

SHELL MIDDEN SITES OF
THE HARKERS ISLAND-NORTH
RIVER AREA, NORTH CAROLINA

by

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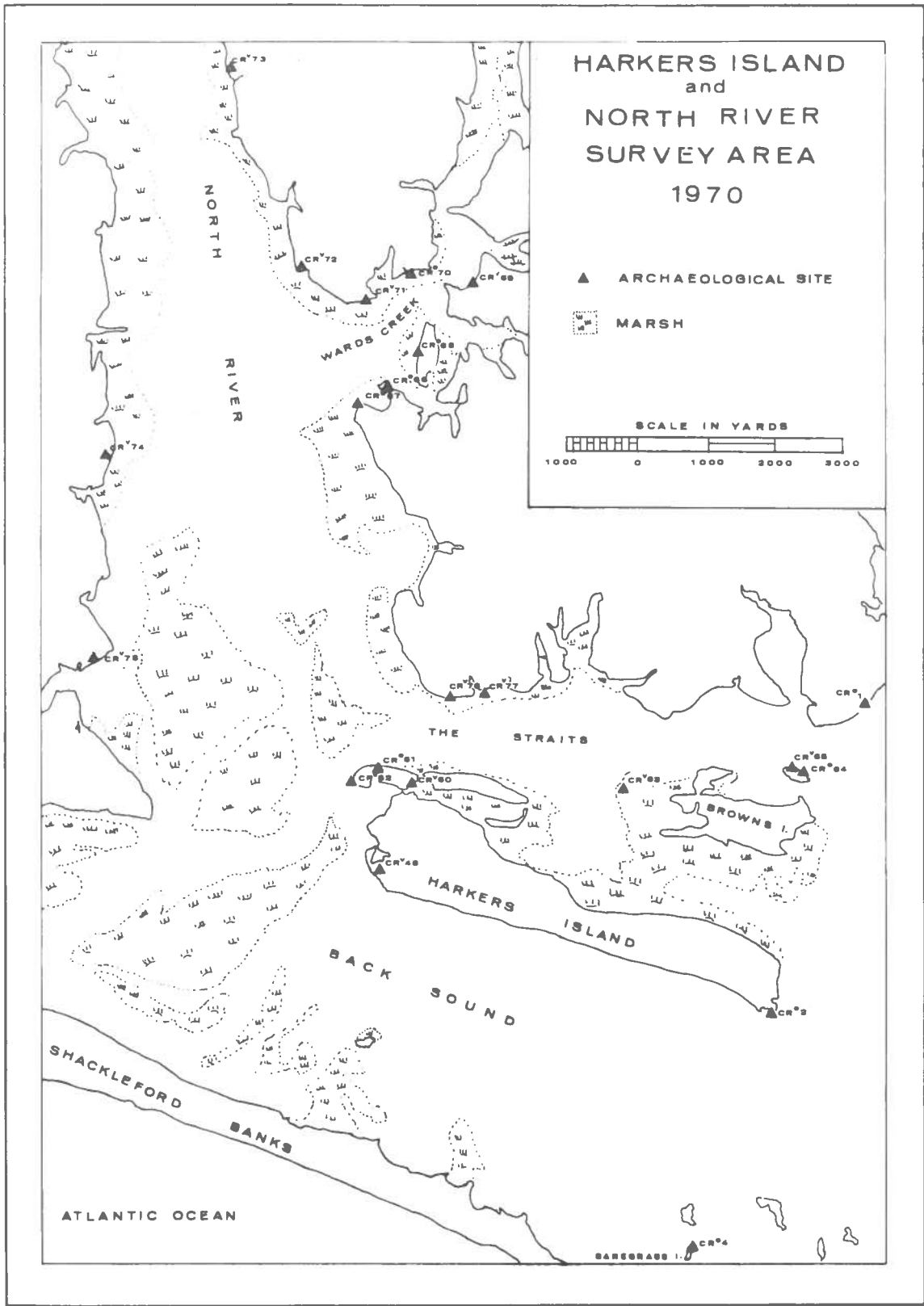
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ABSTRACT

The Harkers Island-North River area survey is a summary of archaeological surface testing done on Harkers Island and North River. It consists of reports for the sites visited as well as a summation of and integration with previous surface collections done in the area. There is an analysis of shellfish remains recovered from middens and an analysis of ceramic materials. The physiography of the area is described and the soils of the region are discussed in regards to their composition and ability to produce agricultural crops. A small chapter is devoted to historic records of the area and the correlation of these records with the archaeological materials found. As a summary a discussion is presented of possible cultural affiliations and a working hypothesis for future work is given.

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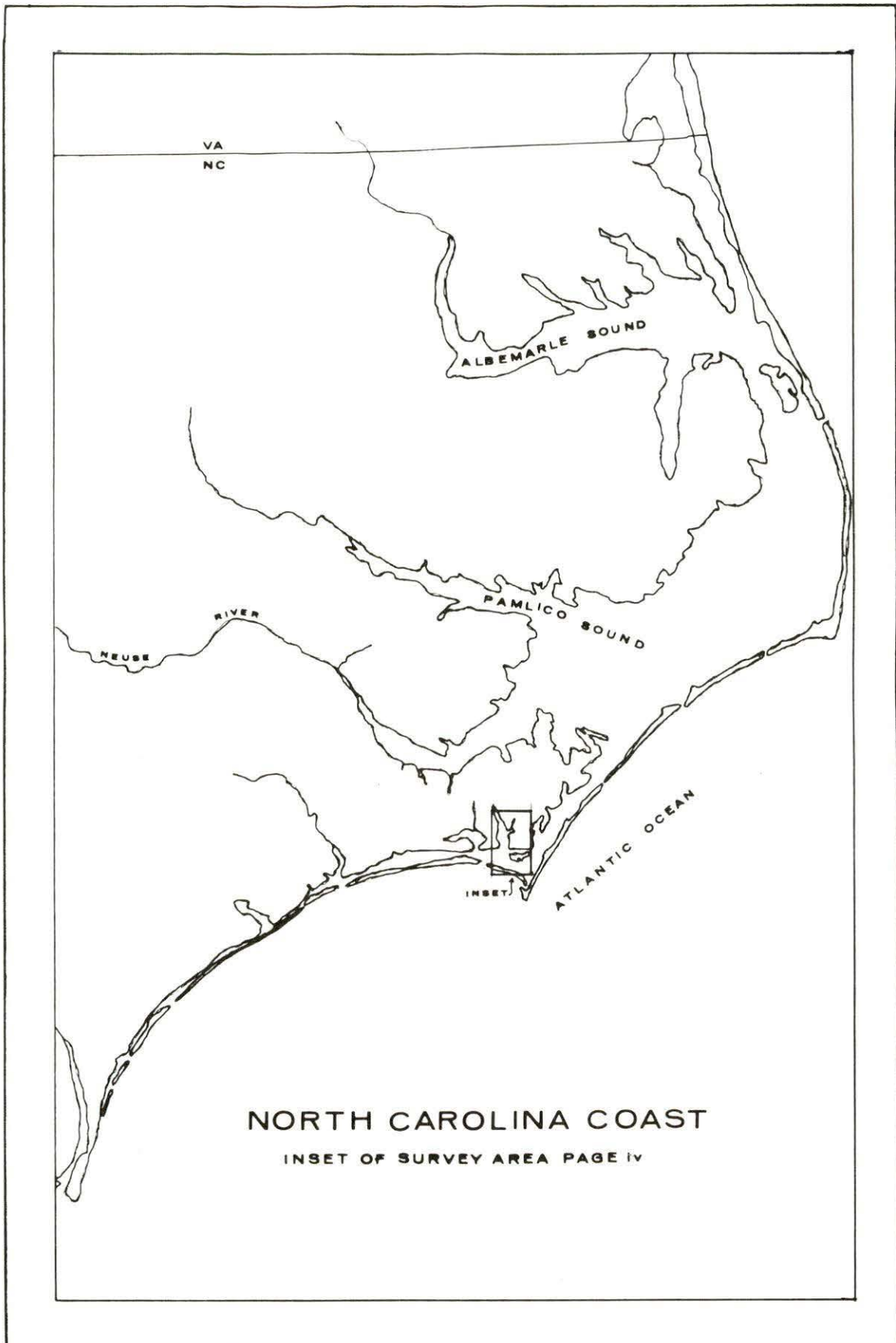


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CHAPTER I

INTRODUCTION

The Harkers Island and North River area survey was designed to organize materials already collected from the area and to then expand the archaeological knowledge of the area by locating more sites, especially shell middens. From the information gathered it was hoped to gain a better understanding of the aboriginal occupations of the area before and during the European contact, and to demonstrate some very specific ecological changes which are thought to have taken place.

Collecting of material in the area began in 1938 when Dr. Joffre Coe and Mr. Harry Davis visited the sites designated Cr⁰1 in Marshallburg, North Carolina, Cr⁰2 on Harkers Island, and Cr⁰4 on Baregrass Island in Back Sound.

No further organized work was done in the area until a subsequent surface collection was made at Cr⁰2 by Tucker Littleton in 1963. The following year Cr⁰2 was again collected by Littleton, Bennie Keel, and Brian Egloff at the time they removed a burial which was washing into the sound. John Mattson made a surface collection in

the Spring of 1969 at Cr⁰2, Cr^V48 and at Cr^V55 which is adjacent to and probably part of Cr⁰1. The collections for the present study were made in the Fall of 1969 and the Spring of 1970 and are the last work done there to date.

This particular region was chosen for study because it offered at once a fairly isolated location, and an area protected from major erosion and land change as is found on the outer banks. There, almost all of the sites are either re-deposited or deeply buried as the dunes are moving continually landward, driven by the prevailing winds. As a result few sites can be found which are accessible to surface collecting and which will also have a meaningful provenience.

Collections for this survey were made in early September, 1969, late November of the same year and early February of 1970. The primary effort was directed at the shorelines of the areas under study as it was thought that this would yield the most reliable information concerning the rise in mean sea level and any accompanying ecological shifts. Enough time was spent in areas removed from the exact shorelines to determine that few if any sites were located away from the water. This would tend to strongly support the hypothesis that the Indians of the area ate the shellfish where they were found rather than transporting them any great distance.

Most of the sites located were within fairly easy

walking distance of passable roads, a few, however, were accessible only by boat. These were for the most part located on relatively high hillocks separated from the mainland by marshes and swamps. Cr⁰68 is such a site.

This area of the coast is plagued by fierce mosquitos brought on by the vast extent of swampy ground. To help eliminate this problem an extensive series of drainage canals were dug and the spoil therefrom neatly piled along side. Several miles of these canals were explored but no traces of possible sites were located. It would appear then, that the Indians lived on the pieces of ground which were high then and are still high today.

Material was collected, as mentioned, along the shorelines, which meant that a sizeable portion of the artifacts was water worn from lying in the surf. Besides eroding the surface treatment of the sherds, this also has the effect of softening the sherds and causing severe exfoliation of the sherd surfaces as the salt from the water crystalizes. Several sherds have rather completely disintegrated since being collected, salt crystalization being the major culprit here.

As mentioned above, a part of the project was directed towards demonstrating some very specific ecological shifts that are thought to have taken place. A quick survey of the sites explored and recorded will show that the mean sea level is rising in this area. Many of the sites are now partially under water, and all of the sites

on the right bank of North River are suffering from severe erosion caused by the combination of rising sea level and the eastward movement of the shoreline caused by the prevailing winds. If the rise in sea level has been going on for some time as is believed, then there should be evidence for it in a differential speciation of shellfish remains in the various middens. Specifically, we should expect to find species present in the middens relatively far up the river which enjoy an environment of less salty water than those found down stream where presumably the salinity would be greater. As one progresses back in time the relative proportion of species preferring less salty water should be higher further downstream, decreasing in time as the water became ever more salty due to the rise in the sea level. This assumption is also predicated on the belief that the aboriginal population preferred to live at the site of the food supply rather than to walk or paddle any great distance to get food. This assumption is, I believe, quite valid. Soil in the area is generally poor, yielding only about 25 bushels of corn to the acre today, (Perkins 1938: 3) and there seems little reason to credit the Indians with any greater yields. Thus there would have been a pressure to depend more heavily on shellfish which were plentiful and easy of capture in the shallow waters of North River and Back Sound.

Besides collecting sherds and artifacts, an intensive collection of shells was made from those sites

which had extant middens. In all such cases great care was made to recover shells only from the midden deposits themselves, and to be sure that they were taken only from pre-historic levels, as several sites had historic occupation components overlying the earlier Indian materials.

After collection the material was returned to the Research Laboratories of Anthropology at the University of North Carolina at Chapel Hill where it was washed, catalogued, and analyzed. All systems of numbering and labeling used here are the systems of the Research Laboratory. Cr^o2, therefore, means that the site is in Carteret County (Cr), that it was a mound site (o), and that it was the second site recorded in that county, (2). The only other designation used herein will be (v) which generally means village, but is also used to denote sites which may have been mounds but are now so destroyed as to be unrecognizable as such. Used in this report the word mound means an accumulation of shells which becomes noticeably higher than the surrounding land forms.

CHAPTER II

PHYSIOGRAPHY

The general physiography of Carteret County is quite flat. Thirty feet above mean sea level is the highest elevation in the county (Perkins 1938: 1) while the highest in the survey area is fifteen feet at Crow Hill, site number Cr^o66.

There is a profusion of tidal streams, many of which are quite broad, although drainage is poor at best. Marshes are extensive, both along the waterways and further inland, for the water table except for a few of the higher lying places, is quite near the surface. This condition has led to a rather sharp delineation of soil types in the county. The poorly drained areas have developed an extensive vegetation which has grown and decayed to become a part of the soil. Soils in these low areas are therefore quite dark, most being black, and very heavily organic. Soils of the higher, better drained areas have not developed the heavy vegetable cover and have remained very sandy and light colored. All the soils of the county are slightly to very strongly acid depending upon the amount of organic remains they contain (Perkins 1938: 29).

The soils of the survey area are for the most part sandy in nature although a large portion is in actuality marsh and swamp. Few sites were located in the marshy sectors, most being on higher ground which was accordingly light and sandy in nature. It should be noted that the site areas themselves are of a very different nature from the general soil conditions due to the heavy amount of decayed organic material left from the middens. Hence, the midden areas are a very dark organic type soil which is really more typical of the lower swamps and marshes.

Twenty-eight different soil types are listed for Carteret County (Perkins 1938: 9). Most of them are of a sandy nature. Only the types which are found in the survey area are described here.

Dunbar fine sandy loam affords good natural drainage by its texture and has gray, grayish brown to light brown surface soils which are of sandy to loamy sand composition. Sub-soils range from yellow to reddish yellow friable sands or clays. Nearly all sub-soils are underlain by mottled yellow, light red and gray fine sandy parent material. This type soil is not high in organic nutrient but is quite friable which lends it to easy tilling and early warming in the Spring. For useful crops modern farmers must fertilize this soil, which even then remains better for forest than for cultivated crops.

Onslow fine sandy loam is characterized in virgin areas by a gray or dark gray light-textured fine sandy loam

underlain by a two to six inch layer of rust-brown or ochreous yellow hardpan. The hardpan is composed of fine sand cemented by iron and organic matter. Below the hardpan is a layer of pale yellow or gray fine sandy loam to a depth of from 10 to 20 inches. Subsoil is brownish yellow or olive drab fine sandy clay ranging to a depth of 28 to 40 inches. This is usually underlain by a heavy clay.

Most of this soil is poorly drained owing to the impervious hardpan. This soil is today used for corn and some truck crops although it is unlikely to have been so used by the aboriginal populations since it must be plowed through the hardpan before it becomes useful.

The Bladen fine sandy loam, low phase, is generally found in low lying areas near tidal marshes. The surface soil is ten to fifteen inches deep and is composed of dark gray to black heavy fine sandy loam. Subsoil is heavy plastic clay or fine sandy clay. This soil usually grades into Tidal marsh on one side and Bladen fine sandy loam on the other. This soil is never completely drained and water stands on the surface part of the year. None is cultivated today and the only growth seems to be scrub pines, gallberry, grasses and rushes.

Portsmouth fine sandy loam has an eight to twelve inch layer of surface soil which is dark gray to black in color. This is underlain by a subsurface layer of gray heavy fine sandy loam which is five to seven inches thick.

The subsoil is light gray friable sandy clay which has some light mottling of yellow or brown and extends to a depth of forty inches. In unplowed areas the surface soil is black. Below the forty inch level the material is even more friable and grades into light-gray fine sand mixed with a little clay and is water saturated. The land is very flat and is hence poorly drained. Water rises to about three feet from the surface. The primary use of this soil today is for pine farming. The cultivated areas are used for truck farming, but it is quite necessary to drain this soil before it can be used for crops, hence it was probably not utilized for crops by the Indians.

Portsmouth loam has a deeper surface layer than the Portsmouth fine sandy loam and it also contains more organic material. The surface soil is a black mellow loam ten to eighteen inches deep. This is underlain to a depth of forty inches or more by a friable gray colored fine sandy clay. Below forty-five inches the parent soil is gray wet fine sand.

This soil has no subsurface layer and the surface layer is so organic that it has a silty or mucky feel. Again this land is mostly in pines and is cultivable only with draining.

Blanton fine sand has a top most layer of one or two inches of gray fine sand, the color being due to the presence of a small quantity of organic matter. The subsoil is grayish-yellow loose fine sand. There is an

intermediate layer stained with brown and containing a few brown concretions. The subsoil extends to depths ranging from twelve to fifty inches and contains splotches of white sand. Drainage in this soil is good to excessive. Most of it is in live oaks, although a little is cultivated. It seems not well adapted to cultivation.

St. Lucie fine sand is white loose sand. It is very incoherent, three feet or more deep, and contains almost no organic material. It is almost entirely quartz.

In areas on Harkers Island the soil contains slightly more organic material and is not quite so white as elsewhere. This soil has excessive drainage and is very droughty, does not hold fertilizer or organic material and is inherently poor. The original cover was longleaf pine but today some oaks are supported upon it, although they are scrub at best. It is apparent that this soil probably was not cultivated by the Indians.

St. John's fine sand occupies a low position in depressions and bays. Surface soils are dark gray to black sands ranging to depths of ten to fifteen inches and they are slightly mucky in places. These are underlain by a hardpan of gray sands. Below the hardpan the sand is grayish-brown and resembles quicksand.

Drainage is very poor, but some drained areas produce corn and beans and some other vegetables. Forest is still the best use for this soil.

Tidal Marsh has a surface soil to a depth of six

to ten inches. It is composed of dark-gray, drab or black loam, clay, silty loam or heavy fine sandy loam containing rust brown streaks. The material is oozy and full of grass roots. Most of the areas are underlain by steel blue clays sometimes mottled with yellowish sand. The underlying sections range from fine sand to beds of sea shells. This soil is very often submerged by the high tide and hence contains far too much salt for modern farming. Its uses are for haying and pasture, both of no value to Indian populations before the introduction of European animals.

As can be seen much of the land in the survey area is unsuitable for agriculture, being either too little or overly drained. Many areas of suitable land do exist, however, and although no direct evidence for agriculture has been found, it would seem reasonable to believe that crops were being grown by the aboriginal population.

It is also probable that agricultural crops constituted a smaller percentage of the total diet of coastal Indians than of Indians living further inland. The reason for this is the abundance of easily obtained shellfish which were not available further from the sea. The animals hunted in the forests were also available in the coast as is evidenced by the deer bones recovered in the burial at Cr⁰2. Thus the combination of rather poor soils, plus abundant animal food points to a smaller amount of grown food in the diet of the coastal Indians.

The marine physiography is an extension of the above-water contours. Water in the North River and Back Sound areas of the survey is for the most part very shallow. Deep channels are found only in Back Sound and one small one in North River. Average water depths are two to three feet with channels being ten to fifteen feet and deeper water available only in dredged channels. Much of the water near the shores is very shallow, being only one to two feet deep for several hundred yards away from the shore itself. There are also large swamps and marshes in the river itself and all of the smaller creeks have extensive marsh areas.

With the increasing land erosion, many of the former marshes along the east bank of the river especially have turned into mud and/or sand flats which are exposed only at extreme low tide. The general marine physiography is by its shallowness exceptionally well suited to the gathering of shellfish by people of primitive technology.

CHAPTER III

DESCRIPTION OF POTTERY

Ceramic remains were of all the materials recovered by far the most numerous. Potsherds were found on all the sites except one and several sites are known only from sherd remains. Sherds were assigned to wares on the basis of paste temper but no attempt was made to assign sherds to types as it was felt that the information available was insufficient to establish types as such.

The four major wares are, shell temper, clay-old sherd temper, sand temper, and small gravel temper. Two lesser wares are represented by large crushed quartz temper and a combination of shell and old sherd temper. By far the most common surface decoration was fabric marking. Not a true fabric, this surface finish was in reality a wicker with the warp made of flat or half-round rods, probably a reed or split root, with a much narrower weft thread. There was no spatial significance to the different rod sizes, nor did weft sizes show any patterns of significant distribution. Weft sizes varied from almost indistinct to very coarse with the twists of the cordage visible on the sherd.

An initial attempt was made to distinguish between a wide weave fabric and a narrow weave fabric. Eventually this differentiation was abandoned when there proved to be no spatial significance to it. It is thought to be of temporal importance with the narrower weaves being later but as there were no temporal controls of any kind on the surface collection, this differentiation was abandoned. Further, it became extremely difficult to distinguish in a meaningful manner between the two as the ranges of variation overlapped, the one style fading very gradually into the other. Hence it will suffice here to note that fabric impressions of a definite wide and a definite narrow weave do exist side by side but fading very gradually one into the other. Should further work be done in the area with a positive temporal control this might prove to be an important factor. The second most common surface treatment was cord marking. This was found at a number of sites although always in small numbers.

In rapidly decreasing order of appearance are true smoothed, punctated, simple stamped, and net impressed sherds. The designation "true smoothed" is made because the action of wind-blown sand and surf renders many sherds smooth surfaced, hence only those sherds are labelled smooth surfaced which were recovered out of the middens or which exhibit a burnished surface. No doubt this has skewed slightly the actual distribution of smooth surface sherds as some were probably rejected as smooth which actually were of the smooth variety. When the absolute.

paucity of smooth sherds is noted, the reader will see that it is of little importance. The physical characteristics of each ware are fairly homogenous throughout the area investigated and hence each ware will be described only once, it being understood that that description is valid for each site where that ware was found.

Shell tempered ware was not found to be the predominant form at any site. It seems to have enjoyed its greatest popularity along Ward's Creek where it represented 32% of the sample from Cr⁰66, 7.6% of the sample from Cr⁰68, and better than half of the small collection from Cr^V71. It occurs in lesser percentages at Cr⁰2, Cr⁰4 and is 18.6% of the sample from Cr^V48, these last three sites being in the immediate vicinity of Back Sound. It was 10.6% of the sample from Cr^V75 on the west bank of North River at the juncture with Turner Creek. Thus it is spatially diverse but occurs only at isolated spots and as relatively small percentages of the total sampling at any site.

Wicker fabric impressing is by far the most typical surface decoration. Rod (or warp) size varied from two millimeters up to five millimeters. Cord marking also occurred with the cords generally heavy with the twists of the cordage quite visible in the clay.

Apparently the makers made no attempt to keep the direction of the fabric or cord marks lined up in any order. The general lay of the fabric was with the rods at an oblique angle to the lip but there was always evidence

of overlap. The lips were either tapered and rounded or squared. If squared the fabric was applied to the outside of the vessel, then laid onto the rim and folded down the interior wall for distances up to 3 centimeters, usually stopping at the recurve in the vessel wall. Another fairly common treatment on the lip and interior was that of impressing the clay with a cord wrapped dowel. In this case the lip was either impressed separately from the interior wall or in the same action which yielded a sloping dowel impression cutting through the interior edge of the lip onto the inside wall of the vessel. There was sometimes a space left between the dowel impressions, but just as often the impressions were right next to one another giving an effect very similar to fabric impressing.

Body shapes found were globular or conoidal. Mouth diameters ranged from six to fifteen inches while body thickness varied from a thin six millimeters to a rather thick 11 millimeters.

The paste is of a very soft and chalky feel, especially on sherds recovered from Harkers Island and the sound islands. The sites on North River yielded sherds of the soft chalky type but the more often the sherds were hard and gritty due to the amount of fine sand which was also present in the clay. Shell size ranged from less than one millimeter to over five millimeters, thus there was no apparent attempt to grade according to size of shell. The shells used include the scallop and oyster and clam may

have been present but no definite specimens could be located. For this analysis shell tempered sherds had to have more shell than any other temper to be classed as shell tempered. There were many sherds with shell inclusions in the paste but it was felt that if some other temper were present in a larger percentage, then the sherd would be put in that ware. This was designed to exclude sherds in which the shell inclusion was a natural accident. The only exceptions were shell and old sherd temper in the case of which a new class was made, and in the sand temper with shell inclusions, in the case of which the sherds were classed as shell, it being felt that of the two sand was more likely to be a natural inclusion in the raw clay. No effect was made to determine hardness of sherds since that factor is so changed by immersion in sea water.

The firing was rather poor with a large area of "core" in the middle of the wall. This area was invariably a different color from the exterior, usually a dark gray color. Exterior colors were in the buff to reddish buff range with some light greys.

Vessel construction was invariably of the coiling technique. Minor surface decorations include net impressing, and simple stamping.

Clay tempered sherds were recovered from all the sites in the Sound area and from almost all on North River. It would appear that clay tempered sherds enjoy a very wide range of distribution. The largest percentages are found

at Cr^o2 where clay tempering accounts for almost 51% of the total sample, Cr^o4 with 88% of a small sample having clay temper, Cr^o61 with 34.7% clay tempered ware. They are numerically scarce at all other sites except Cr^v48 which had 13.3% of its sherds in the clay tempered ware.

Surface treatments of the clay tempered ware is identical to the shell tempered ware with wicker fabric impressing being the most common followed by cord marking. There are no minor surface decorations found on any clay tempered sherds in this collection.

Vessel forms and method of construction are identical with shell temper sherds. Also identical is the physical description of the paste. The clay tempered sherds are soft and chalky feeling to the hand on the islands in the Sound while further up the North River they become hard and gritty from sand inclusions in the paste. They have a poorly fired core and like shell tempered sherds display a general "crude" appearance.

The temper of this ware ranged from clay inclusions which were so small and which so matched the rest of the paste that the tempering was all but invisible to chunks of previously fired clay that ranged up to 5 millimeters and were extremely obvious due to the color difference between them and the clay of the sherd. Clay tempered sherds are generally of a soft pastel buff to reddish-buff color with some soft greys.

Small gravel tempered ware has not only a large

spatial distribution but is present at many sites in very large percentages.

The sherds are hard, but tend to become crumbly upon exposure to the sea water. The tempering is small gravel, most of which is quartz. The range of size is from much less than one millimeter to just over one millimeter although the upper end of the range is not often present. Wicker fabric impressing is the most common surface treatment followed by cord marking. One sherd was recovered from Cr^V48 which had punctation and incising in a pattern. Interior wall decorations consisted per usual of fabric impressing extending down the wall for distances as great as five centimeters, or impressing with a cord wrapped dowel which extended as far as six centimeters down the inside wall. The walls of the vessels were generally thinner than the shell or clay tempered wares, ranging from three millimeters to seven millimeters. Vessel shapes include globular, conoidal and also a few bowls. Firing is generally complete with few sherds exhibiting poorly fired cores, and in most the color is uniform throughout although it is common for the inside wall to be darker than the exterior. The range of colors is quite large going from light buffs through reddish hues to dark blacks.

Mouth diameters ranged from small at six inches to large at 16 to 17 inches, most of the larger ones being confined to bowl shaped vessels.

Sand tempered ware has a spatial distribution

exceeded on by clay tempered ware, but is numerically the greatest of all wares recovered in the survey. The temper was limited to pastes which displayed a sandy feel yet which had no visible inclusions. This effectively separated it from the small gravel tempered ware with which it was very frequently found and which it greatly resembles. It appears that sizing was employed to insure the inclusion of only fine sand grains as few if any particles are large enough to be visible to the unaided eye. An alternative suggestion is that no tempering at all was deliberately added, the sand inclusions being an integral part of the raw clay which was not removed. The sherds are quite hard and do not seem to deteriorate in the sea water as readily as did the gravel tempered ware. It was extremely subject to exfoliation from salt crystalization and hence many sherds have surfaces so eroded as to be unidentifiable. Surface treatment is again mostly fabric marked followed by cord marking. Many minority treatments are found, net impressing being the most common of these. Less common is simple stamping and smooth. One large sherd was recovered from Cr⁰2 on which the coils were not smoothed on the interior of the sherd, leaving absolutely no doubt about its method of construction. Flattened coils were laid one on top of the other with the coils slanting outward. This technique produces a vessel in which force exerted on the interior of the vessel pushes the coils more tightly together, thus lessening the tendency to rupture along coil lines. Whether this was planned or

merely chance cannot be answered, but it remains an interesting engineering concept. The surface of this sherd has completely exfoliated so no idea is available as to its surface treatment.

Vessel walls are again thin ranging the same as for small gravel tempered ware. Vessel forms are also the same, being globular or conoidal, but with many more bowl shaped vessels than any other ware. The cord wrapped dowel interior wall decoration is also more prevalent than in other wares although the most common treatment in this ware is a smooth lip and interior wall.

Large crushed quartz tempering is definitely a minority ware in this area of the coast. At no place does it represent more than 5% of the total sample. It may represent trade items.

The temper is crushed quartz, some pieces of which are as large as 7 millimeters although two to four millimeters is the more common range. They are generally well fired and few have a core of poorly fired clay. Most are a uniform yellow buff color throughout.

Fabric marking is again the most common treatment followed in frequency by cord marking. Net impressing is a minority surface treatment. No sherds were recovered large enough to yield any idea of shape or size, but it was apparent that coiling was used in all cases as a means of vessel construction.

A total of fifteen sherds of a very interesting

temper were recovered and all but one of these were from Harkers Island. These sherds were tempered with an equal portion of shell and clay. In the case of these sherds the clay component is always of a bright red color indicating that the clay had been fired previous to its inclusion in the paste of the sherds. These sherds were recovered from Cr⁰2, Cr^v48, and Cr⁰68, all three of which have significant components of shell tempered and clay tempered sherds. Based upon the great similarities of shell tempered sherds and clay tempered sherds, and supported by the presence of sherds with a combination of both, it would appear that there is a close connection between these two tempering traditions. The exact nature of this connection remains unknown, but is certainly an aspect of the archaeology of the area which would bear further investigation.

TABLE 1

RIM PROFILE DESCRIPTION

Top row: Clay-sherd temper		Second row: Shell temper	
A. wicker fabric	Cr ⁰ 2	A. Sherd and shell temper	Cr ^v 69
B. wicker fabric	Cr ⁰ 2	B. wicker fabric	Cr ⁰ 1
C. wicker fabric	Cr ^v 48	C. cord marked	Cr ⁰ 2
D. wicker fabric	Cr ^v 48	D. wicker fabric	Cr ^v 48
E. wicker fabric	Cr ⁰ 61	E. wicker fabric	Cr ^v 48
F. wicker fabric	Cr ⁰ 61	F. wicker fabric	Cr ⁰ 66
G. eroded	Cr ^v 69		

Third row:		Bottom row:	
A. wicker fabric	Cr ⁰ 2	A. wicker fabric	Cr ⁰ 2
B. wicker fabric	Cr ^v 48	B. wicker fabric	Cr ^v 48
C. wicker fabric	Cr ^v 48	C. wicker fabric	Cr ^v 48
D. wicker fabric	Cr ^v 48	D. wicker fabric	Cr ^v 48
E. wicker fabric	Cr ^v 48	E. wicker fabric	Cr ⁰ 66
		F. wicker fabric	Cr ^v 72

Rim profiles are drawn with the inside of the vessel to the left. These profiles show the various ranges of shape.

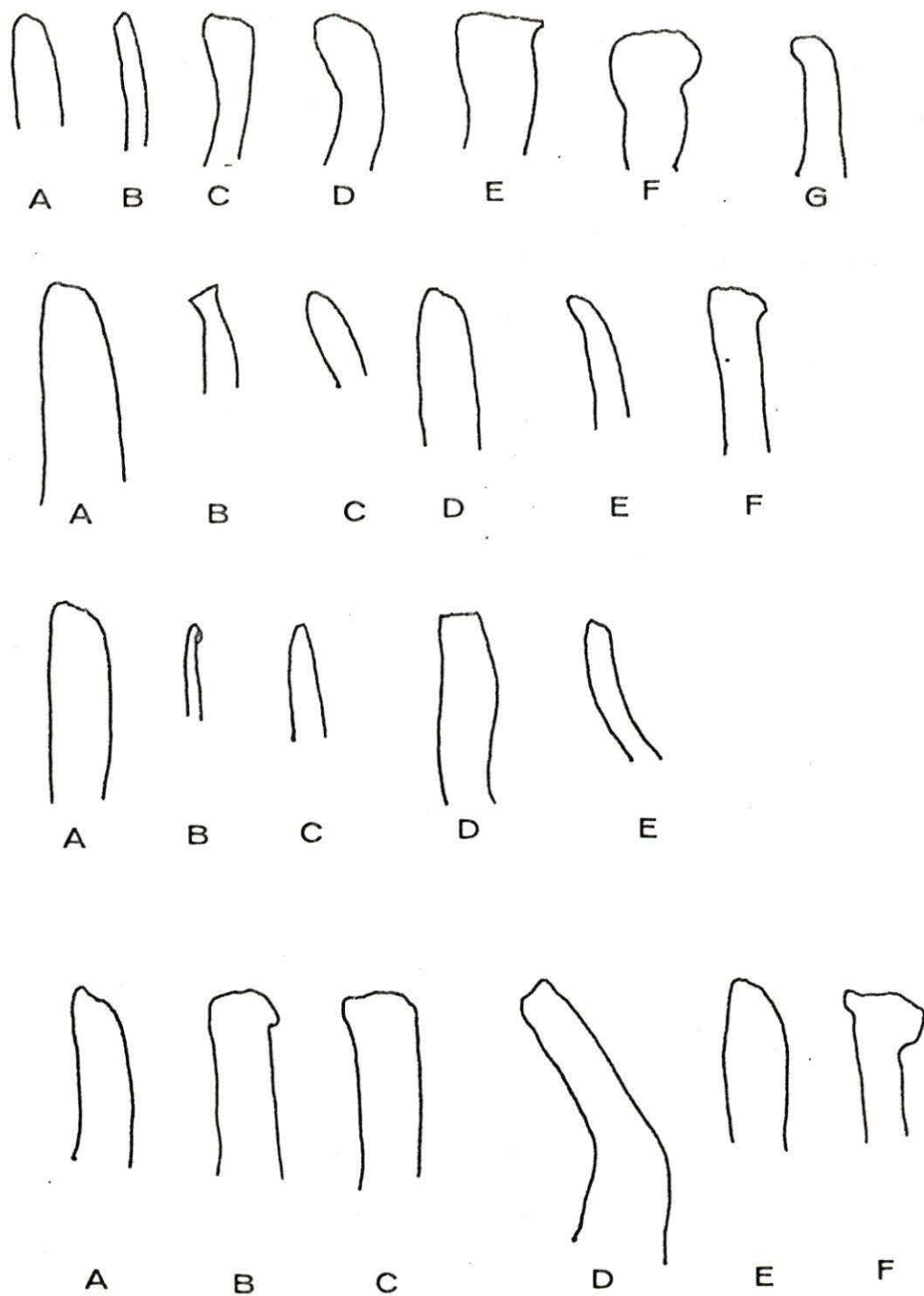


Fig. 2.--Rim Profiles

CHAPTER IV

ARTIFACTS

Stone projectile points were recovered from only two sites, and both of these have been collected by more than one survey. Both sites were also open on the surface which has much to do with the availability of artifacts to the collector. Cr^O2 has yielded over the years only four projectile points. These are described in detail under the discussion of the site. Two Savannah River points have been found, one a triangular Stallings Island variety and one a long blade type. Both were made of porphyritic argillite, a material available almost anywhere in the Piedmont section of the state, but certainly not on the coast. Also of the same material was a small triangular point that has been placed under the Type II triangular points described under the discussion of Cr^V48. In all probability it does not belong in that classification as the material used is so different from other points in that category, the characteristics of manufacture were so similar, however, that it was placed there. These three points would seem to give evidence then, that some sort of trade or migration was occurring between the Piedmont and the coast.

The earliest known points from the region are the three Halifax type points found at Cr^V48. These are of traditional Halifax design and are made of the typical white quartz. Nodules of white quartz large enough to be utilized in the manufacture of Halifax points made be found on the coast in rare number. It would again seem probable, however, that either the finished products or the raw materials were being imported from the coastal plain near the piedmont where the quartz quarries were located that were utilized by the people producing the Halifax materials. The Halifax points represent what would undoubtedly be a pre-ceramic horizon at the sites on the coast where they are found. Whether that level would have shellfish deposits accompanying it remains to be determined by a controlled excavation.

The only other point which has been definitely identified is a Gypsy point recovered from Cr^V48. This little known point seems to be dated at c.500AD in the Piedmont. It is made of white quartz and seems to fit the typical range of that type.

Other points recovered have been given tentative classifications, partly because later points are not well defined, and partly because the points themselves are extremely crude and ill-executed.

Several minor stone artifacts were recovered, most from Cr^V48. One plummet made of white quartz was found. It is generally ovoid in shape and has flakes knocked off

both ends and the middle of both long sides. It was used for either a net sinker or a hook and line sinker. One grinding stone was found at Cr^V48. Both the grinding stone and plummet are made of stone that could be had locally.

Three large white quartz stones were recovered from the midden of Cr^O66. Although none of these showed any signs of use, stones of this size are not available in the immediate area and must have been brought in. Their use is problematical and any number of possibilities present themselves.

Several scrapers were found of both unifacial and bifacial manufacture. They were of stone that could have been found locally, although again the quality of stone implies that at least the raw material was brought into the area by man.

Several bone artifacts were recovered both from the surface and from the one burial preserved from the survey area. In 1964 a burial was removed and preserved by personnel from the Research Laboratories of Anthropology. Found below the high water mark its excavation was hurried because of the incoming tide. Wave action had removed most of the skull, fingers and toes. With the burial were found three antler tines, one of which is sharpened into a chisel-like tool. The others showed no signs of pre-forming for use as tools, although their location in the burial would indicate that they had significance beyond that of mere food refuse.

Vertebrae were found at Cr^O2 and at Cr^V48 that showed signs of having been worked into beads or other decorations. Two of these were fish vertebrae and one was from some type of mammal.

Two smoking pipe fragments were located. Cr^V48 produced a fairly large one of a gray clay with heavy sand temper. It had a 60 degree bend between stem and bowl and had apparently been reworked for re-use after it had broken. The other pipe came from Cr^V74. Located in the surf it was of red clay although the interior had been stained black by tobacco juice. The portion recovered was a stright stem although reconstruction of possible shape is impossible.

CHAPTER V

SITE DESCRIPTION

In the discussion of the sites we shall proceed in numerical order which for the most part is also the chronological order in which they were located and described.

Cr⁰1 is located in the town of Marshallburg, North Carolina, on the banks of The Straits. This site is described by Coe and Davis as being a low shell midden washing into the water. It was not visited by this author and hence there is no further description. It might be noted here that Cr^V55 located by Mattson is probably merely an extension of Cr⁰1. Soil type is Portsmouth loam.

Pottery:

Shell temper:

Wicker fabric marked	1
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Gravel temper:

Unidentified surface	2
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Sand temper:

Wicker fabric marked	3
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Total sherds	6
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Cr⁰2 is known as Shell Point and is located on the southeastern tip of Harkers Island. In 1931 the mound at Cr⁰2 was described as being, "...roughly circular in shape, one hundred yards or more in diameter. Its height rises to ten feet or more near the center. Considerable excavation has been made. Five miles of road on the island have been paved with shells from this mound and many loads have been transported to Hyde County for fertilizer" (Rights 1947: 38). Subsequent to the writing of this description most of the remaining portions of the mound were removed for use as road ballast. When Coe and Davis visited the site in 1938 only a very small crescent was left of the original midden. Today the same area remains although badly eroded by the surf. The total extent of the undisturbed midden is perhaps an acre of very irregular shape. There is a long spit of shell extending into the sound from which numerous pieces of pottery and some stonework may be retrieved at low tide. Local tradition says that the spit is the remains of a causeway which the Indians tried to build to nearby Shackleford Banks. In actuality it is the natural formation taken by the washout caused by the confluence of two currents sweeping past the point. In depth the midden is perhaps two feet thick with no overburden. No test pits were dug at this site or at any others, and thus no idea is available as to how far below the actual shell deposits cultural material may extend.

As noted above the midden is washing into the sound

and the most extensive collections may be had at low tide. At that time there is evidence of undisturbed midden beneath the low tide level which is an indication that there has been considerable rise in the mean sea level since those portions which are beneath the low tide level were deposited. Soil type is St. John's fine sand.

Four stone projectile points have been recovered from Cr^o2. Two of these are of the Savannah River type. The first is a rather triangular shape, 7.7 cm long, 4.3 cm wide and .9 cm thick. The base has been thinned by the removal of several flakes from each side, and the edges are finely retouched. The stem is slightly expanding, 3 cm wide and 1.2 cm long. The area between the shoulder and the stem has been slightly ground. This point was of porphyritic argillite.

A second point placed in the Savannah River category was a long blade. The point was 14 cm long, 3.4 cm wide, and 1.0 cm thick. The stem could better be described as a tang and was thinned by the removal of one fairly large flake from each side. The edges are finely retouched. This point was also of porphyritic argillite.

A third point was made of porphyritic argillite but appeared to be of a later type. This point was triangular in shape, 4.5 cm long, 2.4 cm wide at the base and .4 cm thick. There is no evidence of grinding and the edges are retouched. It has been placed in the Type II triangular point classification described below.

The last point found at this site is a very rough basal section made of white quartz. It is extremely crude and any attempt at classification would be a guess at best. It has a contracting stem, shows no thinning, grinding or retouching.

Two possible beads were recovered from this site. They are made of vertebrae, one from a fish and one from some mammal. The fish vertebra bead is incomplete, four holes having been drilled almost to the center along two intersecting diameters. The periphery along the circumference shows possible grinding or smoothing, although it must be remembered that artifacts found on the surface are subjected to much abrading from wind-blown sand. The location of the drilled holes along two intersecting diameters appears to be too regular to be the result of chance wind erosion.

The second bead is from a mammal vertebra which has been cut in half along a diameter. A hole was then drilled from the edge to the center along another diameter roughly 30 degrees from the cut edge. This bead also shows much smoothing along the edges.

Similar beads were located in situ by William Ritchie on Martha's Vineyard, Massachusetts (Ritchie 1969: 28).

One burial has been preserved at the Research Laboratories of Anthropology from this site. It is the only preserved burial from the survey area. Located in 1964

below the high tide level, wave action had removed part of the cranium, hands and feet, and much of the vertebrae and pelvis were deteriorated. No pit was noted, but several artifacts were recovered with the burial. Three pieces of antler tine were in the burial, one of which shows definite working, having been formed into a chisel type tool. The other two show no forming, but were probably used as tools in some capacity. One cracked pebble and one scraper were also found in the burial.

Pottery:

Shell temper:

Wicker fabric marked	27
Cord marked	3
Net impressed	2
Unidentified surface	<u>16</u>
Total	48

Clay temper:

Wicker fabric marked	225
Cord marked	16
Unidentified surface	<u>126</u>
Total	367

Clay-shell temper:

Wicker fabric marked	3
Unidentified surface	<u>3</u>
Total	6

Crushed quartz temper:

Wicker fabric marked	10
Cord marked	1
Net impressed	2
Unidentified surface	<u>4</u>
Total	17

Gravel temper:

Wicker fabric marked	15
Cord marked	4
Unidentified surface	<u>28</u>
Total	47

Sand temper:

Wicker fabric marked	93
Cord marked	5
Net impressed	4
Unidentified surface	133
Total	235

Total sherds 721

Stone projectile points: 1 Savannah River blade type;
1 Savannah River Stallings Island variety; 1 triangular point type 2. The above three points are of porphyritic argillite. 1 unidentified basal section was of white quartzite.

Beads: 2 bone vertebrae.

Bone: 3 antler tines recovered from burial, used as punches, and chisels.

Burials: 1 extended supine.

Shell: <u>Crassostrea virginica</u> Gmelin	5
<u>Mercenaria mercenaria</u> Linne	6
<u>Busycon caria</u> Gmelin	1

Cr⁰₄ on Baregrass Island was visited by Coe and Davis and their's is the only record of the site. It is described as a low island in Back Sound which is covered with shell deposits of a midden nature. If one looks at the United States Coast and Geodetic Survey Navigating Chart of Back Sound (Number 420, Beaufort Inlet and Part of Core Sound) it is possible to trace a projected line from Bottle Run Point through Baregrass Island, Morgan Island and then back to Shackleford Banks connecting soundings of one foot or less to form what was probably an old shoreline now obliterated by the rising sea. Baregrass Island would then be on the shore of the Banks rather than a very small and isolated island as it is today. Soil is listed as Tidal Marsh, but it is probably a sand base with shell overburden.

Pottery:

Shell temper:

Wicker fabric marked	1
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Clay temper:

Wicker fabric marked	30
Cord marked	4
Unidentified surface	4
Total	<u>38</u>

Gravel temper:

Unidentified surface	3
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Sand temper:

Wicker fabric marked	1
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Total sherds	43
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Cr^V48 is an extensive site covering the southwest point of Harkers Island which is called Rush Point. Mattson noted four different areas of the site which he collected separately. When this author was there the site had been razed by grading machinery for the construction of a new fish house and new lawn had been planted over much of the rest of it. I recognized two separate areas but had no way to correlate them with Mattson's work. As a result, the various parts of Cr^V48 are here treated as a unit which seems to have worked out very well for there is little difference amongst any of the parts. There were several acres of site visible when visited in November of 1969 although the full extent of the site was hidden by new grass, pines, sea oats and juniper which totally covered much of the area. There is little doubt that the site is quite extensive and Mattson reported the midden to be at least two feet thick. This is most certainly the case, and at any rate, Cr^V48 has yielded so far the largest single collection of material from any of the sites visited. Soil type is Blanton fine sand to St. Lucie fine sand.

Erosion of the midden was in evidence along the eastern shore of Rush Point. There a tidal current comes past the land which has caused a channel nine or ten feet deep to be cut in floor of the Sound and has also eroded the land badly. There is an unnamed body of water enclosed between Rush Point and the mainland of Harkers Island. It appears that Cr^V48 is on all the land surrounding

that little bay and hence it would appear the bay or pond represents a favored habitat. The water of the bay is extremely shallow which would indicate that if the sea were much lower it would be a marsh. In actuality that may not be the case. Ritchie has mentioned an hypothesis that small bays such as this tend to silt during time, hence as the sea rose it probably kept above the silting and the bay was in all likelihood the same depth then as it is now (Ritchie 1969: 57). The water is quite fully salt water and as such would have supported molluscs which would have been within easy reach for food, hence a very good reason that the shore around this bay was so heavily populated. Brooks Creek was directly to the north of the bay at Cr^V48. Unfortunately, the land around it was completely covered with heavy pines, lawns and marsh so that no indication was available as to possible prehistoric habitation. It is also considerably deeper than the bay at Cr^V48 which would seem to favor it as a possible site area but, until someone plows their lawn it will be impossible to tell. East of Brooks Creek is Jane's Creek. The same unfortunate circumstances prevailed here as at Brooks Creek. Jane's Creek has a very narrow and shallow mouth and is itself extremely shallow, more over it is surrounded by a boggy marsh which the other two were not.

The artifacts from Cr^V48 were recovered by John Mattson in 1969 and by this survey in 1969 and 1970.

More stone projectile points were found here than

at any other site. The earliest known are the Halifax points of which there are three. The largest is 4.5 cm long, 2.2 cm wide at the shoulder and 1.9 cm wide at the notches. It is of smokey quartz, is side notched and has a ground base. The smaller two are 3.5 cm long and 2.0 cm wide. One is of smokey quartz and the other is white quartz. One Morrow Mountain type point was recovered although it was crude and had been subjected to washing in the surf and was hence very rough. Details such as retouching and grinding had been obliterated. One point of the Gypsy classification was found. It is 3.7 cm long, 1.8 cm at the shoulder and 1.0 cm thick. It has a contracting base, is not ground or smoothed and shows little if any retouching. It is made of white quartz.

Three other types of projectile point were recognized. They were designated Triangular Points, Type I, II and III and were determined by the shape of the base. They are all very crude in execution and are made of various types of quartz.

Type I. Three of these assymetrical points were located. They are triangular in shape, the largest being 3.5 cm long, 2.7 cm at the shoulder, 1.6 cm across the stem, and 1.1 cm thick. The others are of the same proportion. They possess a contracting stem with a concave base. They show no evidence of grinding and none are retouched. Two were of white quartz and one of rose quartz.

Type II. They are the same general triangular

shape as type I but have expanding bases and no stems. No basal grinding is in evidence and neither is any retouching. The largest is 4.0 cm long, 2.0 cm across the base, and .5 cm thick. Others have the same proportion. These were of white and smokey quartz.

Type III points show the same characteristics of manufacture as types I and II. They have generally expanding and concave bases and one appears to be eared. The largest is 3.0 cm long, 2.5 cm wide and .7 cm thick. There is no grinding in evidence and only slight evidence of retouching along the edges. These are of white and smokey quartz.

It must be emphasized that the three types of triangular points are very crude and many appear to be incomplete, hence while no evidence was found for grinding or retouching, it may be that they had not progressed far enough in their manufacture to exhibit these traits.

There were several blanks found which appeared to have been in the early stages of projectile point manufacture. Nothing can be said of these except they manifest bifacial chipping and are of various types of quartz.

Other stone artifacts include a hammerstone of white quartz which was 9.1 cm long, 5.0 cm wide and 3.0 cm thick. A plummet 4.7 cm long, 2 cm wide and 1.5 cm thick weighing 2 ounces. This was chipped at both ends and in the middle of both long edges and was no doubt used as a sinker for either a net or a hook and line. This

was also of white quartz.

One grinding stone was recovered which was 6.5 cm long, 4.5 cm wide and 1.4 cm thick. Both surfaces were hollowed and smoothed. The depressions were not over 3 mm deep. The artifact was made from a fine grained sandstone of white color.

One aboriginal clay pipe was found made of a heavily sand tempered clay. It was broken at the stem which made reconstruction difficult. It appears to have had an angle of 60 degrees between the stem and bowl, but it also appears that the stem was ground down for re-use after it had been broken.

Historic material was also recovered from this site. Most can be dated to the very late eighteenth century at the earliest with some material dated to the middle nineteenth century. One very unique piece was found which was completely out of date with the other finds. This was a green glass gin bottle and although only the bottom of the bottle and the rim were found, it has been given a terminal date of manufacture of 1670 by the archaeology laboratory at the College of William and Mary in Williamsburg, Virginia (Leverette Gregory, personal communication). This one bottle can hardly date the site and it seems quite likely that the bottle was either an antique at the time it was broken, having been kept by a family for several generations, or else was a stray piece either washed ashore or accidentally lost at some earlier time. It would seem

to be more in line chronologically with the material recovered from Cr^o61. See Chapter VIII for further discussion.

Pottery:

Shell temper:

Wicker fabric marked	71
Simple stamped	1
Net impressed	1
Unidentified surface	<u>71</u>
Total	144

Clay temper:

Wicker fabric marked	74
Cord marked	4
Punctate	1
Unidentified surface	<u>24</u>
Total	103

Shell-clay temper:

Wicker fabric marked	6
Unidentified surface	<u>1</u>
Total	7

Crushed quartz temper:

Wicker fabric marked	9
Unidentified surface	<u>3</u>
Total	12

Gravel temper:

Wicker fabric marked	146
Punctate	1
Unidentified surface	<u>172</u>
Total	319

Sand temper:

Wicker fabric marked	113
Cord marked	1
Simple stamped	1
Net impressed	1
Unidentified surface	<u>70</u>
Total	186

Total sherds: 771

Stone projectile points: 3 Halifax, white and smokey quartz; 1 Gypsy, white quartz; 1 Morrow Mountain I; 3 type I triangular, white and rose quartz; 3 type II triangular, white and smokey quartz; 3 type III triangular, white and smokey quartz.

Scrapers: 1 uniface scraper, white quartz.

Blanks: 3 white quartz.

Hammerstones: 2 white and smokey quartz.

Grinding stone: 1 white quartz.

Plummets: 2 white quartz.

Bone: Miscellaneous pieces.

Beads: 1 bone vertebra.

Historic material: glass, ceramics

Shell: <u>Crassostrea virginica</u> Gmelin	6
<u>Mercenaria mercenaria</u> Linne	12
<u>Busycon caria</u> Gmelin	3
<u>Aequipecten irradians</u> Lamarck	3
<u>Polinices duplicatus</u> Say	1

Cr^V60 is the site located on land belonging to Mr. Ike Guthrie of Harkers Island and is the only site discovered which was any distance from the water. Mr. Guthrie had recently graded his land for a sub-division and the artifacts recovered were found in a bulldozer cut roughly 500 feet from state road 1335 and one half mile from the bridge to the mainland from Harkers Island. The artifacts were few in number and the provenience of the zoological specimens was doubtful. Mr. Guthrie reported that the blade of the bulldozer had turned up several extremely dark areas, described as black, and heavily loaded with shell. These had been removed and presumably the items which I recovered were remnants of one such "dark spot". An immediate look at the site would indicate that it was at least one half mile from the water. It is, however, located very near to a large swamp and not at all far from Jane's Creek. It is conceivable, then, that Cr^V60 is a remnant of a site located near Jane's Creek. This would fit the general pattern of shell midden sites in the area which are all immediately on or very near the water. Soil type is Blanton Fine Sand.

Pottery:

Clay temper:

Wicker fabric marked 1

Sand temper:

Wicker fabric marked 4

Shell:	<u>Crassostrea virginica</u>	Gmelin	1
	<u>Mercenaria mercenaria</u>	Linne	4
	<u>Busycon canaliculatum</u>	Linne	2

Cr^o61 is the only site which was being actively collected by amateurs. The location is on the north shore of Harkers Island roughly one quarter mile west of the bridge over The Straits crossed by state road 1335. Because of its proximity to the road and to their homes, several inhabitants of Harkers Island regularly collect artifacts along the beach. I fear that they have most of the definitive material, having even collected all the rim and bottom sherds that they find. Their collection was examined but as the provenience was very doubtful no attempt was made to integrate it into the analysis. One fact which was extremely interesting was the antiquity of the projectile points, many of which appeared to be early archaic. If that were so and if the points are from Cr^o61, that would give that site a duration from archaic through historic times as an almost complete sequence is available from the site.

Erosion along the shore has been severe and again there is evidence of midden below the low tide mark. The site itself is covered in large pines which prevented obtaining an estimate of its total size, but it is not inconceivable that it extends across a small peninsula which separates The Straits from Brook's Creek. Depth of the midden along the shore was better than one foot and nearer two feet in places. Soil is Blanton Fine Sand.

This site yielded no artifacts of aboriginal origin aside from pottery. An extensive collection of

artifacts reportedly collected from this site is owned by Mr. Jackson of Harkers Island. This collection contains many aboriginal smoking pipes, projectile points and other assorted stone tools. Unfortunately, no such artifacts were recovered by the survey. Datable historic material was recovered, however. The majority of the ceramics were of middle eighteenth century origin and later, and two pieces were of great interest. One was the handle from a Redware jar. This piece was given a date of 1720 to 1750 for manufacture. (Leverette Gregory, personal communication). The other piece was a brass shoe buckle of a type in use during the early eighteenth century. No other pieces were recovered with such narrowly defined dates of possible manufacture. The majority could have been produced any time from the early eighteenth century to the late eighteenth century. See Chapter VIII for further discussion.

Pottery:

Clay temper:

Wicker fabric marked	53
Cord marked	<u>3</u>
Total	56

Crushed quartz temper:

Wicker fabric marked	2
Cord marked	<u>1</u>
Total	3

Gravel temper:

Wicker fabric marked	13
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Sand temper

Wicker fabric marked	55
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Cord marked	1
Smooth	2
Unidentified surface	<u>31</u>
Total	89

Total sherds	161
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Bone: 14 miscellaneous.

Metal: 1 brass shoe buckle.

Historic material: glass, ceramics, kaolin pipe stems
and bowl fragments.

Shell: <u>Crassostrea virginica</u> Gmelin	5
<u>Mercenaria mercenaria</u> Linne	5
<u>Busycon caria</u> Gmelin	1

To the west of Cr^O61 on the same peninsula is the site numbered Cr^V62. This site is on land owned by Mr. H. B. Dennis of Winston-Salem who owns a summer house on what is known as Harkers Point. The site is at the extreme western end of the point very near the cemented wreck of the America's Cup yacht "Pilgrim". The sherds recovered were all in the surf or mixed in the sand. No evidence of midden was found and again it is likely that this is the remnants of a site located on Brook's Creek, rather than on the very exposed point of land. Soil is Blanton Fine Sand.

Pottery:

Clay temper:

Wicker fabric marked	6
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Sand temper:

Wicker fabric marked	2
Unidentified surface	<u>10</u>
Total	12

Total sherds	18
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Cr ^v63 is located on the extreme northwest point of land on Brown's Island called wading point. It is represented in the collection by two sherds of unknown class. If there ever was a site there it has long since been washed into The Straits. Soil is listed as Tidal Marsh, but is actually a fine sand.

Pottery:

Clay temper:

Unidentified surface 2

Between Brown's Island and the Town of Marshallburg on the mainland is a small unnamed island separated by only a very shallow wash from Brown's Island. On the north face of this island directly across The Straits from Marshallburg is a midden which is presently washing out. The midden is relatively small, only about 50 yards along the beach and extending an undetermined distance back from the water. The midden was only one foot thick where visible. An interesting example of erosion was visible several yards along the beach from the site. A cabin had been built on the point of land extending northeast towards Marshallburg. A hand pump had been installed presumably to supply water to the cabin. No doubt the pump had been useable, but today the top of the pump is fully eight feet above the present ground level, giving an indication of just how much erosion is taking place along the banks of the Straits.

Cr⁰64 is covered in large pine and smaller juniper which precluded the possibility of determining the extent inland of the midden, although it is doubtful that much of the original midden is left when the extent of erosion is considered. Soil is listed as Tidal Marsh but is actually a coarse sand base with a sandy loam overburden containing the midden.

Pottery:

Clay temper:

Unidentified surface

2

Crushed quartz temper:

Wicker fabric marked	1
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Gravel temper:

Wicker fabric marked	17
Unidentified surface	<u>11</u>
Total	28

Sand temper:

Wicker fabric marked	16
Unidentified surface	<u>10</u>
Total	26

Total sherds	57
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Historic material: ceramics.

Shell: <u>Crassostrea virginica</u> Gmelin	23
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<u>Mercenaria mercenaria</u> Linne	14
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<u>Busycon caria</u> Gmelin	1
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<u>Busycon canaliculatum</u> Linne	1
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<u>Aequipecten irradians</u> Lamarck	9
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<u>Anadara ovalis</u> Bruguiere	1
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At Cr ^v65, about 200 yards to the west of Cr ^o64, another deposit of sherds was found. These were all in the surf and in the sand although they were not badly eroded. No evidence of midden was found although the heavy marsh grass covered the ground to the point of obscuring any evidence that might have been present.

Here again we must look at the navigating chart of the area (no. 420). One will notice a small chain of islands between Browns Island and Marshallburg. These in all likelihood represent the old shore of Browns Island thus explaining why no sites were found on the present northern shore of the island. Similarly it is probable that Browns Island and Harkers Island have only recently separated. They are, however, separated and small boat traffic is now possible between them. Soil is again listed as Tidal marsh but is in reality a fine sand.

The similarity in percentages of pottery wares from this site and from Cr ^o64 indicate that this site is probably an extension of Cr ^o64.

Pottery:

Clay temper;

Wicker fabric marked 1

Smooth 1

Crushed quartz temper;

Wicker fabric marked 1

Gravel temper:

Wicker fabric marked	30
Unidentified surface	<u>3</u>
Total	33

Sand temper:

Wicker fabric marked	25
Unidentified surface	<u>6</u>
Total	31

Total sherds	67
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The site numbered Cr^o66 is located on land owned by Mr. George Huntley of Beaufort who presently owns the Huntley Supply Company and a smaller insurance and real estate company. The land is being farmed and there are cattle on it. Much of the immediate area has been diked for mosquito control and to encourage wild fowl to land there during hunting season. The site area is known as Crow Hill and is a very prominent hummock near the river. The hill itself was in pines but had been plowed between the trees. Much of the rest of the land was marsh grass and various cereal crops. The collection was taken along the shore where a midden was washing out. Some midden was visibly below the low tide mark, and except for the crown of the hill very little of the site area had been plowed. The grass again interfered with attempts to determine the extent of the site towards the land, but the site ran for almost one half mile along the shore of South Leopard Creek and Wards Creek. Midden deposits seemed to be at places two feet thick and are perhaps even thicker further inland. Several round holes were visible about twenty yards inland where earlier inhabitants of the land had dug holes to obtain shells for either mortar lime or for liming their fields. These indicate that the site is quite extensive towards the land. Soil is of the Bladen fine sandy loam, low phase.

Three fairly large white quartz stones were recovered from the midden. These are generally in the range

of 12 cm long and weigh respectively, 16 ounces, 16 ounces and 24 ounces. They are smoothed, show no signs of use against other stones, yet are an anomaly to the area. It may be possible they were used in the cracking of oysters, clams or even whelks.

Pottery:

Shell temper:

Wicker fabric marked	26
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Clay temper:

Wicker fabric marked	2
----------------------	---

Sand temper:

Wicker fabric marked	27
Unidentified surface	4
Total	<u>31</u>

Total sherds	81
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Stone: 3 large stones, white quartz.

Shell: <u>Crassostrea virginica</u> Gmelin	38
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<u>Mercenaria mercenaria</u> Linne	8
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A short ways south of Cr^o66 is a small site, Cr^v67, which has mostly washed into the river. Small traces of midden remain, most beneath the low tide level. The site is located today at the end of Mr. Huntley's mosquito dike although before the dike was installed it was separated from Cr^o66 by a small creek and a large marsh. It does not appear to have been part of Cr^o66. Tidal Marsh is a very accurate description of the soil.

Pottery:

Clay temper:

Wicker fabric marked	7
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Sand temper:

Wicker fabric marked	37
Unidentified surface	<u>30</u>
Total	67

Total sherds	74
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Shells: <u>Crassostrea virginica</u> Gmelin	7
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<u>Mercenaria mercenaria</u> Linne	4
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There is a long but narrow hillock of land separating North and South Leopard Creeks which is further separated by a bog from the mainland. This semi-island is completely covered by the site of Cr^O68 which runs the entire length of the shore, or almost 1,000 yards. The center of the hillock is very high for the area, being between ten and twelve feet above the sea level, but each end slopes down into the creek and the site follows the land right under the water. Midden is between one and two feet thick where visible. Heavy pines, grass and cactus cover all the hillock except the ends which are in marsh grass. There are also small groves of hardwood trees some of which appear to have been cultivated fruit trees, probably apple and peach. This is one of the few sites which has a visible geological stratigraphy. The heavy black humus of the midden is underlain by several feet of white sand. The white sand is in turn underlain by several more feet of yellow sand which is in turn underlain by an orange clay. The beach is now on the orange clay and the erosion seems to have been slowed by the heavier clay deposit.

The entire promontory upon which this site is located is listed as being Tidal Marsh. In actuality the site is quite high above the water and is composed of the fine sand base with sandy loam overburden containing the cultural materials.

Pottery:

Shell temper:		
Wicker fabric marked		11
Clay temper:		
Wicker fabric marked		4
Shell-clay temper:		
Wicker fabric marked		1
Gravel temper:		
Wicker fabric marked		40
Unidentified surface		2
Total		<u>42</u>
Sand temper:		
Wicker fabric marked		86
Total sherds		144
Shell: <u>Crassostrea virginica</u> Gmelin		80
<u>Mercenaria mercenaria</u> Linne		15
<u>Busycon caria</u> Gmelin		1
<u>Busycon canaliculatum</u> Linne		1

Across North Leopard Creek from Cr^o68 is a very sparse site numbered Cr^v69. A few sherds were found in the surf, no midden was present and the whole was rapidly becoming a swamp.

Soil is aptly listed as Tidal Marsh.

Pottery:

Clay temper:

Wicker fabric marked 2

Sand temper:

Unidentified surface 3

Total sherds 5

Cr 70 On a very undistinguished piece of marsh on the north side of Wards Creek, directly across from North Leopard Creek is a very interesting site. Of all the sites collected this is the only one from which no artifacts were recovered. It would be difficult to describe this as a site except that a definite midden was present with shell embedded in it. Pottery is the most common artifact to be found in the survey area and indeed several sites are known by nothing more than a few sherds. It seems likely then, that this site represents a pre-pottery shell midden, and if so, the only one found in the area. In favor of that hypothesis is the very low level of the midden which was mostly in the water with only six to eight inches of land remaining above the high tide mark. The ground was covered with marsh grass, a sign that the sea had soaked up to the surface killing the other vegetation. Further in favor of the antiquity of the site is the chalky and crumbly condition of the shell. Great pains were needed to recover any whole specimens. Further work at the site will be needed to substantiate the hypothesis as it now stands.

The appellation of Tidal Marsh for this piece of land is extremely appropriate.

Shell: <u>Crassostrea virginica</u> Gmelin	17
<u>Mercenaria mercenaria</u> Linne	12

Cr^v 71 Another poor site lies at the juncture of Wards Creek and North River on the north bank of Wards Creek. The site is located on the southeastern most projection of land and consists of a few water washed sherds. An extremely small midden is visible almost all of which now goes under at high tide. Perhaps several square feet are all that remains identifiable as midden.

Soil type is Dunbar fine sandy loam although the whole is rapidly becoming Tidal Marsh.

Pottery:

Shell temper:

Unidentified surface 10

Sand temper:

Unidentified surface 7

Total sherds 17

Shell: Crassostrea virginica Gmelin 5

Mercenaria mercenaria Linne 1

About one mile north on the east shore of North River is Cr^V72. This site is very badly eroded, having only a few sections of midden about 10 yards long remaining. Sherds are to be found in the surf and in the sand beach. The extant midden is perhaps one foot thick, but certainly most of it has washed into the river already. The majority of the midden is covered in grass as the site is now used as the parking place for several summer-use mobile homes. Erosion has been temporarily stopped by the placement of numerous old tires along the beach. Soil type is Portsmouth fine sandy loam.

Pottery:

Clay temper:

Wicker fabric marked	4
Unidentified surface	2

Crushed quartz temper:

Wicker fabric marked	1
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Gravel temper:

Wicker fabric marked	33
Unidentified surface	43
Total	<u>76</u>

Sand temper:

Wicker fabric marked	6
Smooth	4
Unidentified surface	12
Total	<u>22</u>

Total sherds	105
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Shell: <u>Crassostrea virginica</u> Gmelin	7
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<u>Mercenaria mercenaria</u> Linne	6
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The only site found north of the U. S. Highway 70 bridge across North River was Cr^V73. Located on the first point of land north of the bridge on the east bank of the river, it was represented by a small collection of water washed sherds. No midden was visible although the entire area was in marsh grass which went directly into heavy pines.

Soil type is Portsmouth fine sandy loam.

Pottery:

Gravel temper

Unidentified surface 2

Sand temper:

Wicker fabric marked 2

Unidentified surface 9

Total sherds 13

One of two sites located on the west bank of the North River, Cr^V 74 is about three miles north of Lenoxville Point. Few artifacts were recovered from the site although midden was in evidence. The first conclusion reached was that like the other sites along the river it had eroded away. However, at this time it appears more probable that the site has only recently begun to erode into the river. Heavy pines with a grass and thorn undergrowth prevented easy access to the interior and no attempt was possible to determine the extent of the site inland from the beach. The midden, where visible, was over one foot thick, and extended for only 50 yards along the shoreline. See Cr^V 75 for further discussion. The soil type here is Portsmouth fine sandy loam.

One artifact was recovered from this site. A clay aboriginal smoking pipe, 4 cm long, 2 cm wide at the widest part and 1 cm wide at the narrow end was located in the surf. The clay is fired a deep red but the interior is black, probably from tobacco juices as the end away from the bowl is red clear through. It is straight, but is too small a segment for positive identification of shape. The cross section is one of a flattened circle.

Pottery:

Gravel temper:

Wicker fabric marked	1
Unidentified surface	1

Sand temper:

Wicker fabric marked	4
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Total sherds	6
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Pipe: 1 aboriginal clay, red and black.

Shell: Crassostrea virginica Gmelin 10

Mercenaria mercenaria Linne 4

Thais haemastoma floridana Conrad 1

Located on the north bank of Turner Creek at the junction with North River Cr^V75 extended almost one half mile along the shore. Partially located on the property of Mr. Neal Gillespie, this site extends onto neighboring land and circles into the river over plowed fields. Mr. Gillespie had recently graded his land as part of subdividing it and the grader turned up a vast quantity of midden and shell.

The exact position of this site in relation to the water is of great interest, for this was the only major site located that was not directly on the water, that is, not washing into the surf. The edge nearest the water ranged from about ten yards from the water at the western end of the site to over 100 yards away at the eastern end. The explanation for this lies most probably in the prevailing wind pattern which is northwest in the winter months and southwest in the summer months and varying between those ranges in the spring and fall. A look at the navigating chart for the area (Number 420, Beaufort Inlet and Part of Core Sound) shows that almost every exposed northeast or southeast bank has considerably less marsh shown adjacent to it than any of the northwest or southwest shores. The waters of North River which flows from north to south are very shallow and wind of even slight velocity can build up a considerable and damaging chop. Most of the sites located were on the exposed eastern shore of the river, and, as noted, most were located by

walking the surf line looking for washout. On the western bank, however, only one site (Cr^V74) was located by this method, and the other site located was detected in a plowed field. There seems to be evidence here to say that the land is eroding much more rapidly along the lee shores of the river than it is along the western or windward shore. As the water rises it washes out more land along the eastern lee shore and exposes the sites located there. Two factors are then at work eroding the eastern bank, while only rising water affects the western shore.

The area between the water and U. S. Route 70 on the western bank of the river was thoroughly explored on the survey with limited success. The majority of land there is in heavy pines or marsh grass rendering visibility limited. It is thought that U. S. 70 would represent the furthest extent inland that shell middens would be found and that seemed to have been the case. West of that road much of the land has been plowed and no traces of aboriginal sites were seen. It would appear likely, then, that the majority of sites on the western shore are located in the heavily wooded area between the shore and U. S. 70. Further, it would appear that those sites have not yet begun to wash into the river with the exception of Cr^V74 which has probably only begun to wash out considering the condition of the land on that side of the river.

Soil type is Onslow fine sandy loam.

Artifacts recovered here consist of one quartz

bifacially chipped scraper. It is 4.5 cm long, 3.2 cm wide and 2.0 cm thick. It is made of white quartz which is almost a clear quartz crystal.

One historic clay pipe was found of the type generally known as Pamplin, or Moravian, although it fits exactly neither of those categories. It is undoubtedly a lesser known brand, probable date of manufacture is 1900 A. D. Other historic material consisted of various ceramic pieces which seem to date at about the beginning of the nineteenth century. Kaolin pipe stems from this site appear to be possibly that old.

Pottery:

Shell temper:

Wicker fabric marked	18
Unidentified surface	<u>4</u>
Total	22

Clay temper:

Wicker fabric marked	8
Unidentified surface	<u>6</u>
Total	14

Gravel temper:

Wicker fabric marked	26
Unidentified surface	<u>14</u>
Total	40

Sand temper:

Wicker fabric marked	58
Unidentified surface	<u>66</u>
Total	124

Total sherds 200

Scraper: 1 white quartz biface.

Pipe: 1 historic red clay.

Historic Material: ceramics, glass, kaolin pipe stems.

Shell: As noted the clam and oyster shells were discarded due to being contaminated by refuse from a modern oyster house.

<u>Busycon caria</u> Gmelin	7
<u>Busycon canaliculatum</u> Linne	5
<u>Aequipecten irradians</u> Lamarck	1
<u>Anadara ovalis</u> Bruguiere	2
<u>Noetia ponderosa</u> Say	2

Located on the mainland just to the east of the north landing of the bridge to Harkers Island, Cr^V76 has some slight traces of midden but is represented by water washed sherds. Care was taken not to collect too close to the bridge or the sample would have been contaminated by sherds in the road fill which was excavated from Cr^O2. The midden here was also visible under the water at low tide giving more evidence for a rise in sea level. The midden is no more than a few inches thick, but may extend inland a distance again unknown because of marsh grass and lawn. Soil type is Onslow fine sandy loam.

Historic material recovered consisted of ceramic fragments and kaolin pipe stems. They all see to date to the middle of the nineteenth century.

Pottery:

Shell temper:

Wicker fabric marked	7
Unidentified surface	<u>6</u>
Total	13

Clay temper:

Wicker fabric marked	3
Unidentified surface	<u>3</u>
Total	6

Gravel temper:

Wicker fabric marked	19
Unidentified surface	<u>18</u>
Total	37

Sand temper:

Wicker fabric marked	14
Unidentified surface	<u>35</u>
Total	49

Total sherds	107
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Historic Materials: Ceramics, kaolin pipe stems.

Shell: Crassostrea virginica Gmelin 3

Mercenaria mercenaria Linne 6

Located on the other side of a man made lagoon from Cr^V76, Cr^V77 is identified by being on a point of land now used as an oyster shell dump. This dumping precludes any useful sampling of the shell remains there. The area is in marsh grass and lawn and there were no visible traces of midden. The soil is of the Onslow fine sandy loam type.

Pottery:

Gravel temper:

Wicker fabric marked	3
Unidentified surface	2
Total	5

Sand temper:

Wicker fabric marked	2
Unidentified surface	3
Total	5

Total sherds	10
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CHAPTER VI

SHELLFISH

As mentioned in the introduction, shells were collected from those sites which had undisturbed midden. A small area, generally not more than one square foot was quickly excavated and the shells cleaned and packed for transport to the laboratory. There they were cleaned and catalogued. Identification of species was undertaken by Dr. Charles Jenner of the Department of Zoology at the University of North Carolina at Chapel Hill. The species were then counted for each site and a table of percentages of shells present at each site was compiled.

Unfortunately, it was impossible to differentiate any species differences in one genus between the sites on the sound and the sites further up the river. Apparently the difference in water salinity was not as great as had been expected, at least it was not sufficient to create a differential of speciation. The species found in the middens are precisely the species which may be found today in the water below any of the sites.

A similar experiment has been conducted informally by Dr. Norman Barka of the College of William and Mary in Williamsburg, Virginia. In his work on the Chickahominy

and James Rivers in Virginia, he has excavated several sites which had shell deposits in the middens. He also could not find a species difference in response to the decreasing salinity of the water, however, he has noted a definite decrease in the absolute size of the shells recovered from the sites as one progresses up the river. (Leverette Gregory, personal communication). All of the oysters found by him and by the survey here were Crassostrea virginica Gmelin. They seem capable of adapting to quite a wide range of water conditions without changing enough to be classified into different species. To show the changing ecology of the coastal rivers, it will be necessary to change the approach of the experiment.

It is also unfortunate that relatively small samples of shell were collected. During the survey the concern was with gathering a large variety of different shells in hopes of showing a species differentiation, rather than with gathering an absolutely large collection for statistical purposes. The sample is admittedly small for showing any statistical variation, however, one difference between sites on the sound and sites on the river does become apparent. There are relatively more clams, (Mercenaria mercenaria Linne), than oyster (Crassostrea virginica Gmelin) on the sites on the sound, and more oyster than clam on the sites on the river. The only exception to this is Cr⁰⁶⁴ which was the reverse of the

general pattern.

Clams are certainly present in the river today, and Mercenaria and Crassostrea also have the ability to exist in a wide range of water salinity without changing specie characteristics (Smith 1951: 54; Abbott 1961: 150). The cause for the difference in shellfish popularity between the sound and the river remains unknown, waiting for more controlled excavation.

Besides collecting clams and oysters, several specimens of whelks Busycon caria Gmelin and Busycon canaliculatum Linne as well as several scallops Aequipecten irradians Lamarck, were recovered from several sites. These have significance in that they are all deep water species not usually found in shallow water. To have obtained these shellfish the Indians must have been using nets, or possibly diving although it is doubtful that the small specimens would have been picked up by divers. Nets seem a more probable means of obtaining these shellfish, although it is probable that they were merely a bi-product of catching fish. The two plummets recovered from Cr^V48 which also had several specimens of the whelks and scallops lends weight to the hypothesis that nets were being used in the deeper channels of the river and sound.

A table of percentages of shellfish species found by sites is on page 77. Cr^V75 is not listed in its entirety as the collection of clam and oyster was contaminated by accidental inclusion of shells left from a modern oyster house.

TABLE 2
SHELL SPECIES RECOVERED

Scientific name	Common name
<u>Crassostrea virginica</u> Gmelin	Virginia oyster
<u>Mercenaria mercenaria</u> Linne	Northern Quahog Clam
<u>Busycon caria</u> Gmelin	Knobbed Whelk
<u>Busycon canaliculatum</u> Linne	Channeled whelk
<u>Polinices duplicatus</u> Say	Escargot
<u>Aequipecten irradians</u> Lamarck	Scallop
<u>Anadara ovalis</u> Bruguiere	Arc shell
<u>Noetia ponderosa</u> Say	Arc shell
<u>Thais haemostoma floridana</u> Conrad	?

TABLE 3
SHELL PERCENTS

Site	<i>Crassostria virginica</i>	<i>Mercenaria mercenaria</i>	<i>Busycon caria</i>	<i>Busycon canaliculatum</i>	<i>Thais haenostoma floridana</i>	<i>Aequipecten irradians</i>	<i>Andara ovalis</i>	<i>Noetia ponderosa</i>	<i>Polinices duplicatus</i>
Cr ^o 2	41.6	50.0				8.3			
Cr ^v 48	24.0	48.0	12.0			12.0		4.0	
Cr ^v 60	14.2	57.1		28.5					
Cr ^v 61	45.4	9.0							
Cr ^o 64	46.9	28.5	2.0	2.0		18.3	2.0		
Cr ^o 66	82.6	17.3							
Cr ^o 67	63.6	36.3							
Cr ^o 68	81.6	15.3	1.0	1.0					
Cr ^o 70	58.6	41.3							
Cr ^v 71	83.3	16.6							
Cr ^v 72	53.8	46.1							
Cr ^v 74	66.6	26.6							
Cr ^v 75	dis	dis							
Cr ^v 76	33.3	66.6							

CHAPTER VII

CERAMIC ANALYSIS

The analysis of pottery was based primarily on temper and was limited to an investigation of wares determined by attributes and modes. An attempt to define types was not made for several reasons. First, the total number of sherds was small, making any conclusions tentative at best. The concept of types can be based upon many factors, many of which are not well represented in the sample. With the present collection there is very little idea given of vessel shape and the importance of vessel shape to temporal and geographic distribution. There are also insufficient rim sherds to yield reliable analysis and definitions of type. The attributes which vary from one type to another on the coast are extremely fine in distinction, demanding extreme sensitivity to differentiate from one to another. For the above reasons, then, it was felt better not to attempt to define pottery types at this point, but rather to discuss and describe the various attributes of sherds recovered by the survey.

As noted briefly before, there is very little correlation amongst any of the attributes of the pottery. Surface decoration of all wares was over 90% wicker fabric

marked with distinctions in the type of wicker fabric marking being almost impossible to differentiate in a meaningful way. The sizes and patterns of the wicker work fade very gradually one into the other producing an unbroken continuum from the wide weave at one extreme to very fine weave at the other. Many more sherds in better condition with more attributes present such as body shape, rim form etc. will be needed to define meaningful types for the pottery from this area.

A table of percentages of temper from each site can be found on page 87. There does not seem to be any significance to the spatial distribution of the wares in this survey area. The total area of the survey was probably too small to yield any meaningful results. In this survey significant conclusions that can be drawn relate to the relative percentages of wares at any one site. Thus Cr⁰2 and Cr⁰4 with 50.9% and 88.3% respectively are sites of primarily clay tempered ware. Cr⁰66 with 32% of its sherds having shell temper is the site with the most shell tempered sherds available, although that is not the major ware at that site. Cr⁰66 also has 38.2% of its sherds with sand temper. The site with the most sand temper is Cr⁰67 which yielded 90.5% sand tempered sherds. The highest occurrence of gravel tempering is at Cr⁰64 and Cr⁰65, probably the same site, with 49.1 and 49.2 percent of their respective sherds being gravel tempered.

A more significant distribution can be obtained

by the inclusion of three other surveys done in nearby sections of North Carolina. These include the surveys of William Haag published in 1956 on the northeastern sounds, Stanley South, done in 1960 on the extreme southern sounds of North Carolina and the northern coast of South Carolina and Crawford, finished in 1966 further inland near Kinston, North Carolina. A table of percentages of pottery by wares from each of these areas can be found on page 88.

Haag recognized the existence of shell tempered ware, sand tempered ware and clay tempered ware (Haag 1956: 82). The same wares were recognized in this survey. South referred to his clay tempered ware as Hanover series, sand tempered ware as Cape Fear series, and shell tempered ware as Oak Island series (South 1960: 36, 38, 41). Crawford recognizes gravel tempering calling it Lenoir series, clay tempering referring to it as Grifton series, and sand tempering, calling that Tower Hill series (Crawford 1966: 33, 42, 50). South had no gravel tempering, and Crawford had no shell tempering. Significantly, South also had several wares not found in any of the other surveys. These include the fiber tempered ware and the Brunswick ware which was probably a historic pottery (South 1960: 47, 55).

Examining the table of percentages of pottery wares by survey area several striking patterns appear. First, there is a definite decline in the popularity of clay

tempering as one moves from the southern portion of the state to the northern. Very little clay tempering has been found in Virginia, the only significant quantity coming from the Potts site (Evans 1955: 75), although another small amount was noted in examining some shell tempered Chickahominy ware found along the Chickahominy River by Barka and McCary (Leverette Gregory, personal communication). Conversely, shell tempering seems to be much more popular in the northern coastal region although the difference is not as great as in the case of the clay tempered ware.

South began his survey with the idea that there should be a significant difference between the materials of Haag's survey and those of the southern coast because the rivers along the coast would have offered barriers to travel and culture spread (South 1960: 1). The shell and clay tempering traditions along the coast seem to support this hypothesis. If that hypothesis is in fact correct, then we should expect to see ideas coming to the coast primarily from the west, with each sector of the coast reflecting a portion of the culture found to the west. Supposedly, the rivers should form barriers preventing culture ideas from spreading north or south to any great degree.

This hypothesis may have some validity although it is doubtful that the rivers formed anything more than weak permeable membranes to culture flow. Sand and gravel

tempering seem to represent the most common types of tempering on the coast with the exception of the southern portion where clay tempering is most common. It seems possible that the sand and gravel tempering of the coast are a part of the sand and gravel tempering traditions of the Carolina Piedmont. Crawford says that his Tower Hill and Lenoir series are extensions of the Clements-Vincent series of the Piedmont reported by Coe (Crawford 1966: 53) (Coe 1964: 101). It would seem likely that the sand and gravel tempers of the coast are again extensions of that continuum, with fine sand tempering beginning the sequence and then gradually developing into the coarser tempered gravel tempering. The sequence will not hold completely true, however, as the coastal region has few areas devoid of sand in the natural clay. As a result there should be a greater occurrence of sand tempering. With the exception of Crawford's material which was collected much further inland, this hypothesis works. South has 37% sand tempered ware and no gravel tempered ware, while Haag found 48.1% sand tempering as compared to only 9.1% gravel temper. This survey found 38.4% sand temper as compared to 26.1% gravel

The final hypothesis here presented is that the large rivers of the coastal plain offered some resistance to travel north and south and hence some resistance to the flow of cultural concepts. West to east flow was not restricted as the people could follow the river banks or

use the rivers themselves. As a result the sand and gravel tempering traditions of the Piedmont of North Carolina most heavily influenced the coastal regions while those traditions originating on the coast (shell and clay tempering) were geographically more isolated. The North Carolina coast was the scene of the confluence of three large tempering traditions. The clay temper tradition moving up from the south, the shell tempering tradition moving down from the north and the predominating sand-gravel tempering tradition moving to the coast from the west.

Coe has stated that the clay temper tradition was earlier than the sand tempering tradition and that the shell temper tradition was the latest tradition to develop on the coast (Joffre Coe, personal communication). That sequence is apparently correct in general although some modifications may be made. The existence of a small sample of sherds with both shell and clay temper would indicate that possibly the two traditions were not totally separated in time. Several explanations can be offered to explain the shell and clay tempered ware. Re-invention is possible, but not probable. Another possible explanation is that the shell was inherent in the clay used for the vessels. This is also not probable because the amount of shell in the sherds is so great.

A better explanation is that they represent a contact between the shell tempered tradition and the clay

tempered tradition that resulted in a synthesis of ideas. The final sequence would then be that the clay tempered tradition was very much earlier than the shell tempered tradition as far as beginning points are concerned, but that the clay tempering tradition lasted long enough for it to come into contact with the shell tempering tradition. Superimposed upon this contact is the predominant sand-gravel tempering tradition moving to the coast from the west.

To be sure, this is only a hypothesis based upon the meagre evidence available at this time. It does offer a working hypothesis to direct further work. Controlled excavations at certain selected sites may well yield an answer to the questions now existing about culture sequences on the North Carolina coast.

Of the sites located or collected in this survey the following are worthy of further examination and hopefully of detailed excavation.

Cr⁰4 should be excavated as it is a site with a very high percentage of clay tempered sherds. It is small and would yield a relatively "pure" site of clay tempered tradition. Cr⁰2 would bear a quick excavation. It must be remembered, however, that it is a very disturbed site. Cr^V48 would be nice to excavate as it shows the most uniform distribution of the various wares. Although it is now greatly disturbed and much of it is in grass, if excavation could be arranged this site would be

a great value. The undisturbed portions have a relatively thick midden which would probably yield stratigraphic evidence.

Cr^o66 would be a necessary site to excavate as it produced the largest collection of shell tempered sherds, and it is very much undisturbed and would yield stratigraphic information.

The above mentioned sites are probably the most worthy of excavation in that they offer relatively undisturbed sites which would be most likely to yield information about pottery wares. Other sites such as Cr^o68 are worthy of excavation merely because they are large and totally undisturbed.

With the excavation of these sites a beginning will be made to the understanding of the culture sequences of the coastal region. Few sites on the coast can be expected to offer evidence of a stratigraphic nature due to the physiographic construction of the coastal plain. For this reason, shell middens are of extreme value and should be excavated before they are lost either to the present expansion of building construction on the coast or to inundation by the forces of erosion which are so actively at work.

TABLE 4

PERCENTAGES OF TEMPER AT SITES
WITH NUMERICALLY LARGE SAMPLES

Harkers Island & North River Survey

Site	Shell temper	Clay temper	Shell & clay temper	Crushed quartz	Gravel temper	Sand temper	Total %	Total sherds
Cr ^o 2	6.6	50.9	.8	2.3	6.5	32.6	99.7	721
Cr ^o 4	2.3	88.3		6.9		2.3	99.8	43
Cr ^v 48	18.6	13.3	.9	1.5	41.3	24.1	99.7	771
Cr ^o 61		34.7		1.8	8.0	55.2	99.7	161
Cr ^v 62		33.3				66.6	99.9	18
Cr ^o 64		3.5		1.7	49.1	45.6	99.9	57
Cr ^v 65		2.9		1.4	49.2	46.2	99.7	67
Cr ^o 66	32	2.4			27.1	38.2	99.7	81
Cr ^o 67		9.4				90.5	99.9	74
Cr ^o 68	7.6	2.7	.6		29.1	59.7	99.7	144
Cr ^v 71								
Cr ^v 72		5.7		.9	72.3	20.9	99.8	105
Cr ^v 75	10.6	6.7			19.4	60.1	100	200
Cr ^v 76	12.1	5.6			34.5	45.7	99.9	107

TABLE 5
PERCENTAGES OF TEMPER BY SURVEYS

	Clay temper	Shell temper	Sand temper	Gravel temper	Total Sherds
Haag Northern Sounds	17.4	25.1	48.1	9.1	6633
Crawford Kinston area	19.2		29.7	50.9	3277
Loftfield Harkers Island North River	24.4	10.9	38.4	26.1	2511
South Southern Sounds	50.7	12.2	37.0		2036

CHAPTER VIII

HISTORIC RECORD

Although an extensive amount of literature was researched there seems to be no reference to Harkers Island or the North River area in any of the early writings about North Carolina Indians. Europeans were apparently in the area by at least the late seventeenth century and had arrived in some numbers by the beginning of the eighteenth. It may be worth noting here that the general physiography of the area was quite different at that time from what it is now. Before the arrival of Europeans the Outer Banks were covered with rather dense forests of live oaks, pines and other fairly large trees and had extensive grape arbors (Stick 1958: 3). That would explain why Indians ever moved in the first place to the area which today seems so bleak and severe. It was the European practice to cut the trees and let cattle graze the land that brought on the destruction of the primeaval environment, for without the trees and grasses to hold the soil down, the wind quickly built up large dunes which then proceeded to migrate towards the west burying the remaining trees and making the entire area unfit for occupation. It is a fact that after the arrival

of the Europeans the banks became unproductive to the Indians and those Indians who remained were severely poverty stricken and had to appeal to the colonial governments for food and support (Rights 1947: 31; Stick 1958: 26). It does not seem likely that if conditions were that severe that the Indians would have remained to inhabit the land before the coming of the Europeans.

The first records of the Harkers Island area date to 1711 and 1712 at the time of the Tuscarora War (Barnwell; Letters). The aboriginal population of the island and the area were Core or Coree or Coranine Indians, of the Tuscarora stock. They participated in the war and at its unsuccessful conclusion were removed to Hyde County on the shores of Lake Mattamuskeet. That is the first and last record of the Indians of the survey area.

Colonial records of the area state that the original land patent for Harkers Island, (then known as Crane or Craney Island) was granted to Thomas Sparrow (Stick 1958: 313). Sparrow later sold it to Thomas Pollock who willed it to his son George Pollock in 1722. George Pollock sold the island, listed as 2,400 acres in 1730 to Ebenezer Harker for 400 pounds. Three years later Harker sold half the island to John Stevens for 300 pounds, apparently making a tidy profit. Harker continued to live on his half of the island and the island became known as Harker's Island, although the apostrophe of possession has long since disappeared.

In an attempt to correlate the historic evidence with the modern evidence it is noted that Cr⁰61 is located on a peninsula known as Harkers Point. Further, the historic materials recovered from Cr⁰61 have dates that could place it in the early to middle eighteenth century. The artifacts of European origin found at the site are not typical of those that might have been traded to the Indians, and coupled with the many horse and cattle teeth found, support the hypothesis that an historic occupation layer overlies the pre-historic Indian occupation level. There seems to be a fairly good chance that Cr⁰61 represents some part of the household of Ebenezer Harker. The only other historic material recovered from the island is at Cr^v48. There the material all seems to be late eighteenth century at the earliest, with the exception of the 1670 gin bottle which is probably anachronistic. It is possible that an early colonial site exists at Cr^v48 but the evidence is certainly slim.

CHAPTER IX

CONCLUSIONS

The Harkers Island-North River area has proven to be extremely rich in shell midden sites located directly on the water, but lacking in sites further inland. Many sites are experiencing severe erosion caused by a general rise in sea level. This rise can be detected by the examination of the sites which have midden deposits beneath the low tide level. Several sites were found which have completely washed into the river or sound leaving only a few water washed sherds to give the location of their former existence.

Dense underbrush and planted lawns prevented determination of the geographical extent of most of the sites, but many are believed to be fairly large. No test pits were dug so no idea has been gained as to the depth of the middens away from the wash out areas, or as to how far below the actual shell deposits cultural material may extend. Several sites seem to have middens over two feet deep indicating that stratigraphic evidence may be obtained by excavations at those sites.

The original hypothesis that a species differential would be found in the shellfish remains at various sites

did not materialize. Both of the major species of shellfish found at the sites are capable of adaptation to a vast range of water salinities without changing enough to be classed as different species. While the original concept is apparently valid, another approach to the problem must be worked out and several alternatives suggest themselves. First, with a great difference in salinity of the environment, the oyster and clam do undergo changes, although of less than specific nature. It may be possible to chart the small changes in the shells from the various sites rather than trying to find a species differential. Second, there may be a significant difference noted between various genera found at various sites. Thus, in this survey it was noted that as one progressed further up North River the relative number of clams decreased at the expense of the oyster. To utilize this difference a careful control of stratigraphy would be required in order to quantify a possible shift through time. The third possibility that presents itself is that perhaps the emphasis should be on secondary shellfish types. Mussel, for instance, changes species quickly with decreasing salinity of the water and inhabits environments from the ocean to completely fresh water.

The original concept, as suggested by Dr. Joffre Coe, of trying to determine a differential of shellfish food types caused by a change in water salinity remains quite valid. We only need to establish a workable means

of determining that shift.

Of all the materials recovered by the survey the most numerous were ceramics which were classified on the basis of modes and attributes. Paste and temper determined the major classifications, or wares. As insufficient data were available concerning certain of the attributes of the ceramics, no attempt was made to establish types. Rather, it was decided to concentrate upon the larger traditions of tempering for which sufficient data are available. This approach yielded a working hypothesis of possible culture flow which states that a tradition of clay tempering was moving up the coast from the south at a very early date. Later, this tradition was met by a tradition of shell tempering moving down the coast from the north. Superimposed upon these two traditions is the predominating tradition of sand and gravel tempering which was moving to the coast from the west. This hypothesis is, of course, very tentative and is intended only as a guide to future excavations in the area.

Non-ceramic artifacts were so few that it would be impossible to determine any meaningful direction from them. The early pre-ceramic projectile points are all made of stone which would have had to have been imported from either the Piedmont or upper reaches of the coastal plain. Whether these projectile points are located on the coast as a result of trade or migration cannot be determined with the scant information available.

Finally, a question arises concerning the nature of the cultures on the coast. Are the various cultures on the coast merely extensions of cultural patterns centered further inland, or does a recognizable littoral culture exist? The essential question here, is whether the radical difference in environment between the Piedmont and upper coastal plain on one hand and the tidewater on the other, would have produced noticeably different cultures. As answer to that question, there are several fairly secure inferences and several relatively reasonable hypotheses.

The existence in the middens of deep water shellfish such as scallop and whelk along with stone plummet shows that deep water fishing was probably in use by at least some cultures on the coast. The relative dates of the introduction of this fishing could be determined by controlled stratigraphic excavation. This is at least one way in which the procurement of food differed. Also different, of course, is the reliance on shellfish for at least food. There may be some speculation that shellfish were also used as a means of obtaining water as the coastal area is extremely devoid of fresh water springs, the only fresh surface water coming from small ponds which would be likely to disappear in a short drought. Thus the dependence on shellfish for food and possibly for water at least in times of drought is a definite difference between the coastal Indians and those further up the rivers.

Agriculture, too, must have been different on the coast, for little if any of the soil there is natively good for crops. Again, the shellfish may have replaced agricultural crops as a mainstay of survival.

The essential differences between the coast and the upper coastal plain and Piedmont, are the relative amounts of easily accessible food and potable water. The Piedmont is blessed with sufficient water, but food had to be grown or hunted while on the coast itself, food was readily accessible year round in the form of various molluscs and crustaceans but potable water was scarce. The exact way in which these differences manifested themselves remains to be determined by careful excavation. This survey has provided some idea as to the location of various sites and the conditions at those sites, but it cannot answer any of the bigger questions that can be raised about the aboriginal occupations of the coast.

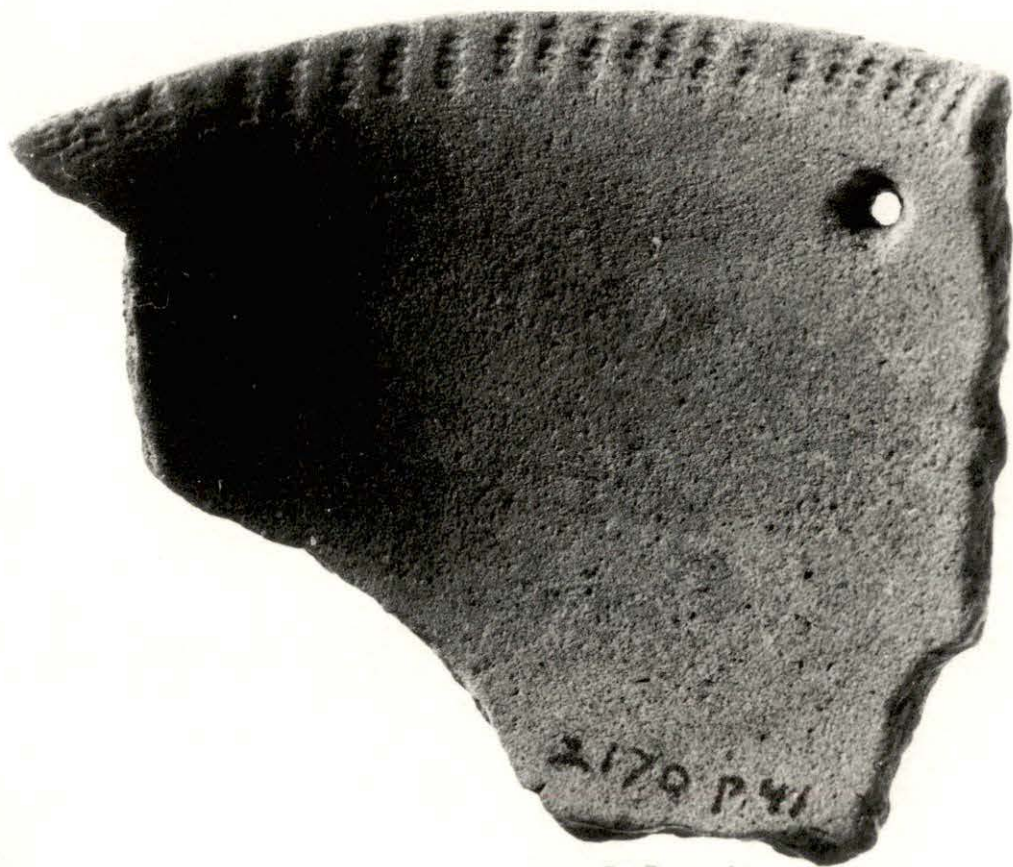
PLATE ONE

SAND TEMPER

Left. Wicker fabric marked, view showing cord-wrapped dowel impressions on interior wall of vessel and hole drilled from interior.

Top right. Wicker fabric marked, interior view showing hole pushed into vessel from exterior when clay was wet.

Bottom right. Wicker fabric marked, view showing interior tool scraping.



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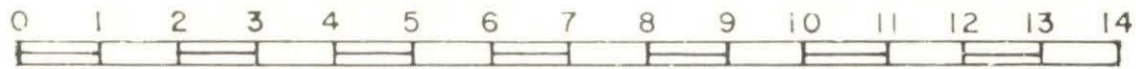
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centimeters

PLATE ONE

PLATE TWO
SAND TEMPER WARE

Left. Wicker fabric marked, see also plate one, left.

Top right. Cord marked.

Bottom right. Cord marked.



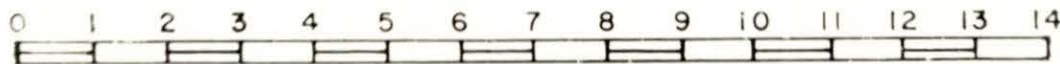
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centimeters

PLATE TWO

PLATE THREE

GRAVEL TEMPER, SAND TEMPER, AND CRUSHED QUARTZ TEMPER WARES

Top row, left to right. Gravel temper: punctate and incised; wicker fabric marked;
Crushed quartz temper: cord marked.

Bottom row, left to right. Sand temper: unidentified surface, showing unsmoothed
coils on interior wall. Gravel temper: wicker fabric marked with cord wrapped
dowel impressions around rim. Crushed quartz temper: cord marked.



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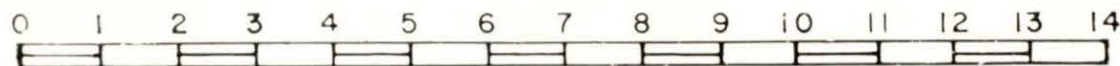
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centimeters

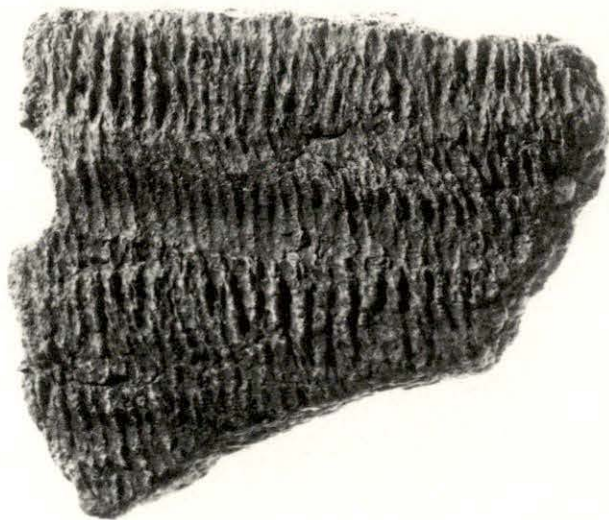
PLATE THREE

PLATE FOUR

CLAY AND CLAY AND SHELL TEMPER WARE

Top row, left to right. Clay temper: wicker fabric marked; wicker fabric marked with row of punctates along rim; cord marked.

Bottom row, left to right. Clay temper: wicker fabric marked; wicker fabric marked showing cord wrapped dowel indentations along lip; Shell and clay temper: wicker fabric marked.



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centimeters

PLATE FOUR

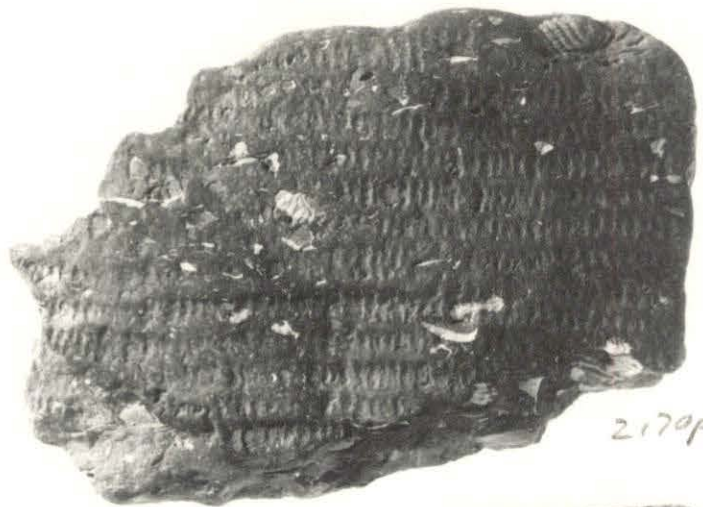
PLATE FIVE

SHELL TEMPER WARE

Top. Wicker fabric marked showing salt crystalization exfoliation.

Middle row, left to right. Wicker fabric marked view showing cord-wrapped dowel impressions on interior wall; wicker fabric marked.

Bottom row, left to right. Wicker fabric marked view showing fabric impressions on interior wall; cord marked.



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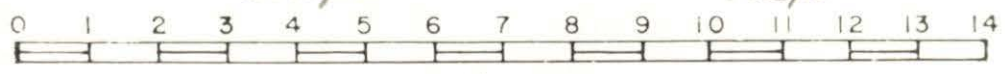
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PLATE FIVE

PLATE SIX
PROJECTILE POINTS

Top row, left to right. Savannah River blade type, Cr ^o 2; Savannah River Stallings
Island variety, Cr ^o 2; Halifax, Cr ^v 48; Type One Triangular, Cr ^v 48.

Bottom row, left to right. Type Two Triangular, Cr ^o 2; Type Two Triangular, Cr ^v 48;
Type Three Triangular, Cr ^v 48; Gypsy, Cr ^v 48.



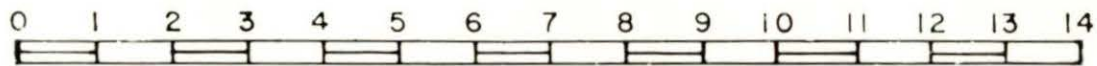
PLATE SIX

PLATE SEVEN

ARTIFACTS

Top row, left to right. Antler tine, Cr ^o1, burial one; antler tine formed to
chisel, Cr ^o1, burial one; clay smoking pipe, Cr ^v48; clay smoking pipe,
^v
Cr 74.

Bottom row, left to right. Vertebra bead, Cr ^v48; vertebra bead, Cr ^o2; plummet
^v
Cr 48.

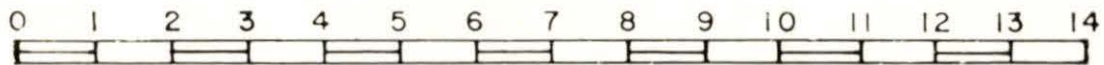
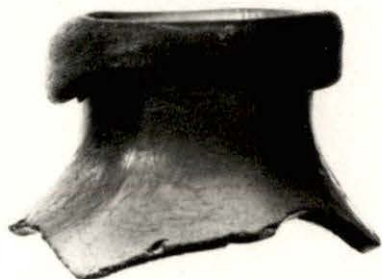
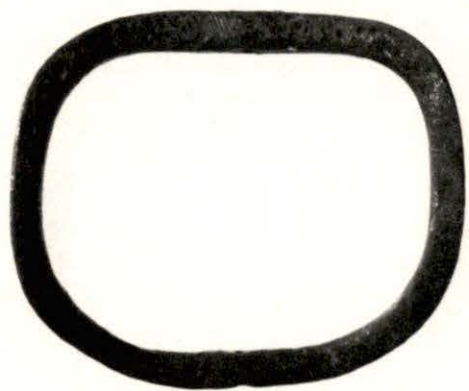


centimeters
PLATE SEVEN

PLATE EIGHT
HISTORIC MATERIAL

Top row, left to right. Brass shoe buckle, Cr ^o61; brown on white transfer ware,
Cr ^o61; black on white transfer ware, two pieces, Cr ^o61.

Bottom row, left to right. Handle from redware vessel, Cr ^o61; smoking pipe, Cr ^v48;
gin bottle neck, Cr ^v48.



centimeters
PLATE EIGHT

PLATE NINE

SHELL

Top row, left to right. Busycon caria Gmelin, Busycon canaliculatum Linne,
Mercenaria mercenaria Linne.

Bottom row, left to right. Crassostrea virginica Gmelin, Aequipecten irradians
Lamarck, Polinices duplicatus Say.

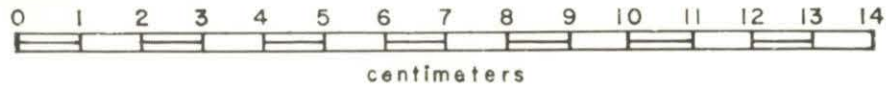
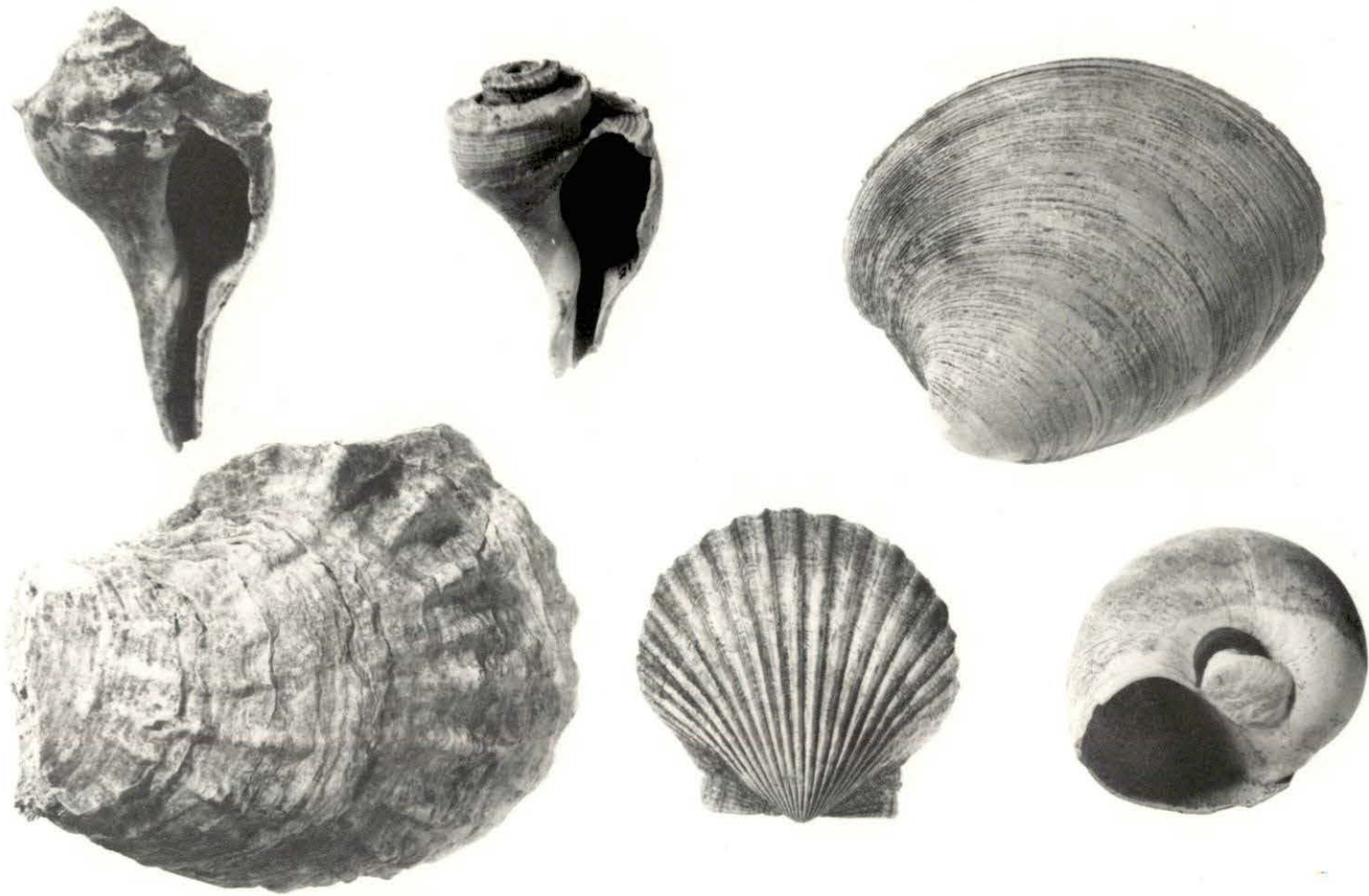


PLATE NINE

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