flake size tends to be skewed towards the small end of the size scale with 19 outliers and no really large flakes. The size five class (15 mm) is both the mode and the median in this assemblage. Size classes one and two, each include only one flake. Twenty (3.8%) size three flakes were recovered while nearly one quarter of the debitage consists of size four flakes (n=149). Nearly half of all debitage (n=278, 46.5%) is size five. A relatively high proportion of flakes were size six (n=110, 18.4%). Only 26 (4.3%) size seven flakes were recovered and fewer size eight (n=5, .8%), size nine (n=3, .5%), and only one size ten flake (.1%) were recovered.

No primary flakes were found in the Fish Haul debitage assemblage and only six cortical flakes (1%) were represented. Interior flakes, those with flat cross-sections and possibly representing early stage lithic reduction, compose nearly one fifth of the assemblage. Bifacial flakes form the major flake class (n=219, 38%). No pressure or notch flakes were recovered. Non-cortical flake fragments (n=115, 20%) and shatter (n=119, 20.6%) form the bulk of the assemblage while pot lids, the by-products of over heated stone comprise only 2.4% (n=14) of the debitage.

In addition to flake class, platform type provides information about how lithic material was reduced at the site. Only two (0.3%) cortical platforms indicative of on-site reduction of nodular material were recovered. Single facet platforms generally representative of early stages in the reduction process were represented by only 11 flakes (2.2%). Most platforms are bifacial (n=194, 33.6%), several were classified as probably bifacial (n=16, 2.7%); however, it should be noted that not all flakes classified as bifacial exhibited typical bifacial platforms. Triangular platforms (n=33, 5.7%) are removed from bifaces when a dorsal ridge from two overlapping flake scars is used as the primary area for transmission of force. Three alternate platforms, characteristic of a particular reduction technique were recovered while five were identified as prepared. Flake fragments (n=148, 25.6%) exhibit no platforms and shatter (n=115, 19.9%) in most cases never had platforms.

Edge damage was observed on the distal end of nine flakes and on the lateral margins of two flakes, approximately 2% of the debitage. As noted above this type of damage may result from use, lithic material reduction, or post-depositional activity.

Although thermal alteration experiments have been conducted with Allendale chert (Anderson 1979), the variable color and quality of the chert make these assessments questionable. The majority of flakes and by-products (n=325, 55.6%) are dull which suggests that they were not thermally altered. Next in frequency is a class labeled semi-waxy with a luster that may reflect thermal alteration (n=150, 25.6%). A real waxy luster, in this assemblage some of the best evidence for heat treatment, was recorded on 85 flakes (14.5%). Since Allendale chert has a tendency to turn pink when it is heated, 13 flakes were pink and waxy while 11 flakes (1.8%) exhibited a pink color change on a portion of the flake. Overall there is good evidence for nearly 20% of the debitage and by-products having been thermally altered, although it is possible that some of these pieces may have been post-depositionally heated. There is possible evidence that an additional 25% of the assemblage (150 flakes) was thermally altered leaving slightly more than half not having been thermally altered.

The predominant lithic material is the classic buff colored fossiliferous Allendale chert. Other fossiliferous types comprise the bulk of the debitage although a high quality chalcedony makes up about 10% of the material (Table 10).

| Material | Flake Count | Percent |
|---|---|---|
| Buff/yellow fossiliferous chert | 327 | 53.5 |
| Pink fossiliferous chert | 66 | 10.8 |
| Gray fossiliferous chert | 30 | 4.9 |
| Brown/pink fossiliferous chert | 7 | 1.1 |
| Tan/brown/gray fossiliferous chert | 18 | 2.9 |
| Pink/gray fossiliferous chert | 16 | 2.6 |
| White and gray chert | 2 | 0.3 |
| White chalcedony | 58 | 9.5 |
| Pink chalcedony | 3 | 0.4 |
| Burgundy jasper | 3 | 0.4 |
| Brown jasper | 1 | 0.1 |
| Fossilized wood | 2 | 0.3 |
| Dark gray vesicular, granular | 17 | 2.7 |
| Gray rhyolite | 4 | 0.6 |
| White quartzite | 5 | 0.8 |
| Brown weathered | 51 | 8.3 |
| Totals | 610 | 100.0 |

Table 10. Lithic material distribution within the Fish Haul debitage.

In conclusion, we can see that most of the flakes are relatively small bifacial specimens that represent thinning and sharpening of curated tools. The absence of large Allendale chert flakes precludes any interpretation of large scale reduction of this material at the site. Similarly the absence of cortical and low counts of interior flakes suggest that no early stage reduction of any material took place at the site. A few rhyolite flakes indicate that tools from the Piedmont were curated or traded into the area and then transported to the site. Based on collections from Berkeley County, just north of the project area (e.g. Anderson et al. 1982; Green and Brooks n.d.) it is rather surprising that none of the Black Mingo Formation orthoquartzite appears in the assemblage. Manchester chert, a purple fossiliferous chert from Sumter County is similarly conspicuous by its absence. Thus the Fish Haul debitage is relatively homogeneous with respect to lithic material and activities. Although at least twenty percent of the debitage exhibits evidence of thermal alteration, it seems most likely that these flakes were struck from tools that had been thermally altered. They do not appear to represent a result of post-depositional factors and may reflect optimizing strategies employed to overcome the impurities and imperfections common to the dominant lithic material utilized.

## Conclusions

Based on analysis of the flaked stone tools, debitage and other lithic materials several conclusions are drawn. The assemblage is surprisingly homogeneous with respect to functional categories of lithic material, and most likely represents several, short term occupations of hunter-gatherers rather than specific task uses.

## Bifacial Technology and Implications for Mobility

Hafted bifaces/projectile points which most likely served as multi-functional tools (Ahler 1971) are the dominant formal tool class. Typologically these tools sort into three size related groups which have been recovered from stratified deposits in the North Carolina Piedmont and Mountain provinces as well as sites in Georgia and South Carolina (Oliver 1981).

Based on the most consistent morphological attributes, haft element length and width, the Fish Haul specimens defined as Savannah River Stemmed, Small Savannah River Stemmed, and Gypsy Stemmed types correlate with several recurrent site occupations during portions of the Late Archaic or Early Woodland Stallings phase of ca. 2000 B.C.-1000 B.C. It is stressed here that the concept of tool life cycles is well recognized. However, since all of these point types exhibit blade attrition and distinctive haft element ratios when recovered from stratified contexts, they appear to represent three distinct types as opposed to one point type that is extremely curated. Based upon the typological data, it is data, it is proposed that most, if not all, occupations at the Fish Haul site date to the latter portions of the Late Archaic period ca. 2000 B.C.-1000 B.C. This position has been supported by recently received radiocarbon dates of 1770 B.C., 1760 B.C., and 1330 B.C. (this report).

With the exception of one rhyolite Gypsy Stemmed point, all of the complete hafted bifaces are manufactured from Allendale chert. Over 65% (n=393) of the debitage recovered from the site is Allendale chert. Few of the flakes are large and none are cortical, which suggests that no early stage reduction took place at the site. The absence of pressure and notch flakes corresponds well with the flaked tool classes which are primarily percussion flaked. Late stage preforms are also absent from the assemblage. The absence of large bifaces (or bifacial cores) which could serve as sources of lithic material for the production of additional tools is rather unexpected. This suggests that only formal tools -- hafted bifaces -- were carried to the site or that other tools were curated to and from the site.

Curated tools as well as flake tools produced from curated bifaces may have been used at the site.

At least half of the debitage and one-third of the hafted bifaces exhibit evidence of thermal alteration. Results of experimental studies (Tower 1984) indicate some disagreement regarding the qualities heat treatment imparts to edge holding properties. It is likely that edge attrition was greater as a result of thermal alteration. Thus heating chert enhances its flaking qualities yet the process diminishes other desirable qualities. One projectile point and a few flakes of rhyolite demonstrate that at least one tool had to have been transported or traded from the Piedmont. The quartz debitage originated in the same area or the interior Coastal Plain. A few cortical flakes suggest that cobbles of this material were reduced or transported to the site as early stage bifaces.

This limited assemblage further evidences prehistoric needs for a versatile, dependable tool kit that was both easily transportable and maintained. Goodyear's (1979) arguments for selection of high grade siliceous materials by early Holocene hunter-gatherers thus may be applied to later Archaic-Woodland groups. The selection of relatively high-quality Coastal Plain cherts would have been just as essential for creation of durable Late Archaic hafted bifaces as it had been during the Early Archaic.

The use of Allendale chert for all three varieties of projectile point types in the Fish Haul assemblage contrasts with results of previous analyses of temporally comparable assemblages. At Stallings Island, Georgia lithic materials used for Savannah River points change from an overwhelming reliance on "slate" to quartzites and cherts in chronologically later types (Bullen and Greene 1970). Assemblages from the North Carolina Mountains and Piedmont exhibit a temporal trend from Carolina slate in the early Late Archaic materials to predominance of chert (Mountain) and fine-grained metavolcanic materials (Piedmont) during the Early Woodland (Oliver 1982). This trend suggests that local materials were used during the Late Archaic and that an increase in extralocal materials was apparent during the Early Woodland.

Based primarily on survey data, expectations for trends of lithic material utilization have been proposed (Cable and Cantley 1979; Goodyear 1979; House and Ballenger 1976; Taylor and Smith 1978) which have been substantiated by subsequent research (Anderson and Schuldenrein 1985; Blanton 1983, 1984; Novick 1985). Based on these proposals it is ananticipated that lithic material diversity was high during the Early Archaic and decreases during the Middle Archaic relying mainly on local materials (particularly quartz) depending upon material availability near site locations. There is a continued use of local materials, especially slates and metavolcanics, during the Late Archaic, followed by an increase in material diversity during the Early Woodland. Excavations of multi-component sites on the interior Coastal Plain (Anderson et al. 1982) illustrate these same general trends.

Thus the homogeneity of the Fish Haul assemblage was rather unexpected. This lack of variability is the result of site location, in relation to sources of lithic material, and mobility patterns. It seems most likely that the tasks requiring flaked stone tools were conducted with multi-functional hafted bifaces that were sharpened and rejuvenated at the site. Other tools may have been used and then transported from the site. Specific lithic material types may represent directional patterning reflecting season cycles (Reher and Frison 1980) or exchange/trade (Goad 1980). If people were returning to the site from a number of different locations a greater amount of variability among lithic materials would be anticipated. In addition to Allendale chert which outcrops along the Savannah River, we would then anticipate the curation of tools made from materials that occur in the Piedmont (e.g. rhyolite, tuff) and the interior Coastal Plain (e.g. Manchester chert, orthoquartzite). It has been proposed that groups stopped at lithic material outcrops on the interior Coastal Plain in order to retool (Anderson et al. 1982), however, none of this diversity is present in the Fish Haul assemblage. The absence of other lithic material types suggests that the Fish Haul lithics were deposited by peoples coming from the west or northwest where Allendale chert was the most readily available material.

Given the virtual single-point origin for the Coastal Plain cherts, examination of diachronic patterns of raw material selection at sites like Fish Haul where tight controls over stratigraphic orderings, chronological (radiometric) placements, and a low variance of site function through time should provide additional insights about mobility patterning. Apparent trends of decreased frequency of particular materials through time, in combination with increasingly emphasized maintenance strategies, reduced initial tool sizes, etc. (Anderson 1979; Claggett and Cable 1972), could be indicators of decreased access to the quarry sites resulting from hypothesized "hardening" of band territorial boundaries or increased socio-political control of those sources during the Early-Middle Woodland periods.

In combination with data from other sites, situated at or more proximate to actual quarry or production sites (Goodyear and Charles 1984), the Fish Haul data provide insights about the "terminal" processes of biface maintenance reduction and discard behaviors at small sites. The collections likewise offer significant opportunities to examine questions of typology of lithic tool forms, mentioned previously, the actual functions of hafted bifaces in a systemic context, and factors influencing their eventual entry into the archaeological record due to breakage or exhaustion as viable edged implements (Schiffer 1976; Collins 1975). Analysis of the projectile points, or hafted bifaces, and large stone from Fish Haul suggests that maintenance of bifacial tools was a repeated task at the site.

## Implications for Bipolar Reduction

The assemblage is dominated by a bifacial technology where only one possible bipolar fragment was recovered. This quartzite cobble was reduced by the bipolar technique. Bipolar technology has been reported in regional contexts, most in temporally later associations (Blanton et al. 1986; Cable and Cantley 1979; Tippitt and Marquardt 1984). Kelly 1986; see also Smith 1986:14) proposes that the bipolar technique is a response to stress in areas where lithic material is scarce. Since lithic resources are scarce in the Fish Haul vicinity application of this model is plausible. Therefore, during any temporal period in this area, we might anticipate bipolar reduction of expended tool fragments or reduction of an occasional find as an optimizing strategy making the most of a scarce resource.

Bipolar cores and debitage have been reported at a variety of sites (Cable and Cantley 1979), but in association with Yadkin ceramics on the interior Coastal Plain. Blanton et al. (1986) reported the use of the bipolar technique from Early and Middle Woodland contexts in Sumter County, South Carolina within the interior Coastal Plain. They argue that the use of this technique is a response to the pebble quartzites that were exploited from local drainages. Bipolar debitage of crystal quartz has also been reported from the Savannah River vicinity (Tippitt and Marquardt 1984).

Consequently, along the coast we may expect evidence of the bipolar technique as a response to stress on lithic resource availablity or, alternatively, as a method to reduce small nodules which may have been transported into areas where a scarcity of stone was anticipated. Additional research in the area may contribute to our understanding of the use of bipolar reduction in different regions and through time.

## Other Aspects of the Lithic Assemblage

Only one tool, a Small Savannah River point (ARCH 423), was recovered in association with a feature, Feature 28 , a pit with Stallings Island sherds, charcoal, and charred hickory nuts. The other tools were recovered from general excavation contexts. Many of the tools and debitage were thermally altered. Additionally, on the basis of several burned flakes and tools it is apparent that chert was thermally altered but at too high a temperature, burned accidentally during activities, or burned in post-depositional contexts across the site. The recovery of hammerstones in a locale where such materials are rare suggests that these were curated items left at the site. In addition to stone working, the evidence of battering on the hammerstones may represent activities such as food processing and wood working.

## Summary

In summary, the lithic assemblage from the Fish Haul site, with its unexpected material and compositional homogeneity, provides insights into the late stages in tool life cycles. Most tools are curated hafted bifaces made of Allendale Chert. Allendale chert dominates the debitage assemblage and represents bifacial flakes most likely removed while sharpening hafted biface margins. The recovery of one rhyolite biface and associated debitage, as well as debitage of other materials, provides some evidence for mobility and exchange/trade. Hammerstones left at the site represent cached tools in an area of scarcity. The homogeneous Fish Haul lithic assemblage adds to our understanding of the formation of small sites, which in this case represents a series of short term, hunter-gather residential occupations.

# OTHER PREHISTORIC ARTIFACTS

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## Shell

Stallings and Thom's Creek shell middens are prolific producers of culturally altered shell. While whelk are most frequently found altered (Trinkley 1980c:209-214), DesJean (1985a) and South and Widmer (1976:46-50) note the presence of possible working on other shells such as clam and cockle. It has been presumed that on the stone-poor coast other more abundant sources, such as shells, were used.

Only two shell artifacts were recovered from Fish Haul, and both were probably decorative rather than functional. One is a heavily eroded oyster shell which measures 1 3/4 inches (4.6 centimeters) in length and 1 7/16 inch (3.7 centimeters) in width. A hole, about 9/32 inch (0.7 centimeter) in diameter, has been drilled in the hinge area, presumably for suspension. The second example is a clam shell fragment, also heavily eroded, which measures about 1 3/16 inch (3 centimeters) in length by inch (2.5 centimeters) in width. A hole, measuring about 9/32 inch (0.7 centimeter), has been drilled through the shell, about 1/4 inch (0.6 centimeter) from the outer edge. A portion of this edge has been broken off the specimen.

Although a number of the whelks evidenced holes to remove the meat, none suggested either intentional preparation for use or opportunistic use. All of the shells appear to represent the collection of individuals for food.

This absence of shell tools may be related to the relatively large lithic collection from Fish Haul. At the portion of Lighthouse Point subjected to 1/4-inch (0.6 centimeter) screening 20 lithics were recovered for a density of one item per 45 cubic feet (1.3 cubic meter), while 25 worked shell specimens were recovered for a density of 1 item per 36 cubic feet (1.0 cubic meter). At Fish Haul, the density of lithic items in the two prehistoric blocks is about one item per 3.6 cubic feet (0.1 cubic meter). The abundance of stone tools at Fish Haul may have negated the need for shell tools.

Alternately, the nature of the site, rather than the presence of stone sources, may determine the need for shell tools. Study of the whelk tools at Lighthouse Point suggested their use to abrade or scrape a relatively soft item, such as skins or wood (Trinkley 1980c:213). DePratter (1979b:20) favors the interpretation that these tools were adzes, used in wood working. Since no stone adzes or other similar cutting tools were recovered from Fish Haul, no activity which required their use apparently took place at the site.

## Hones

Pottery hones have been recovered from almost every Stallings and Thom's Creek site reported and the tool is found into the Middle Woodland in South Carolina and to the Proto-Historic at Kings Bay in Georgia (DesJean 1985c). Both Michie (1979:64-67) and Thomas et al. (1979:44-46) discuss a number of wear patterns on pottery sherds, although the "v" or "u" shaped groove is most common and is most appropriately called a hone. Michie terms this wear pattern "groove abraded" and notes that this "tool appears to have been utilized in the manufacture of bone pins" (Michie 1979:67). Such a conclusion is reasonable as this type of sherd tool has been almost exclusively found on sites which also evidenced abundant worked bone.

At Fish Haul 151 hones were recovered; 124 (82.1%) were on Stallings sherds (primarily plain - 75%) (Figure 56H-L), 14 (9.3%) were on Thom's Creek sherds, one (0.7%) was on a Deptford sherd, and 12 (7.9%) were on sandstone or siltstone (Figure 56M-N) and hence assignable to a cultural period based only on stratigraphy. Eleven (91.7%) were recovered from Zone 2, Level 2, or below and are therefore most likely associated with the Stallings occupation. The twelfth stone hone was found on the surface and its cultural association is therefore problematical. Of the 151 hones, 119 or 79% were recovered from the Stallings occupation in either the 1982 or 129-141 blocks. Between the two blocks 48 hones (32%) were recovered from the 1982 block (1 hone per 25 cubic feet [0.7 cubic meter]) and 71 hones (47%) were recovered from the 129-141 block (1 hone per 12.5 cubic feet [0.4 cubic meter]). The greater incidence of hones in the 129-141 block is striking, although there are too few data to venture an explanation.

It is unusual that this density of hones is found at a site which yielded no worked bone. At Lighthouse Point the ratio of bone pins to hones was 1:2 (106:248), at Stratton Place the ratio was 1:4 (1:4) (Trinkley 1980c) and at Bass Pond the ratio was about 1:12 (7:87) (Michie 1979). The failure to recover bone pins at Fish Haul may be related to poor preservation conditions at the site, which lacks a shell midden to neutralize the acid soil. Animal bone at Fish Haul was found primarily in feature contexts with shell, which undoubtedly assisted in the preservation process. Curiously, features have been poor producers of bone pins. Of the 106 pins at Lighthouse Point, none were recovered from features and of the seven specimens from Bass Pond, only 3 (43%) were found in a single feature (Michie 1979:63). Of the 13 pins from Test Block 4 at Sapelo only 2 (14%) came from pits (Williams 1968:274-275). Although 37 bone pins recovered by Haag from Bilbo in 1957, none were found in features (Dye 1976). It is therefore possible that bone pins were present at Fish Haul, but have simply not been preserved.

Alternatively, the sherd hones may have been used to prepare and work materials, other than bone, which have an extremely short lifespan in the archaeological record. If previous speculations are correct and these hones were used to work bone pins which were subsequently used in the production of nets (DePratter 1979b:19; Trinkley 1980c:218-219), a material such as wood is a feasible substitute for bone. Green wood has about the same strength as bone and wooden netting needles could be quickly produced using sherd hones. These wooden artifacts, however, would be largely invisible in the archaeological record -- even if they were discarded into features. Because the Stallings faunal remains suggest that the occupants of Fish Haul were collecting at least some fish best caught in nets, this alternative explanation is viable. Bone pins may have been the preferred tool at sites of longer duration, while more temporary tools may have been sufficient at camps of short duration.

## Baked Clay Objects

The only fired clay artifacts recovered from the Fish Haul excavations are 35 intact and fragmentary baked clay objects, all but two from the 1982 block. The failure to recover daub from prehistoric contexts is perhaps an indication that structures, such as the one postulated for the 1982 block, were ephemeral and not intended to last more than one visit. Anderson et al. (1982:323) note that daub was common at Mattassee Lake, apparently originating in and around hearths even in the absence of wattle and daub sturctures. It is probable that the sandy soil at Fish Haul precludes the natural firing of clay in and around hearth features.

Most of the baked clay objects (33 of 35) are small fragments. The two intact specimens are similar and consist of compact balls of clay about 1 3/4 inches (4.5 centimeters) in diameter. The only other recognizable form appears to a disc (Figure 56 O-Q). The specimens exhibit a fine paste with few or no inclusions. The objects have been thoroughly fired in an oxidizing atmosphere and have buff to light reddish-brown colors. Fragments exhibit a highly contorted paste, consistant with the interpretation that they were hand made by squeezing lumps of clay.

These items have been found at a number of Stallings and Thom's Creek sites (DePratter 1979b:19;Trinkley 1980c:428; Williams 1968) and may occur into the Refuge and later Woodland (Anderson et al. 1982:320; Trinkley 1982). Possible functions include use as "boiling stones" or as cooking stones in a prepared pit. Both interpretations have convincing aspects -- grooves and punctations found in the balls would assist their removal from pots, but they also have been found in large numbers in several pits. The work at Fish Haul does not significantly contribute to a better understanding of this situation, although it is certainly of significance that 30 of the 35 baked clay balls are found in the 1982 block. The remaining three fragments are found in square 141-10R50.

Work by Duma (1972) suggested that the phosphate content (expressed as $P_2O_5$) of ceramics could be used as an indication of their use. Phosphorus is a natural constituent of the clays used to produce pottery, and the manufacture and firing of the vessels tends to distribute the compound throughout the paste. Once fired, however, the clay retains the ability to bind phosphate ions permanently. Because of the porosity of clay, organic substances the vessel contained will tend to pass through the clay and the vessel will "become imbued with the organic substance" which is recognized as an increase in the phosphate content of the clay (Duma 1972:128).

This technique has the ability to recognize the use of a clay pot to store or routinely prepare organic substances, such as food. In the Stallings phase such an examination is not likely to be very useful, since it would simply demonstrate deductively what is already suspected inductively. The technique, however, may be useful in the study of the baked clay objects, for if they were used as "boiling stones" they would be expected to come into contact with food in a liquid state which could significantly contribute to their phosphate enrichment. Alternatively, if the baked clay objects were used as "roasting stones," it is likely that their contact with organic substances, and hence their uptake of phosphate, would be considerably less.

As a preliminary test of this idea three Stallings sherds and fragments from a single baked clay object were submitted for phosphate analysis to Hahn Laboratories in Columbia, South Carolina. Table 11 provides the results of these tests.

| Specimen | Phosphate (as $P_2O_5$) |
|---|---|
| Stallings sherd (ARCH 398) | .435% |
| Stallings sherd (ARCH 398) | .745% |
| Stallings Sherd (ARCH 398) | .465% |
| Stallings baked clay object (ARCH 149) | .240% |

Table 11. Analysis of phosphate content of Stallings sherds and a baked clay object.

These results reveal phosphate levels of 0.435 to 0.745% in Stallings sherds, with the variation probably the result of differential contact. Duma (1972:128) suggests organic enrichment yielding phosphate levels of 0.50 to 0.615%, entirely consistant with these results. The baked clay object, however, yields a phosphate level of only 0.240%, similar to Duma's non-enrichment examples. It appears likely that at least this one baked clay object was not used as a "boiling stone," but may have more likely been used as a "roasting stone." Further investigation of this problem requires the examination of a larger sample of baked clay objects and sherds (for control).

The horizontal distribution of these artifacts in the 1982 block shows a strong concentration to the southeast, with 16 specimens found in square 1982-70R110. No clay balls are found in the squares of the posited structure (1982-80R90-100). The vertical distribution resembles that observed for other artifact classes, with the bulk of the baked clay balls originating in Zone 2, level 3 (33% of the total). Levels 2 and 4 account for an additional 24% and 18% respectively.

## Summary

It is apparent that there are many more artifact classes absent from the Stallings occupation at Fish Haul than are present. Although the trait list approach, as part of what Harris (1968:394) terms the "mentalistic" or neo-Freudian culture and personality school, has largely fallen out of favor in archaeology today, it is still useful to compare the artifact inventory of a site such as Fish Haul to one such as Stallings Island. While it normally may be impossible to understand the sociocultural meaning of a particular trait to the people who used or manifested it, the trait list is still a useful tool for the visualization of cultural diversity.

Looking only at the "Technological and Artistic Activities" outlined by Fairbanks (1942), and disregarding the pottery and lithic complexes, Fish Haul exhibits none of the 25 bone complex traits, none of the five shell complex traits (although Fairbanks did not include whelk tools), one of the two fiber complex traits, and only three of the eight design complex traits (and all of those are found on pottery alone). If the lithic industry (discussed in the previous chapter) is included, Fish Haul exhibits only one of the three traits in the rough stone complex, two of the seven chipped stone complex traits, and none of the 11 ground stone complex traits. Fish Haul has failed to produce steatite disks, bone tools, or shell tools, all common at many other sites in the Savannah drainage. This sparseness of artifacts has certainly contributed to the conclusion that these sites are "limited occupation[s]" (DePratter 1979b:37).

The few non-ceramic and non-stone tool artifacts present include personal decorative items (shell gorgets), waste sherds with the secondary function of a specialized fabrication tool (probably used in the production of nets), and easely produced baked clay balls (probably used in cooking). The items missing from the list are ones which may be more indicative of long term or even permanent occupation, with the accompanying diversification of activities.