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The ARCHEOLOG

REPORT

on

THE MISPILLION SITE

7-S-AI

by the Mispillion Site Committee

of the

SUSSEX SOCIETY OF ARCHEOLOGY AND HISTORY

successor to the

Sussex Archaeological Association

COMMITTEE
Henry H. Hutchinson, Ch.
Warren H. Callaway
David Marine
April - 1957

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ILLUSTRATIONS

PLATE I—

Overall map of the extent of occupation at the Mispillion Site.

PLATE II—

Explored Area at Mispillion Site showing grid system stations, and location of shell-pits, features, burials, fireplaces, etc.

PLATE III—

Fig. 1—Surface plan, and cross-sections of Feature 16.

Fig. 2—Machine used in removing (and replacing) top soil.

PLATE IV—

(a) Feature 12 showing fireplace and barbeque-grid post moulds (near the wire markers).

(b) Feature 1, showing three barbeque-grid post moulds around a fireplace.

(c) Feature 5, showing a row of post moulds of side wall of an Indian Hut.

(d) Feature 11, showing an unusually dark and distinct outline of a refuse pit as revealed at the plow line.

(e) Feature 2, showing a typical discoloration of a "feature" as revealed at plow line.

PLATE V—

(a) Showing the discolored sub-soil at plow line over what developed into Burial #2.

(b) Showing remains of skeleton of Burial #2 as found.

(c) Showing small intact bowl, remains of bones, skull, and teeth of Burial #3, as found.

(d) Large grit tempered potsherd, in situ. Feature #3.

(e) Anvil-Stone, in situ. Shell Pit #7.

PLATE VI—

(a) "Coil Nubbins" from Mispillion Site and the flat unusual sherd as described in text.

(b) "Coil Nubbins" and odd ceramic sherd, from the Willin Site, shown here for comparison.

(c) Partially restored, shell tempered, wide stem pipe. (Incised lines have been chalked to make them show up in photograph). Pit #3.

(d) Fragment of clay pipe bowl with incised decorations. Pit #7.

(e) Conch shell Bead. Pit #7.

(f) Worked bone and antler awls.

PLATE VII—

Pottery Vessels shapes, and profiles of basal sherds. The basal sherds photographed here were stuck in sand on their side, so that the actual profile of the base is shown. Figs. c, d, & e, appear to be unsymetrical which is true.

PLATE VII—

Shell Tempered Rim Sherds. Showing surface treatment.

PLATE IX—

Grit Tempered Potsherds. Showing surface treatment.

PLATE X—

Shell Tempered Potsherds (a to g) showing surface treatment. Numbers 12, 14, 17, 19, restored and whole vessels. Showing surface treatment.

TABLE OF CONTENTS

Page

The Archeolog

Vol. 9 No. 2, Sept. 1957

CORRECTIONS

Page 4, col. 1, line 26, please read pebble instead of pobble.
" 4, col. 2, line 29, " disturbed " distributed.
" 4, col. 2, 5th line from bottom lying " laying.
" 7, col. 1, 14th " " " "
" 11, col. 1 line 26, please read are " is
" 13, in table " " truncated " trunscated.
" 13, col. 2, line 7, " " coarser " coaser
" 15, col. 1, line 2 " " consistent " consisten
" 15, col. 2, line 6, " " vitrified " petrified
" 18, col. 2, end of para. "No.3" Plate X-13 " Plate X-12.
" 22, line (c) please read unilateral " unilaterial.
" 26, col. 1, line 20, " " magnitude " magniture.
" 26, col. 2, line 12 " " predominant " prediminant
Table 1, inside back cover, bottom figure in final col. (1.2) instead of (0.21)
Inside front cover, 2nd column, next to last line, 13 instead of 12.
Page 29, col. 2, line 46, Heizer instead of Hizer.

REPORT ON THE MISPILLION SITE (7-S-A1)

INTRODUCTION

ORGANIZATION. A Site Committee was appointed in Dec. 1954 by the President of the Sussex Archaeological Association to direct the exploration of this site. For details of the committee personnel, organization, negotiations, etc., see Appendix I.

PURPOSE. The committee, at the direction of the S.A.A. planned to direct the work at the site in such a manner that as many archaeological facts, as well as artifacts, would be recorded about the site. To this end a set of rules for workers and diggers was adopted and distributed to members of the association. See Appendix II for these rules. In general the workers cooperated heartily with the committee, but there were some notable exceptions.

PROCEDURE. Arrangements having been made to lease part of the site (see Appendix I) in which we agreed to replace top-soil and refill all holes, an area of less than an acre was selected by Mr. Omwake which he thought would be the most productive, this was surveyed and staked out in 20 ft. squares on a base line running approximately north-south in the center of the farm access lane. Three galvanized iron stakes were driven into the ground on this base-line as permanent markers. Elevations were taken and contours plotted on 1 ft. intervals on the Site Map, Plate 1.

A number of "shell pits" had been located by Mr. Omwake and these were given numbers and marked on the site map, and are reported herein under Shell Pit numbers. Other sub-surface disturbances found are called Features or Burials and given a separate serial number. See Plate II.

At the request of Mr. Omwake the southern portion of the leased area was reserved for his exclusive use. He had already started excavating certain pits in this area. These are not shown on Plate II nor covered by this report.

In order to discover sub-soil intrusions and disturbances, the committee decided to remove all the top-soil down as deep as plow and cultivating machinery had mixed and churned up the earth; and to concentrate our attentions on the disturbed areas and intrusions below that line. That line or depth we have called the "plow Line" and our vertical measurements are generally given as "x inches bpl", meaning "below plow line". Depths given as "bpl" are used rather than from a fixed datum since the site is on a gentle slope, and depths from a fixed datum would not be as comparable between different pits or features as well as depths "bpl".

The top-soil was removed by mechanical means (see Appendix III) and was not screened or carefully looked over, but any artifacts noticed by the "observers" during its removal or replacement were collected and listed.

Many photographs were taken as the work progressed, but we have selected only those that are most typical or unique, for reproduction here.

Much of the detail of personnel and their participation is given in the Appendices, since there is no need for that in the body of this report.

The Site Numbers assigned to this and other sites mentioned in this report are from the "Site Survey of Sussex County, Del." which was made by the Sussex Archaeological Association at the request of the Delaware Archaeological Board. Complete copies of that report are on file in the State Archives, at Dover, Del. and with the S.A.A. (now the Sussex Society of Archaeology and History). A summary of that survey with index of site numbers was published in The Archaeolog Vol. VIII, No. 2, July 1956.

DESCRIPTION OF SITE

The site is located about one and one-half miles east of the town of Milford, Sussex County, Del., and is between State Road No. 36 and the Mispillion River.

Indications of the original Indian occupation consisting of surface finds and shell concentrations in the soil, extend for about 1500 feet east-west along the south bank of the river, and back as far as 400 feet from the present river bank. The area selected for our excavations is about the center east-west and near the river bank. The high point of our area is about 10 feet above the mean tide level. The river bank adjacent to our area is now almost vertical, and in places is undercut by wave action of the water.

The whole area has been known for many years as a place to find "darts" and/or arrow heads. Probing by Mr. Omwake located many shell-pits, and some of them were excavated by him and his associates before the S.A.A. started their investigation of the site (see Appendix I). The known shell-pits and features are indicated on the general map Plate I.

The land over all the site has been cultivated for probably 150 to 200 years, except a portion of the easterly section which has been used for an oil tank farm for about ten years, and during World War Two part of the westerly section was occupied by a temporary munitions plant which has since been entirely removed, and the land is again under cultivation. There are indications that there have been modern houses, barns or sheds, at several places on the site but the above ground structure of these is entirely gone now.

The top-soil is a light sandy loam, below which is a clean yellowish sand-clay composed of about 9 parts sand and 1 part clay. At depths of 18" to 48" are found occasional pockets or lenses of fairly rich clay - - maybe 60% clay.

The water in the river is now fresh, and probably always was since the site is about ten miles by water from the Delaware Bay. The lower reaches of the river flow through about seven miles of tidal marsh land which might possibly have helped to hold back the brackish water from the bay, more than the dredged channel of the river does now.

DETAILS OF BURIALS, FEATURES, AND SHELL PITS

In order to make this report less cumbersome, we have condensed the description of each feature, pit, etc. to include only such traits and conditions that seem pertinent, and have omitted the detailed tabulation of artifacts except where the tabulation has indicated some stratographical tendency or other possibly significant fact.

The distribution of different types of pottery is common throughout the worked area, with such exceptions as are noted under specific features.

In excavating shell refuse pits the attempt to find stratographic differences in horizontal levels is futile, since refuse was apparently dumped over the edge of the pit and would gradually fill the pit in irregular reducing cone shaped layers or strata, rather than in horizontal strata. In two instances matching sherds were found on opposite sides of the pit and differing 18" and 24" in horizontal level. This side dumping of shell can be seen in the section of Feature 16 which included intrusive Shell Pit #4 and another non-intrusive shell dump on the side of the Feature. Plate III, Fig. 1. In some Features (not shell pits) some stratographic differences between the types of potsherds could be noticed. (See Features 3 and 9-10).

In this paper when we speak of "matching" sherds, we mean those which fit together perfectly, line for line and edge for edge; not those which apparently are from the same vessel and similar edges etc.

The surface dimensions given are (unless otherwise noted) those at the plow line.

"T.S." indicates thickness of top-soil at that particular feature or pit.

The coordinates of the approximate center of the burial, feature, or shell pit, are given after the feature number.

We have classed several features as "post moulds". It is difficult to definitely differentiate between a post mould and a root mould. Our criteria for differentiation was:--If the mould was vertical with an abrupt end at the bottom, it might be a post mould. If it tapered off gradually in size, or slanted away from the vertical, then it probably was a root mould. There were innumerable root moulds found and investigated, and a number were photographed at the plow line, only to be discarded after being excavated.

BURIAL #1. approx. SG x W 154

This burial and shell pit was located a short distance to the west of our leased area and was excavated by guests of The S.A.A. The following is quoted from a report by Mr. Omwake published in the Archaeolog of June '55, Vol. VII, No. 1.

"The pit was oval in surface shape having diameters of 10 ft. 6 in. N-S and 6 ft. 2 ins. E-W. Top soil 8 in. was removed and examined for artifacts. Most of the refuse was oyster shells. A few Conch, clam and mussel shells were observed. The refuse was generally saucer shaped in vertical profile from west to east and achieved a maximum depth of 12 in. at the center. It was underlain by a layer of discolored earth which contained few shells, about 6 in. thick. Near the center of the pit lying under the disturbed earth was found the skeleton of a human male. The burial was partially disarticulated. The pelvic bones rested on the chest. Part of the ribs occurred in a group removed about 15 ft. to the SE of the main deposit of bones. The right scapula lay about 12 in. NW of the skull. The head was turned face down and lay toward the north. Both upper arms and all but 7 of the vertebrae were missing. A triangular arrow point was found beside the skull.

North of the human remains and resting against the curved wall of the pit at the same level was the skeleton of a dog. The body lay on its right side and was curved to the contour of the northern pit wall, the head being to the west, with the nose pointed toward the human remains . . . . . .

"Cultural material recovered from the refuse consisted of a large quantity of pottery, an ulna awl in good condition, a small fragment of a thin soapstone object, a broken pipe stem having a deep longitudinal groove, a large calcedony pebble fractured longitudinally and having one edge finely chipped, a rhyolite knife(?), a thick stemmed rhyolite arrow point, a thin flat based isosceles triangular jasper arrow point, a broken chert point, and a triangular jasper spall. Large quantities of broken animal bones were collected. Chips were numerous and fire cracked sandstone pebbles were not infrequent."

BURIAL #2. NC plus 6 × W 45. TS=12".

At plow line a rougly oval discolored area about 10' x 4' with long axis NW-SE, which gradually reduced to an area of about 5' x 1.5'. At the bottom was the remains of an extended skeleton with the head bent forward so the chin rested directly on one cervical vertebra and the back of the skull resting against the virgin soil of the original excavation. Skul was to the NW. In

position of an extended burial were the shafts of femur, tibia, and fibula, the joint ends of which were completely disintegrated, the root of a trumpet vine had grown through the narrow cavity of the right femur, unrecoverable fragments of one ilium were in place. The top of the skull was 36" below the natural surface of the ground and the bottom of the grave was 40" to 42" deep.

The skull had almost a full set of teeth, slightly worn. Sutures were not cemented. There were no remains of arms, hands, feet, ribs, backbone, shoulder or ankle bones. Plate V-A & B.

Dr. T. Dale Stewart, National Museum, reported as follows on the remains of this skeleton:--"The skull is undoubtedly female and, since no sutures are closed I would judge it to be a young adult. There has been recent antemortem loss of some lower molars. Other teeth are carious. The following measurements have been taken on the skull: Length, maximum - 181mm: Bredth, maximum - 130mm: Basion Bregma ht. - 135mm: Basion masion 1t. - 104mm: Cranial index - 71.8: Mean height index - 86.6. According to these figures the skull is long-headed (dolichocranic) and quite high-headed. These proportions are characteristic of the Algonquian Indians."

About one inch above the skull was a small clear quartz pobble with one chip knocked off it. In the fill of the grave were very few artifacts, only - 4 grit tempered potsherds, 2 shell tempered potsherds (all very small), a few jasper and quartz chips, an occasional charcoal flake, and practically no shell.

BURIAL #3

At the SE corner of the dark discolored area of Feature 6 at a depth of 10" bpl was three-quarters of a 24" diam. circle of very lightly discolored soil. At 12"bpl in this light discoloration was the upper rim of a small bowl 5" diam. sitting upright. Three inches to the SW of the bowl at 14" bpl were several teeth of a child, and three inches further was the remains of a small badly disintegrated skull. As darkness overtook the excavators at this point, the bowl was removed and the skull covered with a wooden crate and gunny sacks. We did not get back to work on this for several days and then found that the box and sacks had been removed, and the remains of the skull tramped on. However fragments of the skull remained and more teeth were found. 12" to the east of the child's skull was a much disintegrated fragment of an adult skull, between the two skulls and about 3" from the small bowl was a group of small fragments of long bones all laying parallel and a small piece of badly disintegrated bone possibly from a pelvis. Additional teeth were found in this 24" circle, but none in the dark area of Feature 6. Some of the teeth were represented only by the enamel shell. There were 38 teeth or fragments of teeth, and 27 identifiable separate teeth, 9 of which are adult and ten milk teeth and the others not definitely classified.

The skull of the child showing only one suture and that was uncemented. The adult teeth showed very little wear.

The bowl found with this burial is described under "Restored Vessels". There were no other artifacts found in this burial area except one small flint chip which was inside the bowl, and 10 jasper chips scattered throughout the area.

We believe this was a bundle burial of a young mother and her child. The presence of the small bowl indicates a funeral offering. Plate V-(C).

Feature 6 was intrusive into part of this burial area.

FEATURE #1 (ND plus 4 x W 52). TS=8"

A Fireplace. Very dark soil 14" diam. x 2" - 10" bpl, containing many flakes of charcoal but no artifacts. Around the remains of this fire were three small post moulds 1.5" - 2.5" diam. located at the corners of a 21" x 15" rectangle. A faint discoloration at the fourth corner may have been the bottom of a fourth post mould, but it could not be definitely identified as such. Plate IV-(B).

It is believed that these post moulds were the remains of the uprights of a barbeque grid similar to that shown in the painting by Capt. John White (c 1585-86) of the Indian's method of cooking fish at Roanoke Island.

FEATURE #2 (NF x W 48). TS=8"-10"

A distributed area 5' x 3.5' long axis NE-SW, tapering off to zero at 24" bpl. Just below the plow line was a group of 5 fire cracked stone (2"-6") and adjacent was a good bone awl. About 12" W of these were two articulated cervical vertebrae of a large animal (probably deer). Scattered throughout the rest of the feature were only a few badly weathered oyster and conch shell (less than a dozen), many fragments of disintegrating bone - including deer, small animals, turtle, and fish, also 15 additional fire cracked sandstones; two broken jasper points, very few shell tempered and one grit tempered potsherd - all small; many flakes of charcoal, 17 jasper and 3 quartz chips.

FEATURE #3 (NF plus 5 x W 65). TS=8"-14"

A disturbed subsoil area roughly pear shaped 10' x 7' at plow line, long axis N-S, faintly outlined at plow line but decidedly dark at 6" bpl. Extended with tapering sides to a depth of 30" bpl where it ended abruptly on a flat surface about 6' x 34".

Just below the plow line was a large potsherd about 7" x 8" laying at about 30 deg. to the vertical, this was part of the rim of a large vessel about 15" diam. grit tempered, fabric impressed, with 13 circumferential cord impressions below the rim. Plate V-(D). Other potsherds of this same vessel were found to a depth of 22".

At 8" bpl was found a large shell tempered rim sherd, fabric impressed with a hole *punched* through from the inside before the clay had hardened, 5/8" below the rim. A matching sherd to this was found in shell pit #15. They were from a pot or bowl about 5"-6" diam.

At about 14" bpl was found a small (2"x2") grit tempered potsherd with a hole drilled unilaterally from the outside, hole near middle of sherd.

From the size and shape of this feature we expected to find a burial, but though we worked with great care, we found no sign of human bone. In the upper 12" bpl were many small stone flakes and chips, an occasional piece of charred or disintegrated animal bone and conch shell. Below the 12" level was practically sterile except for discolored earth and as listed below.

Artifacts	0-12" bpl	12"-30" bpl
Quartz chips	6	2
Other stone chips	9	0
Mica tempered potsherds	0	2
Jasper chips	71	3
Grit tempered potsherds	77	12
Shell tempered potsherds	37	1*

*This shell temperd potsherd was very small (0.75" x 0.5") and could easily have been intrusive by rodent or root hole.

FEATURE #4 (NF plus 6 x W 54). TS=10"

A roughly circular fireplace 3'-4' diam. tapering down to zero at 14" bpl. Contained many bits of charcoal, a few burnt oyster and clam shell, several fragments of charred small animal bone, 4 grit and 5 shell tempered potsherd - all small, 1 quartz and 9 jasper chips, 1 fragment of jasper point and one jasper sample.

FEATURE #5 (NF plus 9 x W 74). TS=10"-12"

A series of seven post moulds running approx. NE-SW. Posts from 1.5" to 2.5" diam., spaced four to eight inches apart Plate IV-(C). These moulds extended from 1" to 5" bpl. Three had rounded ends, two almost flat ends, one a pointed bottom, and one a slightly expanded or knobbed end. Those on the uphill end extended only about 1" bpl and those on the lower end about 5" bpl. (Our plow line was not level and sloped with the natural grade although not as much, i.e. the top soil was 12" at the upper end and 10" at the lower end). There was also a discolored area between numbers 2 and 4 (counting from the SW) about 4" x 2" tapering to zero at 7" bpl on the SW edge, it may have been a post mould. No artifacts or carbon was found in any of these moulds or in their immediate neighborhood.

The small size and the close spacing of these post moulds, suggests to us that they were part of the wall of a small shelter or hut, in which the spaces between the uprights was filled with intwined twigs, branches, or reeds, instead of the more common bark, matt, or hide covering.

FEATURE #6 (NG plus 4 x W 79). TS= 8"-10"

A very dark soil area at plow line about 4.5' NS x 6.5' EW, the south and west sides of the dark area almost square and straight, the north and east sides very irregular. In the SW corner was a nearly black area about 13" diam. with a high content of charcoal flakes, extending to 6" bpl. Three inches N of the charcoal concentration at 6" bpl on the west edge of the feature were four hand size river stones in a row EW, and just north of them a concentration of about one quart of fragmentary charred small animal and bird bones. In the general area of the feature extending to 12" bpl were 4 grit and 5 shell tempered potsherds all small, 35 jasper and 6 quartz chips, 1 jasper reject, and three jasper samples.

The sides of this feature were almost vertical down to 10" bpl and ended abruptly at 10"-12" bpl. The SE corner of this feature intruded into the Burial #3 area.

FEATURE #7 (NH x W 85) to
(NH plus 8 x W 72). TS=10"-12"

Four large post moulds and a fireplace in line NE-SW. Beginning at the SW of the feature:—

(a) (NH x W 85). A post mould roughly triangular in shape 8" x 10" extending to 8" bpl. Flat bottom. No artifacts.

(b) (NH plus .5 x W 81). A small fireplace about 24" diam. tapering to zero at 8" bpl, containing many flakes of charcoal, fragments of charred bone and a few small jasper chips.

(c) (NH plus 4 x W 77.5). A post mould roughly rectangular in shape 8" x 10", extending to 12" bpl, roughly squared bottom. No artifacts.

(d) (NH plus 5.5 x W 74.5). A post mould roughly round 14" diam. extending to 12" bpl, and just to the north of this were two 6" diam. post moulds extending to 10" bpl. No artifacts.

(e) (NH plus 8 x W 72). A post mould roughly round 12" diam. extending to 14" bpl. No artifacts.

From the shape of (a) and (c) and the spacing, we think most likely that these post moulds were not Indian made, but were made later by the white man. The fireplace (b) is probably Indian in origin.

FEATURE #8 (NH x W 60). TS=10"

A fireplace 18" diam. tapering to zero at 6" bpl. Contained many charcoal flakes, 4 small shell tempered potsherds and 3 small jasper flakes.

FEATURE #9-10 (NJ to NK x W 50-60). TS=8"

A refuse area very irregular in shape, max. dimensions 12'NSx7'EW. In the NE corner of the feature was a saucer shaped concentration of clam and conch shell (no oyster shell), many carbon flakes, 3 fragments of disintegrated bone, no potsherds or stone chips.

In the balance of the feature which tapered off to zero at 23" bpl, oyster, clam and conch shell, all considerably weathered, were frequent, but not frequent enough to class this as a shell pit, (not more than 1% of the fill was shell). Also many fragments of well disintegrated bone, antler, turtle shell, and bird bone. The distribution of potsherds showed some indication of stratification as follows:—

Artifacts	0-6" bpl	6"-23" bpl
Grit tempered potsherds	14	15
Shell tempered potsherds	12	0
Jasper chips	43	33

The saucer shaped concentration of shell in the NE corner was apparently an intrusion into the main feature.

FEATURE #11 (NI plus 1 x W 14). TS=8"

A white man's refuse pit irregularly rounded 6'3" x 6'6", sides almost vertical ending at 21" to 23" bpl. Contained a large assortment of chips, stones, small grit and shell tempered potsherds, fragments of trade pipe, sheet glass, home-made brick, glazed brick, hand forged nails, square cut nails, glazed pottery sherds, and a few shell and bone fragments not appreciably weathered.

(We have considered the Indian artifacts found herein as if they were top-soil or surface finds.)

FEATURE #12. TS=8"-10"

A group of three fireplaces, one of which had barbeque post moulds around it:—

(a) (NG plus 4 x W 16). A fireplace 24" diam. gradually diminishing to zero at 8" bpl. At the NE, NW, SE & SW corners were stake moulds 2' 'to 3" diam. extending 3" to 4" bpl and about 6" outside the fire darkened fireplace. At the NE, NW & SW corners there were double moulds as if one set of stakes had been burnt or rotted away, and a new one driven in to replace it. The fireplace was black with fine charcoal mixed with sandy soil. This like Feature 1 remind one of the barbeque grill pictured by Capt. John White (c 1585-86) of the Roanoke Islanders cooking fish.

(b) (NG plus 9.5 x W 18.5), and (c) NH plus 3 x W 16). Two fireplaces approximately the same size and shape as (a) but with no barbeque stake moulds found.

No artifacts associated with either of these three fireplaces.

FEATURE #13, Including PIT #17,
(ND plus 5 x W 15). TS=8"-10"

Shell Pit 17 was roughly round 2.5' to 3' diam. tapering to 8" diam. at 14" bpl, was about the center of a large discolored area 74" NS x 66" EW called Feature 13. The feature had nearly vertical sides down to 18" bpl then tapering off to zero at 26" bpl about halfway between the center and the west edge.

Shell Pit 17 was intrusive into Feature 13. It consisted of slightly weathered oyster, clam and conch shell, charcoal, fragments of animal bone including jaw and leg bone of deer, turtle shell, a few potsherds and stone chips.

Feature 13 surrounding and below Shell Pit 17 contained a few much weathered oyster and conch shell, a few potsherds, many stone chips, and fragments of bone and antler and turtle all much weathered.

Artifacts	0-14" bpl Pit 17	0-14" bpl Feat. 13	14"-26" bpl Feat. 13
Shell tempered potsherds	10	9	0
Grit tempered potsherds	0	4	0
Tip of jasper blade	1		
Jasper chips	23	39	12
Quartz chips	1	2	
Argylite chips	0	4	2
Fire cracked sandstone	0	6	3
River pebbles quartzlike	0	15	4
Unfinished argylite blade			1

FEATURE #14 (NF plus 1 x W 65). TS=8"-10"

A possible burial, very shallow. In removing the top-soil with the tractor scraper, pieces of what appeared to be skull bones were disturbed and dragged by the tractor blade near the bottom of the top-soil. They were traced back to a discolored area about 12" diam. x 3" deep bpl where a few other fragments were found. All were soft and badly disintegrated. A piece of bone resembling a larg femur shaft, also badly disintegrated was in the top soil. Fragments of the bones were fitted together by Dr. Marine and he reports that they indicate a large brain cavity and unusually thick for human skull. Although certain characteristics indicated human bone he could not be certain with the limited material. Artifacts in and adjacent to this feature were 3 grit and 6 shell tempered potsherds, many stone chips, one jasper point and a broken sandstone mortar.

FEATURE #15 (NB plus 4 x W 18). TS=10"-12"

A discolored area directly adjacent to and north from Shell Pit #1, roughly oval in shape 4' NS x 6.5' EW tapering rather uniformly to almost nothing near the center at 35" bpl. Contained in 0-8" bpl 17 rather large shell tempered fabric impressed potsherds, matching to form part of vessel about 15" diam. The rest of the feature contained scattered throughout - 13 shell and 6 grit tempered potsherds, a few well disintegrated bone, antler, and shell, down to 26" bpl, flecks of charcoal down to 24" bpl. 11 pieces of fire cracked sandstone and a few jasper chips were scattered throughout.

FEATURE #16 including SHELL PIT #4
(ND plus 6 x W 37). TS=7"-10"

When the top soil was removed from over Pit #4 it was seen to be about the center of a large disturbed area, roughly oval in shape, 12' x 9' long axis NS, which we called Feature 16.

Shell Pit #4 was roughly round - 26" to 30" diam. x 5" deep bpl with almost flat bottom. It was intrusive into Feature 16. It was a high concentration of oyster with an occasional clam and/or mussel shell. Contained 2 grit and 44 shell tempered potsherds, one jasper point, many jasper and a few quartz chips, one each jasper and quartz samples, and a small percentage of carbon flakes. Plate III Fig. 1, #1.

Feature 16 contained several sub-features as follows:

Plate III Fig. 1, #2. A shell dump on the SE edge beginning at 4" to 6" bpl extending down to 24" bpl and spreading out toward the center of the feature and covering about one quarter of the SW side of the feature, this extended on down to 34" to 36" bpl. This dump was 98% oyster, with an occasional conch, clam, or mussel shell, and contained many shell tempered potsherds, one jasper point, many jasper and a few quartz chips, fragments of animal, turtle, and fish bones, sometimes charred, and flakes of charcoal.

Plate III Fig. 1, #3. Along the NE quadrant of the feature was a half-lense of highly calcined shell and carbon, beginning at about 9" to 12" bpl and 10"-12" thick at the outside edge and tapering to zero two feet from the walls. This carboniferous lense contained a number of shell tempered potsherds some of which matched potsherds from the shell-dump (2) on the other side of the feature. Also contained many charred fragmentary animal bones, antler, deer teeth, bird bones, and turtle shell, many jasper and a few quartz chips.

Plate III Fig. 1, #4. The skeleton of a dog (Dog #1) was slightly intrusive into (3) the above carboniferous lense. The feet of the dog were exposed at 6" bpl and the side of the skull at 15" bpl 3" in the black lense of calcined shell near the NE edge of the feature. It was a fairly large dog and apparently had been buried on its back with its feet straight up during rigor mortis. While the soil around this dog skeleton seemed slightly less dense than the surrounding soil, there was no color difference noticable to indicate it being a recent or intrusive burial. Its bones were in good preservation.

Plate III Fig. 1, #5. Another dog (puppy) burial (Dog #2) at approximately the same level as dog #1, near the center of the feature and directly under the intrusive shell pit #4. This skeleton was laying on its side in an extended position, and the bones in good condition. It must have been buried before shell pit #4 was formed since there was no indications of its being intruded through or under the shell.

Plate III #6. Over the 24" bpl level was a roughly round lense of relatively clean sand 24" to 30" diam. x 0 to 3" thick, the edges extending slightly over the bottom of the shell dump (2) and under the highly calcined shell and charcoal lense (3).

Plate III #7. Under (6) and mixed with the discolored soil of the general feature, were 38 rounded river pebbles 1.5" to 3" diam. all within an area of 14" diam. x 6" deep.

Plate III #8. At 36" bpl was another lense of highly calcined shell, covering an area of about 24" diam. x 2" thick. This extended under the toe of shell dump (2), and was under the collection of river pebbles (7). Contained no artifacts.

The disturbed soil and excavated area of this feature extended to an irregular bottom varying from 40" to 46" bpl. Directly on the bottom and next to the virgin soil was found a large unfinished blade 4" x 2.5" of quartzitic sandstone and a 3" x 2.5" hammer stone of the same material Plate III #9. No other artifacts found below the 36" bpl level.

Throughout the general feature in the discolored soil were many shell tempered and a few grit tempered potsherds. Two vessels were restored from scattered potsherd fragments, these are described as vessels Nos. 3 & 4 under "Pottery". Outside the sub-features mentioned above there were very few oyster shell, one or two fragmentary conch shell, many fragmentary animal bones and jasper chips and occasional other stone chips. Fragments of bone awls were found at 6" bpl and 24" bpl, two awls of antler at 26" bpl, and fragments of various stone points found in each level down to 30" bpl.

The side walls of Feature 16 were nearly vertical, sloping about 20 deg. with the vertical down to 36" bpl where it started leveling off to an irregular bottom from 40" to 46" bpl.

FEATURE 17 including SHELL PIT #2
(NC plus 6 x W 25). TS=10"

A discolored area roughly circular in shape 60" diam. x 28" deep, into which intruded near the center a saucer shape SHELL PIT #2, (51" NS x 41" EW x 14" deep bpl). The feature had amost vertical sides with slightly rounded bottom. The shell pit contained mostly well preserved oyster shall with a few clam and scallop shell and about 30% conch shell (an unusual high percentage of conch shell), also many fragments of turtle shell, several catfish spines and other fish ribs and some fish scales, the skull of a small animal - probably an intrusive field mouse, and a few stone flakes or chips.

Outside the shell pit area and in the discolored soil of the feature were a few well rotted shell, many bits of charcoal, several fire cracked stone, a group of shell tempered fabric impressed potsherds matching to form part of a pot about 16" diam. (these matching sherds were from the 26" level bpl.) A few weathered fragments of deer and other animal bone, a few jasper chips, and 1 grit tempered net impressed potsherd.

FEATURE #18 (NI plus 4 x W 66.5). TS=8"

A small fireplace about 18" diam. tapering off to zero at 6" bpl. Contained very dark soil with few pieces of charcoal, 2 shell tempered and 1 grit tempered potsherds, 4 jasper and one quartz chips.

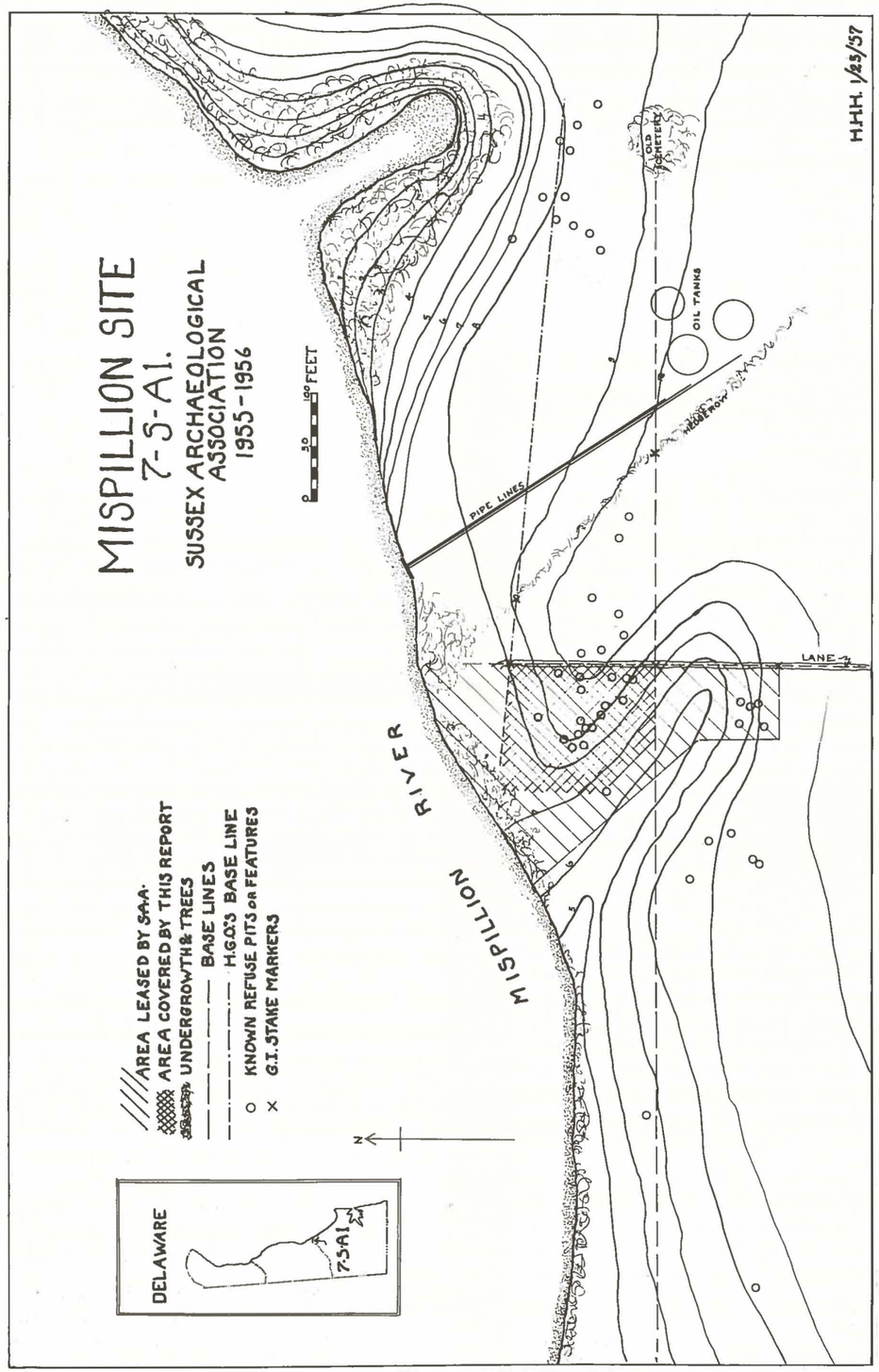


PLATE-I

FEATURE #19 (NI plus 2 x W 83). TS=9"

A small fireplace about 18" x 22" tapering off to zero at 10" bpl. Contained 14 shell tempered and 1 grit tempered potsherds, 30 jasper, 3 quartz and 3 other stone chips.

FEATURE #20. TS=11" to 14"

Three post moulds in line SE-NW about 5' to 6' apart:—

(a) NB plus 0.5 x W 40. Post mould 2" diam. x 2" bpl, blunt pointed bottom.

(b) NB plus 5 x W 45. Post mould 1.5" diam. x 1.75" deep bpl, blunt rounded bottom.

(c) NB plus 9 x W 49. Post mould 2" diam. x 4" bpl. Blunt rounded bottom. There were no artifacts associated with thees post moulds.

FEATURE #21 (ND plus 9 x W 56). TS=10"

An isolated post mould 2" diam extending 4" bpl. Almost square bottom. No artifacts.

FEATURE #22 (NG plus 5 x W 47). TS=12"

Two isolated post moulds about three feet apart in SE-NW line. Each about 2" diam. and extending 3" and 4" bpl. Both blunt pointed bottoms. No artifacts.

OTHER FEATURES

There are several other features and/or fireplaces shown on Plate II without numbers. These were small discolored areas and very shallow bpl, and contained no artifacts, so are shown but not described.

SHELL PITS

A "Shell Pit" as referred to herein, is a sub surface concentration of shell, refuse, and earth, generally being from 50% to 90% shell.

SHELL PIT #1 (NB x W 20). TS=9"-11"

A shell and refuse pit almost circular in shape, 4.5'-5' diam. reducing slightly in area down to 18" bpl where concentration of refuse ceased. Discolored soil continued to 22" bpl. No cultural material below 18" bpl. Refuse consisted of about 98% oyster shell with an occasional clam or conch shell, fragments of animal bone, including deer jaw with teeth, turtle shell, catfish spine, fish bone, rodent bones and claws; 16 shell tempered and 2 grit tempered potsherds, 20 jasper chips, 1 jasper and 1 quartz sample, and one broken hammer-stone.

SHELL PIT #3 (NF plus 6 x W 14). TS=7"-10"

A shell and refuse pit roughly circular in shape 40" diam., sides nearly vertical down to 21" bpl and bottom saucer shaped. Refuse about 80% shell, of which about 98% was oyster, 1% scallop, and 1% clam and conch, all well preserved except the scallop which were very fragile. All types of shells were well mixed together except the scallop which seemed to be grouped in several small concentrations. Other refuse consisted of fragmentary animal bone, bird bone and turtle shell; 20 shell tempered and one grit tempered potsherds; also 4 matching fragments of a shell tempered smoking pipe with a wide flat stem at an angle of about 150 deg. to the bowl, with incised rectangles and small circles on the bowl. Plate VI-(C). Also 1 broken chert point, 88 jasper and 5 quartz chips, 4 other stone chips; 1 each jasper reject and sample, one badly weathered argyolite (?) point, and 16 rounded river pebbles 1"-2" diam.

SHELL PIT #5 & 6

#5 pit had been located by probing before any top soil had been removed, when the top-soil - approximately 10" deep, was removed, there was nothing left to identify the pit. #6 was excavated by Mr. Omwake and no information is available for this report.

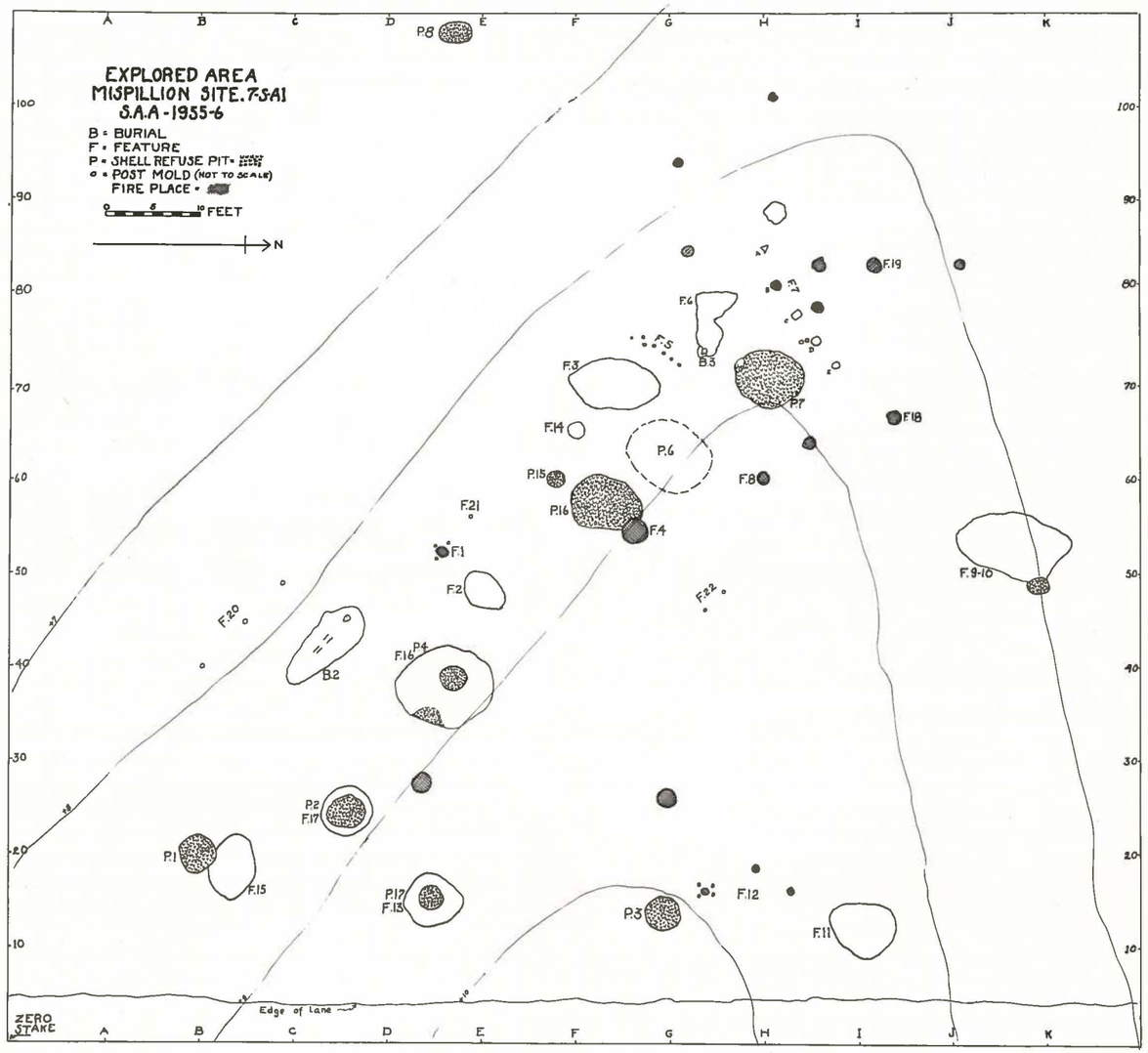
SHELL PIT #7 (NH x W 70). TS=8"-9"

A shell and refuse pit roughly oval in shape 7.5' NS x 5' EW, sides quite steep tapering to 7.5' by 4.5' at 27" bpl. Shell extended to 24" bpl; below was very dark soil which leveled off at 27" bpl near the edges, but in the center down to 47" bpl. One side of this central depression was very steep and the other side gradual. The steep side of this lower depression (north side) was a hard sand-clay which seemed to have been made hard by heat or fire.

The upper 24" was about 80% shell, oyster predominating, but with frequent conch, clam, and mussel shell. The soil mixed with these shell was unusually dark in color but with very few charcoal flakes except in a fireplace approximately 1.5' diam. x 6" deep located 8" bpl about the center of the shell pit. The shell deposit also contained many fragments of bone, antler, turtle shell, 3 grit and 42 shell tempered potsherds, 85 jasper and 6 quartz chips. These chips were most frequent in the area surrounding an anvil stone found in the SW edge of the pit at 4" bpl. Other artifacts in the shell deposit were 4 triangular jasper points and a bone awl.

Below the 24" level in the dark soil were very few shell and fragmentary bone, 5 grit and 28 shell tempered potsherds, one mica tempered potsherd, 73 jasper and 2 quartz chips and 6 jasper samples. Also a fragment of a pipe bowl of fine texture decorated with deeply incised lines outlining a diamond shape area enclosing a small rectangular incised figure. Plate VI-(D); and a highly polished shell bead 0.312" diam. x 1.37" long, with hole drilled lengthwise, and probably made from the core of a conch shell. Plate VI-(E).

Two uncommon ceramic items from the upper 24" within the shell deposit were; a small "nubbin" of clay



LOCATION OF PITS, FEATURES, Fireplaces, Burials and Post Moulds, in area worked at Mispillion Site.

PLATE - II

5mm diam. x 21mm long, believed to be the nub end of a clay coil used in making pottery vessels. And a flat ceramic sherd 18 to 29 mm wide x 7mm thick x 30mm long, the sides are rounded but the ends broken. Very fine crushed stone temper. Two lightly incised lines running into the break at one end. Plate VI-(A).

SHELL PIT #8 (ND plus 8 x W 118). TS=10"-11"

A shell and refuse pit about 3.5' x 2.5', oblong in shape and roughly cone shape in section, and extending 28" bpl. The concentration of shell in the upper 4" to 8" consisted mainly of *small* oyster shell, with a few clam and conch shells all mixed with nearly black sandy soil and finely divided charcoal. Shell in good condition.

Below the shell concentration the soil was darkly stained with very few artifacts. The whole pit was reported to contain 55 small fragments of shell tempered soot covered potsherds, some with fabric impressions both inside and out. Many fragments of deer bone, 2 vertebrae, few bird bones, few stone chips and many fine cracked stone. These are *not* included in the summary tabulation of artifacts, as they were not available to us for detailed classification.

SHELL PITS No.s 9 to 14 incl.

Pit #9 was outside our leased area, and was not excavated. Nos. 10 to 14 incl. were in the area reserved for Mr. Omwake and data thereon is not available for this report.

SHELL PIT #15 (NE plus 8 x W 60). TS=8"

A small shell and refuse pit roughly round 24" to 30" diam. x 12" deep bpl, saucer shaped in profile. Mostly well preserved oyster shell and only one conch shell mixed with discolored soil and charcoal flakes. Contained 1 grit and 19 shell tempered potsherds, 41 jasper chips, three quartz and three other stone chips, and 2 jasper samples. One of the shell tempered sherds from this pit matched one from Feature 3 about 15 ft. away.

SHELL PIT #16 (NF plus 4 x W 57). TS=8"-10"

A large shell and refuse pit roughly oval in shape 7' x 9', tapering gradually to about 2' x 4' at 42" bpl. A high concentration of shell in the center down to 27" bpl and thinning out from that core to the edges and bottom. Shell was mostly oyster with a few clam and conch, all much weathered and mixed with soil almost black with charcoal flakes or organic stain. Contained many small and large fragments of animal bone, much turtle shell, some bird bone, and some possibly dog bones. Also 18 shell tempered and 5 grit tempered potsherds. (Memory prompts that there were many more potsherds than this, but these were all that were turned in). 67 jasper and 2 quartz chips, 1 jasper reject, 9 jasper samples, 3 jasper points, 1 argylite point, 1 round flat jasper pebble with polished edges 1.5" x 1.1" x 0.5" thick, 1 round quartz river pebble.

SURFACE AND TOP-SOIL MATERIAL

As noted elsewhere, no special effort was made to recover all artifacts that may have been in the top soil as it was removed by the tractor-scraper; however any artifacts that were seen by the observers in this operation, were collected and listed, believing that they would represent a fair sample of its contents. They consisted of 199 shell tempered and 41 grit tempered potsherds, 9 jasper and one calcite point, 17 jasper, 24 quartz, and 2 other stone rejects; 266 jasper, 23 quartz, and two other stone chips.

As a test to determine if this method of sampling the contents of the top-soil was representative of the site, we have figured the percentage of a few items in the top-soil as compared to the percentage of the same item in sub-surface finds, as follows:—

Item	from top-soil and surface	from excavations bpl.
Grit tempered sherds, by count	17%	20.2%
Grit tempered sherds, by weight	27%	38%
Jasper chips, by count	91.1%	89.5%
Quartz chips, by count	8.2%	6.4%
Triangular projectile points	80%	65%

The relative closeness of these percentage figures seems to indicate that the top-soil contained a representative selection from the site, so we have carried these in the totals from the site.

SHAPE OF REFUSE PITS, FEATURES, ETC.

There is no predominant or characteristic shape to the refuse pits as is shown by the following breakdown:

Shape of pit	Number
(1) Roughly round, nearly vertical sides and almost flat bottom	3
(2) Roughly round, sloping sides and almost flat bottom	2
(3) Roughly round, no sides, saucer shaped bottom	2
(4) Roughly round, nearly vertical sides part way, then conical bottom	1
(5) Roughly oval, nearly vertical sides, nearly flat bottom	1
(6) Roughly oval, conical sides and bottom	4
(7) Roughly oval, sloping sides, nearly flat bottom	2
(8) Roughly oval, no sides, saucer shaped bottom	1
(9) Roughly oval, straight sides part way, nearly flat shelf, and further irregular depression in center	1
(10) Roughly rectangular, vertical sides, nearly flat bottom	1

Item (6) is the most frequent, but only 22.2% can hardly be classed as characteristic or typical of the site.

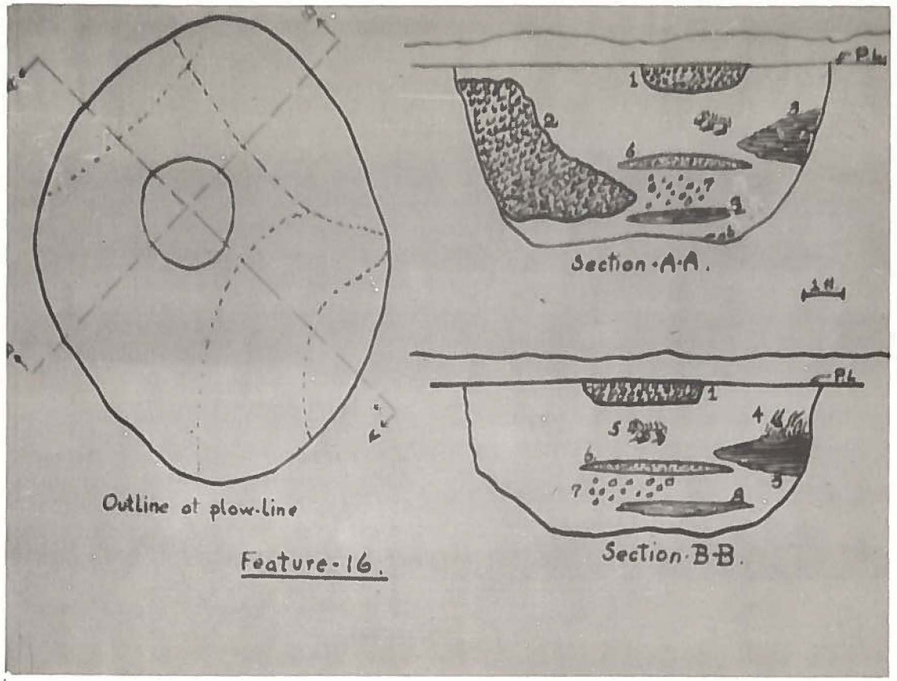


Fig. 1 SECTIONS OF FEATURE #16

Fig. 2 TRACTOR-SCRAPER, USED
for top soil removal

PLATE - III

PROJECTILE POINTS

In addition to these listed below, there were many broken tips or edges that were not classifiable, approximately 95% being of jasper, the balance being of quartzlike or quartizic stone. (J - jasper, O - other stone.)

(a)	Triangular, approx, equi-sided, straight base		10,J
(b)	Triangular, approx, equi-sided, concave base		5,J
(c)	Triangular, approx, equi-sided, deep concave base		3,J
(d)	Long Triangular (sides more than 1.5 times the width of base) straight base		4,J
(e)	Long Triangular, concave base		3,J
(f)	Long Triangular, deep concave base		2,J
(g)	Long Triangular, small rounded side notches		2,J
(h)	Lanceolate, trunscated, broad side notched		1,O
(i)	Lanceolate, trunscated, long, side notched		1,O
(j)	Lanceolate, blunt point, shouldered, square stem		1,O
(k)	Lanceolate, trunscated, straight base		3,J
(l)	Lanceolate, trunscated, concave base		2,J
(m)	Lanceolate, trunscated, concave base		1,O
(n)	Diamond, small square shoulder, pointed stem		1,J
	Total		39
Summary:—	Triangular without notches or stems	27	
	Lanceolate without notches or stems	6	33
	Triangular notched	2	
	Others notched or stemmed	4	6
		39	39
	Triangular points without notches or stems	70%	
	Other shapes or with notches or stems	30%	
	Jasper points	89%	

MISCELLANEOUS ARTIFACTS

2 Bone awls. (F-2, and TS)
2 Polished antler tips. (F 16 and F 13)
2 Antler awls. (F 16)
1 Conch shell bead. (P 7)
1 Pipe fragment, incised diamond, rectangle, and rouletting (?) (P 7).
1 Pipe partly restored, broad flat stem, incised rectangle enclosing small circle probably made with reed. (P 3)
1 Fragment of gorget, eliptical shape, broken thruugh bilateral drilled hole. (TS)
1 Large unfinished blade of quartzitic sandstone (P 16).
1 Flat oval stone with red pigment (fugative) on same. (TS)

POTTERY

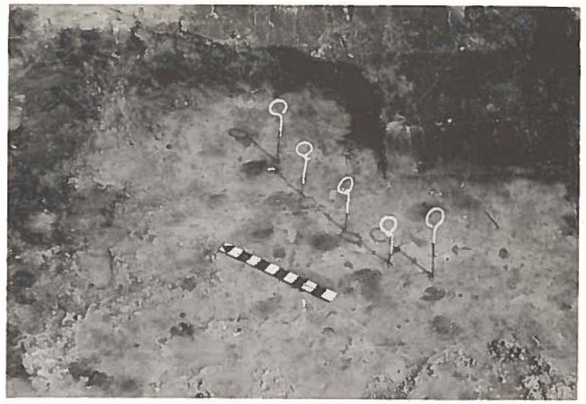
Unfortunately we have not been able to build up enough vessels with perfectly matching sherds to establish a characteristic shape for the site. We have three partially restored vessels with enough matching sherds to get a complete profile of one side, and one small bowl found complete in one piece.

This pottery, especially the shell tempered potsherds, bears a close similarity to other pottery found in many sites in Sussex County, Del. and nearby counties of Maryland: Notable that from the Townsend Site (7-S-D1), Russell Site (7-S-D7), Willin Site (18-Dor-1), Chicone Site (18-Dor-11), and Baron Creek Site (18-Wic-3). The similarity exists principally in the Fabric Impressed surfaces and in the general technic of Incised straight lines and in diagonals, "V"s, chevrons, and herringbone design. In the grit tempered sherds the paste seems to be similar to that found at the Willin Site, but the Fabric Impressions are coaser at Mispillion than at Willin, and the "Cord Impressed Circumferential" was found on grit tempered sherds at Mispillion but only on shell tempered at Willin.

The shape of the few restored vessels here (Plate VII) trend toward a more hemispherical bottom than is indicated on the restored vessels from the Lewes, Del. area (Townsend 7-S-D1), (Schoolhouse 7-S-D5, etc), where they have more conical shaped bottoms. Vessel No. 3 is similar to those from the Lewes area. The restored vessels from the Marshyhope area (Willin 18-Dor-1, Moore Site 18-Dor-13, etc) have bottoms nearly like Nos. 1, 2 & 4 from the Mispillion site, and their profiles have a similar variety.

Other basal potsherds found here are shown in the bottom half of Plate VII. It will be noticed that some of these are non symetrical in the pictures which are true reproductions. These pictures were taken with the basal potsherds partly buried in sand, - buried just enough to have a true profile of the bottom at the surface of the sand.

a BARBEQUE-GRID STAKE
Moulds, Feature #12



c POST MOULDS OF HUT WALL, Feature #5

b BARBEQUE-GRID STAKE
Moulds, Feature #1

d SUB-SOIL DISCOLORATION
Feature #11

TOP SOIL REMOVAL IN LANES, (Appendix III), and discolored sub-soil at Feature #3.

e

PLATE - IV

COLOR

We have not stressed color in our classification because it does not seem to be a consisten characteristic in the kind of pottery found in refuse pits and on the surface in this area. For intsance:—in several partially restored vessels in which sherds fitted perfectly together, one sherd would be almost black throughout - both surfaces and core, while a matching sherd next to it would be light tan on both surafces and in the core. This happened in many instances, and is probably due to where the different sherds lay in the refuse pit, and the difference in the amount of fire, heat, or weathering they had been subjected to after being discarded. Those found in areas where there was much charcoal and deeply organically stained soil were generally much darker, or blacker, than those found in relatively clean soil or unburnt shell. However this was not consistently true, there were many exceptions.

In two partially restored vessels from F-16, sherds that fitted perfectly in the restoration could be called black, smoky, tan and pink, and one sherd was smoky-black on one edge and tan on the other, the different shades of color going all the way through the potsherd.

SURFACE TREATMENT

In some of the restored vessels where sherds matched perfectly, we found that part could be classed as one type of treatment and other parts classed as other treatments. For instance:—in one case part was clear deep Fabric Impressions (type 2), another part was faint Fabric Impressions Smoothed over (type 4), and another part smooth but with scraping scratches (similar to outside of Type 17).

The great majority of sherds indicate they have been paddled with a fabric covered stick or paddle on the outside while being backed up with a smooth anvil on the inside, and a good proportion of these have been "smoothed over" with something like the wet hand before the paste has set. There are many variations in the surface treatment, as noted below under "Pottery Types".

HARDNESS

It was noticed that hardness (as measured by the Moh's Hardness Scale), varied considerably from sherd to sherd in the same vessel. In vessel #3 it varied from 2.5 to 4.5, and in vessel #4 from 2.5 to 3.5. In both cases the harder sherds were the darker colored sherds which had probably been subjected to considerable heat in or near a fire *after* being broken.

All sherds were not tested for hardness, but several samples of each type from each level bag were tested. No consistency as to type was found as they varied 2.5 to 5. The shell tempered sherds averaging approx. 3, and grit tempered sherds approx. 3.5.

CONSTRUCTION

Fractures that show clearly cleavage along coil lines were common but not frequent, and were found in both grit and shell tempered sherds.

Several "coil nubbins", or roughly cylindrical pieces of paste coils, which had been thrown away and fell into or near enough to a fire to become partially petrified were found. Also a small flattened conical nub-end was found. Plate VI-a (Similar coil nubbins were found in the Willin Site.) This only confirms that coiled pottery was made at this site.

POTTERY TYPES

The potsherds were first classed according to their tempering material, then according to their surface treatment. Some surface treatments are common to several different tempered sherds.

TEMPER—The following different tempering materials are represented in this site:—

(G) Grit: - including coarse sand, fine gravel, crushed rock and occasionally crushed jasper and quartz.

(S) Shell: - including many sherds in which the tempering shell has been entirely leached away leaving voids of a thin lense or concoidal shape.

(M) Mica: - crushed mica or crushed micaeous rock.

(P) Potsherd: - Temper appears to be somewhat porous particles of crushed potsherds, red to black in color.

(O) No Temper: - contains no tempering material, or else it is so fine that it cannot be distinguished with a pocket magnifying glass.

SURFACE TREATMENT: - The following types of treatments are distinguishable. (Unless otherwise noted, the interior surface is smooth).

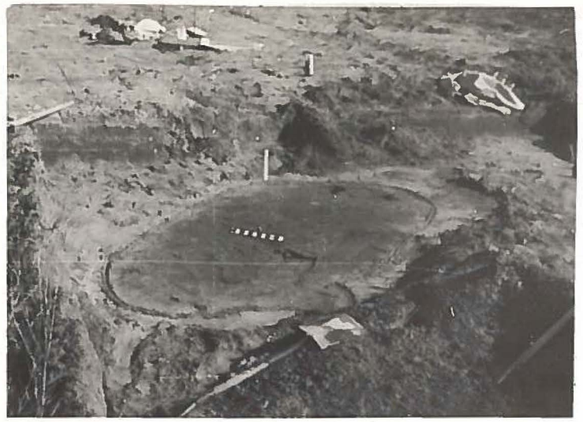
(1) Net Impressed—Impressions of a knotted net on the outside.

(2) Fabric Impressed—Impressions made with a paddle or wide stick wrapped with a coarse fabric or twisted cord. The warp of the fabric may be fairly fine, or very coarse.

(3) Fabric Impressed, Scraped inside—same as (2) outside, but with marks on the inside made by a tool with imperfections in its edge which leaves noticeable scratches.

(4) Fabric Impressed, Smoothed over—same as (2) but with the impressions partly obliterated before the paste was hardened, probably by being wiped or rubbed lightly with a wet hand, or other instrument that would give the same effect.

(5) Fabric Impressed, "Criss - Cross" — impressions made as in (2) but with a superimposed impression made with the same tool at varying angles to the first impressions.



a DISCOLORED SUB SOIL. BURIAL #2

b BURIAL #2 in situ.

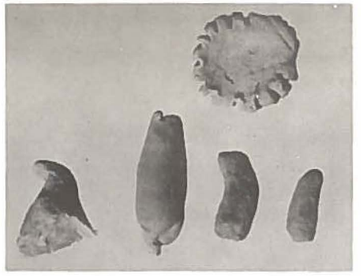
c REMAINS OF BURIAL #3, and associated small bowl.

d LARGE POTSHERD, in situ. F-3

e ANVIL STONE. Shell Pit #7

PLATE - V

a



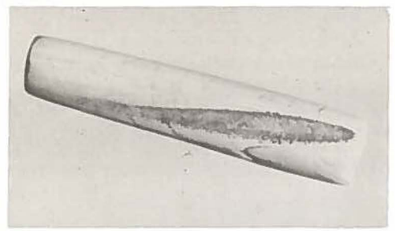
b

Mispillion Site Willin Site

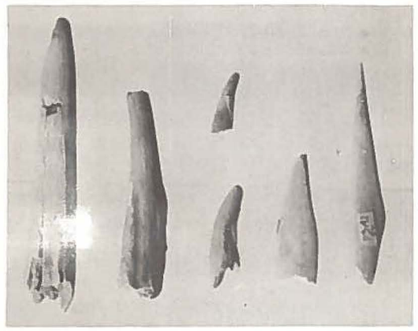
CLAY COIL NUBBINS. (x 0.72)

c CLAY PIPE, (x 1.66)

d CLAY PIPE FRAGMENT (x 1.66)



e CONCH SHELL BEAD (x 1.66)



f WORKED BONE & ANTLER AWLS (x 0.5)

PLATE - VI

(6) Fabric Impressed, Incised Straight lines—same as (2), (3), (4), or (5), but with incised straight lines over the fabric impressions. These lines may be continuous all around the vessel (circumferential) or short lines making a variety of designs such as "V"s, chevrons, zig-zags, herring bone, fringes, etc.

(7) Fabric Impressed, "Corn Cob"—Impressions made with a paddle wrapped with a fabric of very coarse warp and such a fine weft that the impressions look like the impressions of a corn cob.

(8) Fabric Impressed, Inside and outside—same as (2) to (6), but with fabric impressions on the inside as well. Where these are found they are either rim-sherds or appear to be from near the rim.

(9) Fabric Impressed, Cord Impressed Circumferential—same as (2) to (5) but with superimposed impressions of a heavy twisted cord around the vessel under the rim. Cords varying from ⅛" to ½" in diam. May be single or multiple impressions of cord.

(10) Cord Marked — Impressions made by a lightly twisted cord wrapped over a paddle or stick, with no indications of warp or weft, such as in the fabric impressed types.

(11) Cord Marked, Inside & Outside—Similar to (10) but with cord marks also inside.

(12) Cord Wrapper Stick Impressed, Impressions made from what appears to be a cord wrapped tightly around a stick; generally appear too widely apart to be mistaken for the Fabric Impressed Types, though they might have been made by the *edge* of a cord or fabric wrapped paddle.

(13) Paddled outside, Scraped inside—Impressions on the outside which appear to be made with a rough paddle, with no indications or identification of twisted cord or fabric. Inside similar to inside of (3).

(14) Smooth or Plain—No surface treatment visible.

(15) Smooth, Incised—No surface treatment visible except incised straight lines.

(16) Plain, Scraped inside—No surface treatment on outside, but scratched inside similar to (3) and (13).

(17) Scraped inside and outside—Only surface treatment visible are scratches similar to those inside of (3) but here both inside and out.

RESTORED VESSELS

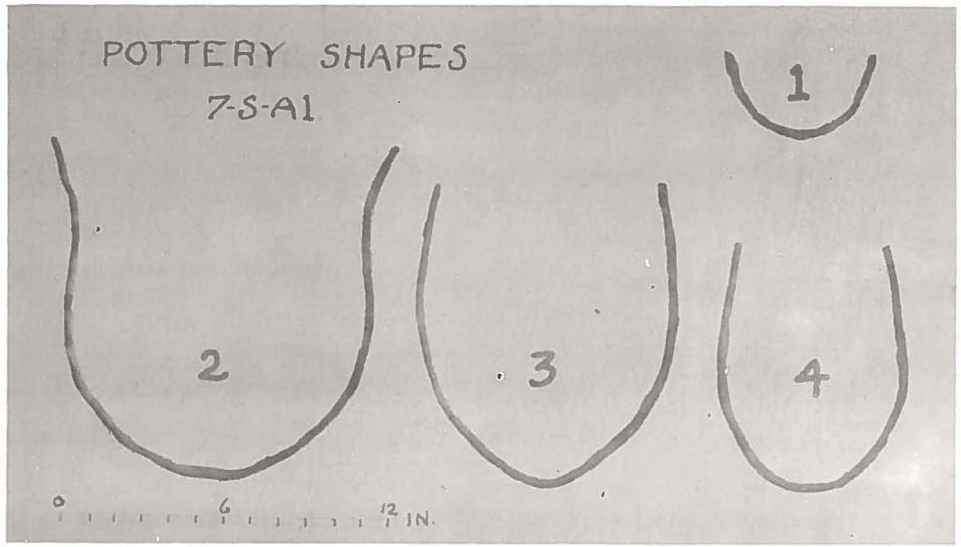
No. 1—A complete bowl found in one piece, almost hemispherical in profile, with very slight stretching of the bottom toward a conical point. Rim slightly and irregularly indented with edge of paddle, inside smooth, outside fabric impressed (Type G-2), color inside is pinkish tan to grayish black, outside is buff varying to gray and black. Texture medium smooth. Hardness 4.5. Rim thickness ⅛" to 3/16", base thickness approx. 5/16". Temper is rounded coarse sand or fine gravel. Diam. at mouth 5", height 3". Plate X-19.

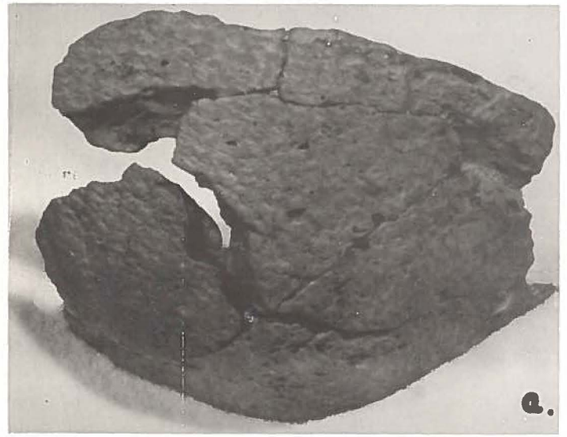
No. 2—A partially restored vessel tempered with particles of crushed rock from 0.031" to 0.125" in size, mostly dark in color but some quartz. Thickness ⅛" at rim to ½" at base. Diametrical section is very lopsided but an average diameter would be about 13" with a height of 13.5". Body slightly constricted below a wide flare to the rim. Base nearly hemispherical. Texture medium smooth. Hardness is 3. Body impressed on outside with Fabric Impressed (Type G-2), base is type 4 treatment, decoration outside under rim is Type 9 consisting of 13 circumferential cord impressions beginning just below the rim. Color inside is light tan, outside is brown to gray-black. Rim thickness 3/16" to ¼", base thickness ½". Rim is closely indented with edge of cord or fabric wrapped paddle or stick. Coil construction apparent on some sherds. (Plate X-17).

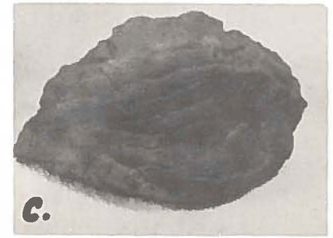
No. 3—A partially restored vessel about 8" diam. at mouth, widening out to 10" diam. at mid-height, then tapering to a conical or "pointed base". Height 11.5". It is symetrical. Shell tempered with particles from minute to 3/16" in size. Inside smooth, outside treatment is in places Fabric Impressed (Type 2), other places Fabric Impressed, Criss-Cross (Type 5), near the bottom Fabric Impressed—Smoothed over (Type 4). Outside just below the rim is decorated with 12 incised circumferential lines over which are a series of "V"s made of short incised dashes, and below the incised circumferential lines is a fringe of short incised vertical dashes about ⅛" to 3/16" apart (Type 6). Rim is ⅛" thick, body quite uniform 3/16" until near the bottom where it thickens to ¼" and 5/16". Texture is fine except where temper shows through. Hardness varies on different sherds from 2.5 to 4.5. Plate X-12.

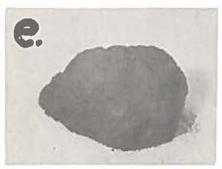
This vessel fits almost perfectly into the "Townsend Incised" type description (Blaker, Eastern States Archaeological Federation, Bul. #9, '50) except that the incised lines encircling the neck are closer than the prescribed ½" below the rim.

No. 4—A partially restored vessel of a relatively tall and narrow shape. 5.5" diam. at rim, 7" diam. just below mid height, 9" high, base almost hemispherical. Shell tempered with particles from minute to ¼" in size. Rather coarse texture. Hardness 2.5 - 3.5. Inside smooth outside partly Fabric Impressed (Type 2) and partly smoothed over and scraped with a tool that left wide (.03" to .13") scratches in random directions. Decorated below the rim with 7 incised circumferential lines below which is a fringe of vertical short incised dashes (type 6). Color varies from pinkish tan to gray-black. Rim is not indented but is rounded. Thickness of rim ⅛", base ½". Plate X-14.









PROFILE OF
BASAL POTSHERDS
(x 1.0)

PLATE - VII

PLATE VIII. Shell Tempered Rim Sherds.

(a) Type 2. Fabric Impressed. Rim rounded and indented with "V" shaped tool.

(b) Type 2. Fab. Imp. Rim rounded and indented with cord or fabric wrapped stick.

(c) Type 6. Fab. Imp. Incised. Rounded rim impressed diagonally with smooth round tool across top of rim.

(d) Type 6. Fab. Imp. Incised. Rim rounded and impressed with smooth round tool.

(e) Type 4. Same as Type 6 plus Incised circumferential lines. Rim rounded on very small radius.

(f) Type 4. Fabric Impressed Smoothed over. Rim flattened.

(g) Type 4. Fab. Imp. Smoothed over plus incised lines circumferentially and vertically. Rim flattened at slight angle to outside surface.

(h) Type 6. Fab. Imp. Incised. Seven circumferential incised lines and vertical incised fringe below. Rim rounded. (From Vessel #4).

(i) Type 4. Fab. Imp. Smoothed over. Rounded rim.

(j) Type 6. Fab. Imp. Incised circumferentially with fringe. Rounded rim.

(k) Type 6. Fab. Imp. Incised. Flattened rim at about 30 deg. to outside surface.

(l) Type 10. Cord Marked. Rim flattened at about 15 deg. to outside surface.

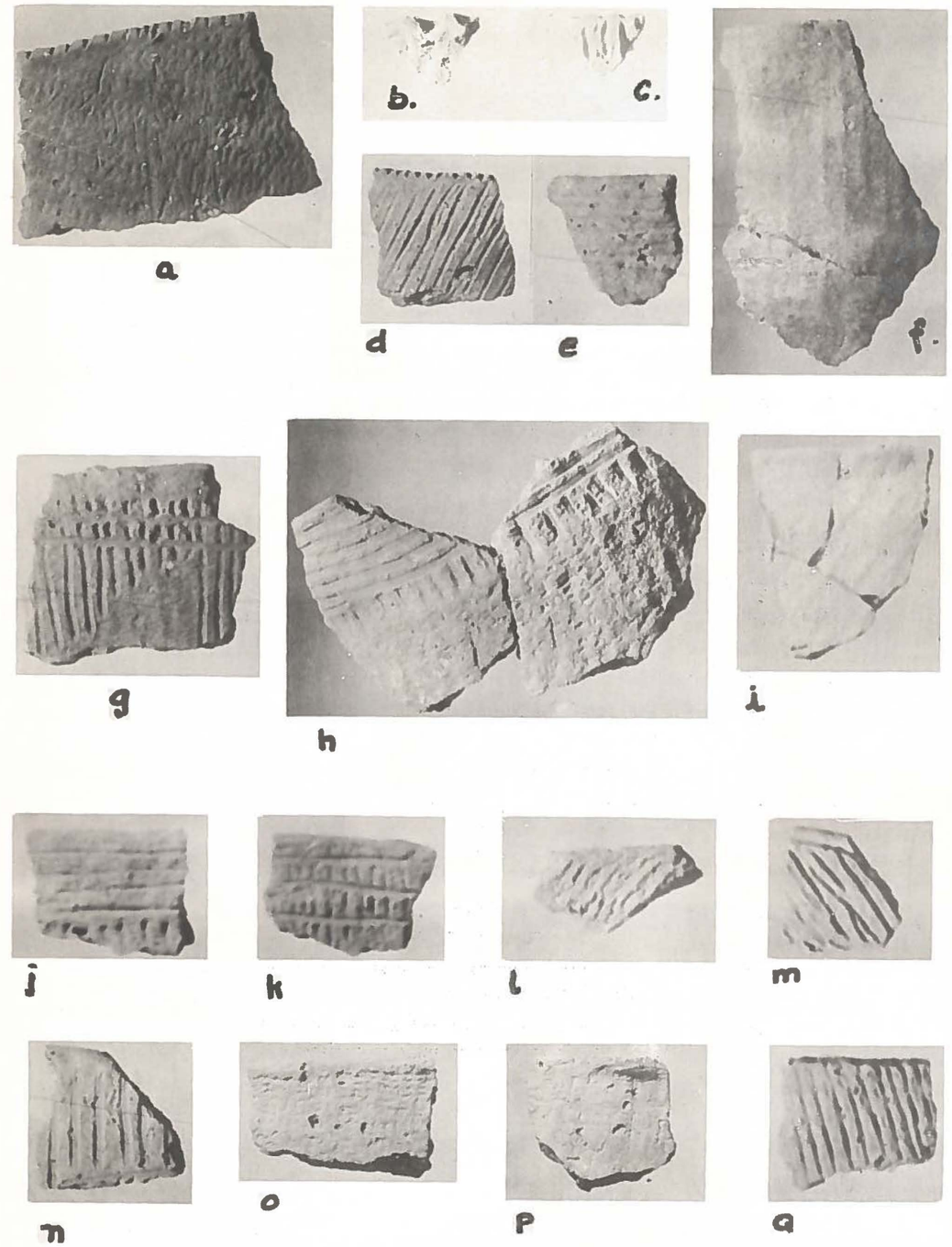
(m) Type 4. Fab. Imp. Smoothed over plus incised line circumferential and irregular diagonals. Rim rounded.

(n) Type 6. Fab. Imp. Incised. Rim flattened at almost right angle to surfaces.

(o) Type 4. Fab. Imp. Smoothed over. Rim flattened at about 30 deg. to outside leaving slight bead on outside.

(p) Type 4. Fab. Imp. Smoothed over. Rim rounded on a slight out-flare.

(q) Type 6. Fab. Imp. Incised. Rim flattened at slight angle to outside with fabric wrapped paddle.



SHELL TEMPERED RIM-SHERDS, Surface Treatment, (x 0.7)

PLATE - VIII

PLATE IX. Grit Tempered Potsherds.

(a) Type 10. Cord Marked with scraping marks inside (see"b").

(b) As inside of Types 3, 13, 16 & inside and outside of type 17. This is inside of (a).

(c) Type 7. Fab. Imp. "Corn Cob". With unilaterial "mending hole" drilled from outside.

(d) Type 7. Fab. Imp. "Corn Cob".

(e) Type 10. Cord Marked.

(f) Type 2. Fab. Imp. Rim Flattened to almost rt angle to surface and impressed with fabric wrapped paddle.

(g) Type 2. Fabric Impressed.

(h) Type 13. Paddled, scraped inside. Rim roughly flattened at about rt angle to sides.

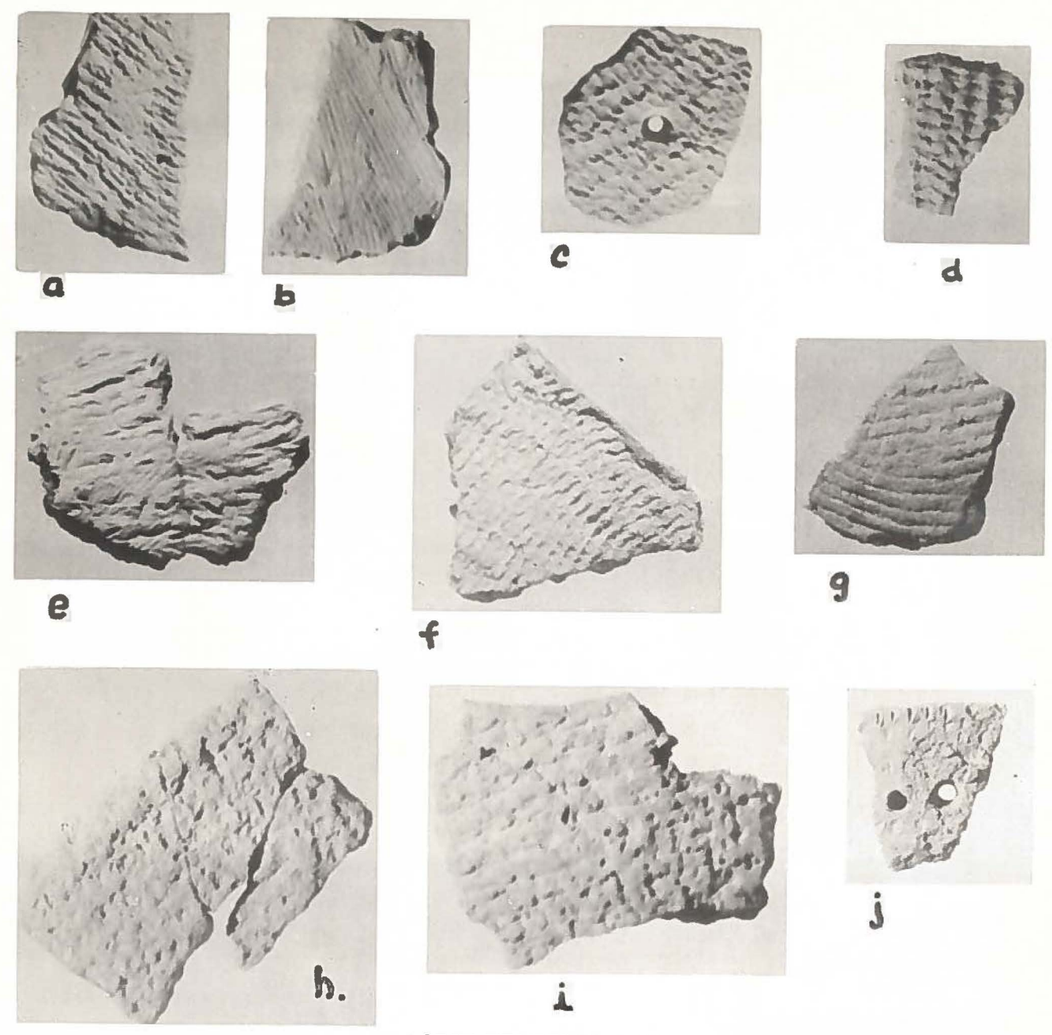
(i) Type 1. Net Impressed. Rim rounded.

(j) Type 15. Smooth Incised. With indented hole about 2/3 through, and a drilled hole all the way through. Rim flattened at almost rt angle to surface and edge indented with edge of sharp "v" shaped tool.

(k) Type 2. Fabric Impressed. Rim flattened at about rt angle to surfaces with Fabric wrapped paddle.

(l) Type 2. Fabric Impressed. Rim flattened at about rt angle to surface with Fabric wrapped paddle.

(m) Type 2. Fabric Impressed. Rim flattened with edge of fabric wrapped paddle at about rt angle to surfaces.



GRIT TEMPERED POTSHERDS, Surface Treatment, (x 0.7)

PLATE - IX

PLATE X. Potsherds and Vessels.

(a) Type 6. Fabric Impressed smoothed over & Incised. (Near rim).

(b) Type 5. Fabric Impressed "Criss-Cross".

(c) Type 8. Inside surface Fabric Impressed.

(d) Type 9. Fab. Imp. Cord impressed circumferential

(e) Type 6. Fab. Imp. Incised. Chevron or Herringbone incisions.

(f) Type 6. Fab. Imp. Incised. Diagonal incisions.

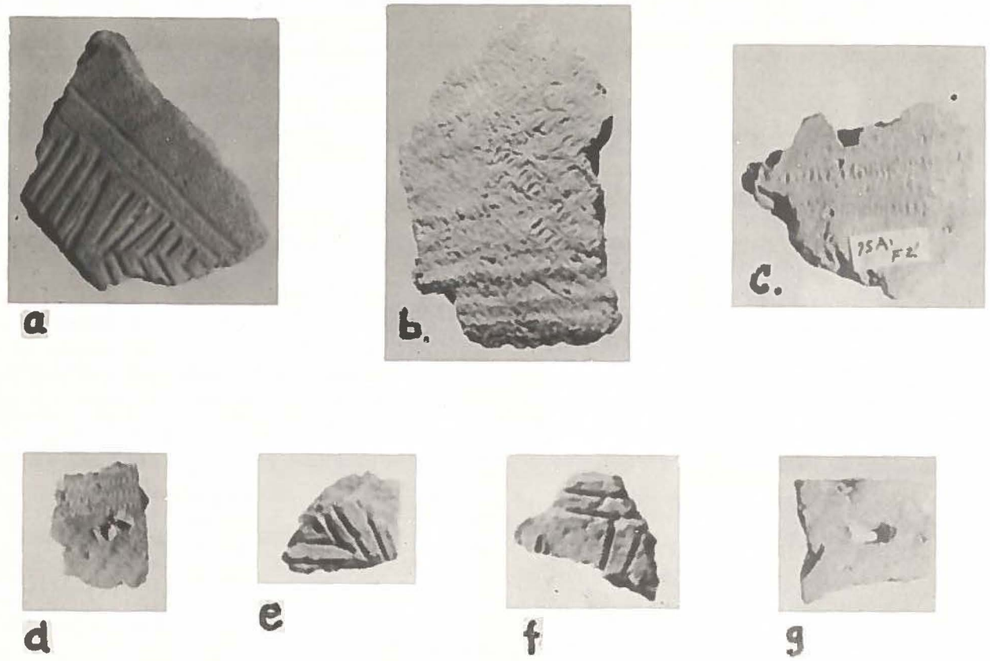
(g) Type 14. Smooth or Plain. With an almost rectangular hole drilled bilaterally.

(13) Vessel #3. Showing several surface treatments. See text under "Restored Vessels".

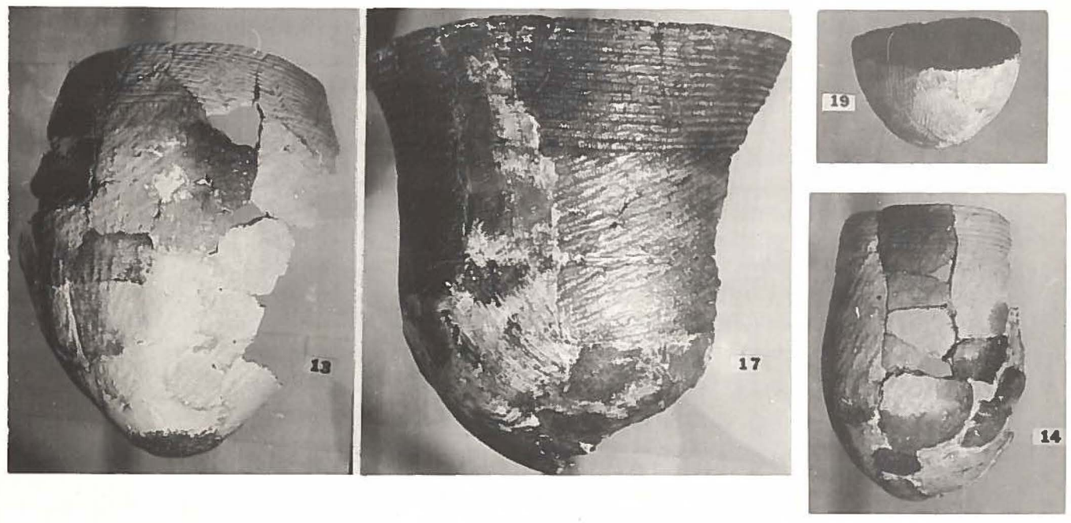
(17) Vessel #2. Showing Type 9 Cord Impressed Circumferential. See text under "Restored Vessels".

(19) Vessel #1. Small bowl found with Burial #3. Fabric Impressed. (See text).

(14) Vessel #4. Showing Type 6 surface treatment, but pot has other surface treatments. (See text).



SHELL TEMPERED POTSHERDS, Surface Treatment, (x 0.7)



RESTORED VESSELS, (x 0.22)

PLATE - X

ANALYSIS OF POTTERY

All potsherds were tabulated by pit or feature number, depth bpl, and type. This table was quite elaborate and indicated no general stratification or cultural trend, so it is not reproduced in this report. However where any stratification has been indicated in individual features, it has been condensed and covered in the description of the feature. A condensation of the whole tabulation is given in Table 1.

Since the author has long felt that merely *counting* potsherds by type and level was not necessarily a true method of proportionate representation, (one large potsherd would count less than the same potsherd if broken into a dozen pieces); we also weighed each type in each feature and pit by levels, and these weights are also summarized in the Table 1. Much to our surprise, three of the seven types that were the largest by weight or by count, fell into the same *relative* position both by weight and by count, as follows:—

Relative position in magniture, percent	Type # by count	Type # by weight	
1st	S-2	S-2	same
2nd	S-4	S-4	same
3rd	S-14	G-9	
4th	G-2	G-2	same
5th	S-6	G-10	
6th	G-10	S-14	
7th	G-9	S-6	

Although assigning relative position by weight also has its drawbacks, such as variations in thickness, density, etc., we believe it should be given due consideration in a site analysis, along with other special conditions existing.

We make no attempt to estimate the number of different vessels represented in this section of the site for several reasons:—Most of the potsherds are small; The great majority of them have fabric impressions which only an expert could differentiate between; And as shown above one pot may have several types of surface treatment and be different colors and hardnesses.

The predominant characteristic of the pottery here is the fabric impressed outer surface with its many variations (Types 2 to 9). We feel that these variations are more personal rather than tribal or cultural differences. The custom of paddling with a cloth or cord wrapped paddle being the cultural trait of first importance, and the incising of straight line designs thereon a second trait of importance. The various methods of applying the paddling, smoothing the impressions, and different designs incised in straight lines, are personal traits of the maker, not necessarily or actually cultural or tribal differences.

The shell tempered potsherds in Types 2 to 9, could all fall into the "Rappahannock Fabric Impressed" or "Rappahannock Incised" types described by Blaker in "Ceramic Abstracts" 1953 issued by the Eastern States Archaelogical Federation, except for the shape of the vessel which is of course not known from these unrestored potsherds. These two "Rappahannock" types are given a temporal position of "late pre-historic" (Woodland). Some of the grit tempered potsherds seem to fit into the description of the surface treatment of the "Dunlap Fabric Marked" type as described by Fairbanks (E.S.A.F. Ceramic Abstracts 1953), and assigned to "early Woodland".

The presence of grit tempered potsherds in practically every pit and feature, top-soil and on the surface is noticeable. It is generally a low minority ware in most of the pits or features, only in a few features was it prediminant. To account for this we think the site was first occupied by a group using grit tempering, and they disposed of their broken pottery at random, some going into their refuse pits and the balance on the surface where it became scattered and broken into still smaller potsherds; they consumed a relatively small amount of shell fish since in excavations where grit tempered potsherds were predominant there were very few shells. Later they adopted shell tempering and made shell-fish a staple diet, and their refuse pits were largely filled with various shells. In making these shell pits—or refuse pits where shell was a major source of fill,—it was only natural that occasional grit tempered sherds from the surface would get mixed at random therein.

We think it was the same people, or tribe, that made both the grit tempered and the shell tempered pottery, because the predominant surface treatment technic of both the grit and shell tempered pottery is the characteristic fabric impression. The transition from grit tempered to shell tempering was probably quite rapid, for once they found that shell tempering was satisfactory and much easier to crush shell than stone, it would be natural to change over quickly. If the change over had been a slow one, there would have been a greater proportion of grit tempered sherds in some of the shell pits.

It can, of course, be postulated that a different people, tribe, or culture, using shell tempering in their pottery occupied this site after it had been abandoned by the people using grit tempering. We do not think this is the case here because there is such a great similarity between the surface treatment on both grit and shell tempered wares. Surface treatment Types Nos. - 2, 3, 8, 9, 10 & 14, are represented in both.

REVIEW

A few facts that may be diagnostic seem to be evident on this site, such as—(1) Shell pits are intrusive into Features, but Features are not intrusive into Shell Pits.

(1) Features generally contain very few shell (except in intrusive shell pits), and what shell is found in them is generally very much weathered.

(3) All Shell Pits in which pottery is found have a great preponderence of Shell tempered potsherds. The few grit tempered potsherds found therein are small and are not matching.

(4) In two features both grit and shell tempered potsherds were found in the upper levels, but only grit tempered sherds found in the lower levels; and in one feature (F-16) which had an intrusive shell-pit, there were no grit tempered sherds in the shell-pit, but outside the shell pit were both shell and grit tempered sherds.

(5) Two features had predominating grit tempered sherds, many of which were "matching".

(6) In two features there were a considerable number of rounded and un-chipped river pebbles, 1" to 3" in diam. and they were concentrated in a relatively small area and not scattered throughout the feature.

(7) Three dog burials. One of which may have been associated with a human burial; the other two were definitely not associated with human burial.

(8) Three human burials. No. 1 was partially disarticulated with some bones scattered, and in fairly good condition and was under a "shell pit". No. 2 was extended, most of the bones completely disintegrated, but the skull and a few leg bones were recoverable. This was under no shell or refuse pit, and had no shell or refuse in the fill over it. No. 3 is believed to be a bundle burial, the bones were almost completely disintegrated and only fragments of two skulls and teeth of an adult and a child were recoverable. It was under no shell or refuse pit, but there was a small 5" diam. grit tempered bowl associated therewith.

(9) Most features and shell-pits contained many fragments of deer bone, frequently pieces of antler, many fragments of unidentified animal bone many of which were split, much turtle shell, occasional bird, fish, small animal and rodent bones.

(10) The shell in the refuse pits was predominantly oyster (estimated 95%), with small amounts of conch, claim, mussel, and scallop in that order. Occasionally there was a concentration of one of the minority shell to the almost exclusion of the others. In general the minority type of shell was scattered throughout the pit or feature.

(11) The use of jasper (varieties of flint like stone generally red, brown and yellow in color) for projectile points, and the manufacture of triangular projectile points is predominant.

(12) Two of the many fireplaces had identifiable "barbeque stake" moulds around them.

(13) One feature showed a distinct line of sapling (or small posts) moulds, such as may have been the uprights of a small hut or wigwam.

(14) One feature showed three post moulds in line, rather widely spaced, that may have been the uprights of another hut or wigwam. (It should be born in mind that all these post moulds were discoverable only 8" to 12" below the original surface, and that intermediate posts, - if there were any, - may not have sunk that far into the ground).

(15) Pottery was manufactured on this site as is evident from the small "coil nubbins" found here. These "nubbins" are small pieces of the paste coils that were broken off and discarded and fell in or near a fire so the heat partially vitrified them. Similar coil "nubbins" were found on the Willin Site (18-Dor-1).

(16) Another ceramic artifact of unexplained use found here, is a sherd 30mm long x 18 to 20mm wide x 7mm thick, edges are rounded but ends broken. Very fine crushed stone temper. Two lightly incised lines running into the break at one end. It is flat with no curvature. It has been suggested that this is a piece of applique, but sherds with applique have not been found on this site, and such sherds are extremely rare on this peninsula.

(17) Two fragmentary clay pipes of Indian make were found in two shell-pits. No fragments of Indian pipes found in any feature. Fragments of the white clay "trade pipes" were fairly common on the surface and in the top soil and were not recorded. The one exception being trade pipe fragments in Feature 11 which has been shown not to have been of pre-historic origin.

CONCLUSIONS

We have already discussed under "Analysis of Pottery" a possible transition from grit tempered to shell tempered pottery, and we may add here, that the same situation probably occurred at many other sites here on the Peninsula. Surface finds on 30-40% of the sites reported in the 1956 "Site Survey of Sussex County" by the S.A.A. indicated similar conditions to this Mispillion Site so far as the mixture of grit and shell tempered pottery is concerned, as well as similarities of other artifact types.

Time and Span of Occupancy

We can only guess or estimate the length of time that the Mispillion site was occupied, but in making such a guess or estimate, we take the only gauge that seems to be available and that is the weathering of shell (oyster, clam, conch, etc.) in various pits and features. Nor do we have an accurate gauge of this weathering in time units, so in lieu thereof we make certain comparisons. Taking some broken oyster shell from the bottom of an old "shell road" which had been in use for more than 100 years, and comparing them with oyster shell in some of the intrusive shell pits, - we see very little, if any, more weathering on the intrusive shell pit shells than on the presumably 100 year old shell from the road. However, comparing the shell from these intrusive shell pits with shell from some of the features at Mispillion we think the weathering on the shell from

features was 10 to 100 times more than the shell from intrusive shell pits. On this basis alone we could estimate the time of deposit of the feature shells as 1000 or more years BP. Unfortunately other factors make this comparison unreliable. Scattered shell buried in soil mixed with organic matter (as in the features) would disintegrate much more rapidly than in a shell pit of concentrated shell with little soil and organic matter mixed therewith. Notwithstanding the uncertainties of our time gauge, we think it safe to estimate (or guess) an occupancy of between 500 and 1000 years, possibly a seasonal or spasmodic occupancy but relatively constant, and ending soon after the beginning of the historic period (c1650). We have not as yet, tied in this location with any Indian village mentioned historically.

Although the indicated occupancy area is about 14 acres, it is not probable this whole area was occupied at one time. We think the occupancy shifted, from time to time, back and forth over this whole area. Surface finds from outside the 1/3 acre explored by our work, compare with finds from the surface and top soil in this worked area indicating similar cultural occupation, but the intensity of sub-soil disturbances and artifacts in our worked area does not seem to be sufficient to represent a continued occupancy for anything like 500 years or more, hence our theory of the occupancy shifting back and forth over the site. Exhaustion of the soil for their crude agriculture could be one reason for this shifting back and forth.

We believe it probable that this site was occupied, more or less regularly, from the Middle Woodland times up to the historic period.

Mispillion Site Committee
Henry H. Hutchinson
Warren H. Callaway
David Marine

APPENDICES

APPENDIX I

SITE COMMITTEE HISTORY

In Dec. 1954, Mr. H. Geiger Omwake, well known throughout Delaware in archaeological and educational circles, verbally reported on some of his work near Milford, Del., on the site we now call the Mispillion Site, previously known as Phillip's, Benson, Robinson, etc., etc., and he suggested that the S.A.A. take over the site as an organized project or "dig", and that H. H. Hutchinson be chairman of a committee to have charge of the project. The S.A.A. accepted the suggestion and decided to approach the property owners for permission to excavate and work the site for a year or more, and this Site Committee was appointed consisting of H. G. Omwake, P. S. Flegel, and H. H. Hutchinson as Chairman.

Mr. Omwake had roughly staked out the area on the site which he thought would be most productive to work, and had marked a number of "shell-pits" which he had located by probing. Negotiations were started to rent or lease that portion of the site. In January 1955 Mr. Flegel reported agreement with the owners on leasing the area that was staked out.

The agreement with the owners was that the Sussex Archaeological Association would have exclusive rights to make archoeological research on the area, to have motor access by the farm lane to the area, would fill all excavations replacing top-soil on top, and the S.A.A. to pay the owners for the value of the crop lost to them by leaving our leased area out of cultivation. Subsequent negotiations established this figure at $60.00 for 1955 and $50.00 for 1956.

On Mar. 5, 1955, Omwake and Hutchinson made a preliminary survey of the site, and on Mar. 12, 1955 the leased area was staked out in 20 ft. squares by Omwake, O. H. Peets, Flegel, and Hutchinson.

On Sept. 15, 1955, Dr. Marine reported to the S.A.A. that the Delaware Archaeological Board had appropriated $190.00 to the S.A.A. for archaeological research in Sussex County, and Mr. Omwake suggested that said money be earmarked for the Mispillion site, especially for the expense of mechanical equipment for removing top-soil, and the S.A.A. agreed that the money would be reserved for expenses of the Mispillion site.

In Jan. 1956 Mr. Flegel resigned from this committee due to his being abroad for an extended period, and he was replaced by Warren H. Callaway. In Oct. 1956 the chairman of this committee recommended to the S.A.A. that the rent for 1956 be paid and the project be closed, since the leased area had been thoroughly covered, and on Dec. 12, 1956 the final back filling and grading was completed.

In November 1956 Mr. Omwake resigned from this committee and announced with his resignation, that he was withholding all his notes and findings from use by this committee; therefore none of his work is included herein except Burial #1 which is copied from "The Archeolog".

In April 1957, Dr. David Marine was appointed to replace Mr. Omwake on this committee.

APPENDIX II

RULES for Workers and Diggers on The MISPILLION RIVER or the PHILLIPS-ROBINSON-BRIDGTON-BENSON SITE

(1) No excavating, digging, or collecting shall be done on this site except by persons authorized by a member of the Site Committee of The Sussex Archaeological Association, to whom the site has been leased.

(2) Those applying for permits to operate on this site agree to abide by these RULES.

(3) Each worker upon obtaining permission to dig on this site will be assigned specific "pits" or "sections" for which he (or she) will be responsible. They will do no work in any other pit or section without the permission of the assignee of that pit or section, or of a member of the Site Committee.

(4) Each worker will keep accurate field notes of all facts and artifacts discovered, and will call the attention of one of the Site Committeemen to any unusual conditions found, and will follow the recommendations of the Site Committeeman on how to handle or treat that particular feature. These notes will include a record of the different levels in which all artifacts, features, burials, etc., were found.

(5) Each worker will make out a DAILY WORK REPORT for each day he works on the site. This report will show the pit or section worked on, what levels, and what artifacts, were found on each level, what special features were discovered, and summarizes all the day's work.

This Daily Work Report will be given or mailed to one of the Site Committeemen not later than the day following the actual work. It may be made out in pencil or otherwise, but must be legible so the committeeman can fully understand all that went on or was found.

The making out of this DAILY work Report immediately following the day's work is *very important,* as it has been found (even among the best trained archaeologists) that important details are forgotten or overlooked or confused with other events, if they are not reported BEFORE any other work or even discussion of other work takes place. Surface finds on or near the site should be reported on the Daily Work report telling what and where found.

(6) When assigned a section or pit, the worker will first remove and examine the top-soil, piling it all to one side of his assignment. Upon completion of his pit or section he will be responsible to see that his assignment is properly back-filled, with the top-soil on top.

(7) Each worker will be careful not to damage adjacent crops or croplands; will not obstruct roads or lanes; will only use authorized roads or lanes for access to the site; will not litter-up the site or adjacent areas with paper, trash, etc., and will keep the site as orderly as possible.

(8) Members of the Site Committee will be subject to these rules, and will also be responsible to see that their assignments of section workers fit in with the prearranged plan for developing the site, that all reports turned in to them are promptly delivered to the subcommittee whose responsibility it is to summarize and report on the project or site.

(9) Only bona-fide members of Archaeological societies, or recognized archaeologists, will be given permits to work on this site. However, holders of permits may have responsible persons help them on their sections if they assume all responsibility for the actions and work of those helpers.

(10) Holders of Permits, may have their permit revoked, if in the opinion of the Site Committee, they are not making an earnest effort to complete the excavation of the pit or section assigned to them, or if not following out the agreed upon rules. In case it becomes necessary to revoke a permit, the holder of said permit agrees to turn over to the Site Committee all the material he has removed from his section, together with all notes available, and to assist the committee's representative to properly identify all material.

(11) Applicants for permits to "dig" on this site who are not members of the S.A.A. will be required to pay a fee of $1.00 to help pay the expenses incurred.

(12) Each "digger" should provide himself with ample material for taking field notes, including cross-section paper (8 squares to the inch), 6 ft. rule or tape, a ball of chalk-line, trowels, brushes, ice-pick, shovels, etc., and plenty of stout paper bags. And carefully marking each bag to identify its contents by levels and sections.

(13) Photographs are *important*, especially if made of objects "in situ". An inexpensive camera or Kodak may be well suited to this purpose. If you do not have photographic equipment, request a member of the Site Committee to have pictures made before moving any interesting feature.

(14) All findings may be retained by the holder of the permit for the section in which found, but the holder agrees to permit the S.A.A. to exhibit same for any reasonable length of time, and to permit members of the S.A.A. and bona-fide archaeologists to examine, study, copy or photograph, any or all of the material from this site, within a reasonable time after application therefor. The holder of this material agrees not to sell or give away this material, but if he wishes to dispose thereof, he will give it to the S.A.A. or their successors. He also agrees to label or mark the material in such a way that it can be readily identified as to its source.

(15) It is recommended that each "digger" or worker obtain, study, and follow "A Manual of Archaeological Field Methods" edited by Robt. F. Hizer, and published by The National Press, Millbrae, Calif. (Price $2.00).

APPENDIX III

MECHANICAL REMOVAL OF TOP SOIL MISPILLION SITE

The land here has been cultivated for a long time and in recent years by heavy mechanical equipment, so the top-soil is from 8" to 14" deep. This of course has churned up, mixed, broken, and scattered, whatever artifacts were within those levels, and also obliterated many of the sub-surface markings that may have originally

been left by the structures and activities of the prehistoric inhabitants.

To remove all this top-soil by hand and examine it carefully would have taken all the man-hours available to us for several years, and would have told nothing except a list of artifacts, (which would be in all probability similar, though larger, than the list we subsequently obtained from the surface and top-soil.) We therefore decided to ignore the contents of this top-soil, - except such artifacts that we happened to notice, - and to scrape the top-soil down to the "plow line" with a Ford Tractor equipped with a six foot straight blade *behind* the tractor. We had found that equipment which pushed a scraper blade would have the smooth scraped surface broken up and churned by the wheels or treds of a *pushing* machine, and often obliterating the markings of sub-soil disturbances.

We found it advantageous to scrape six foot lanes leaving an 8" to 10" earth wall between lanes, until each lane had been explored and mapped, then to scrape down the little wall between lanes, and then to explore and map anything that may have been under it. Plate IV-e.

It was also expedient to limit the length of the lanes to 50' to 60' due to the excessive pile up at the end of the lane.

We uncovered four to six lanes at a time, explored and mapped that area then replaced top-soil with the tractor scraper, then uncovered the next four to six lanes. The number of lanes varied according to the conditions found and to the depth of top-soil. This method of uncovering only small portions at a time, was also thought advisable as it would not leave too many features exposed for an extended length of time before we had time to properly explore and excavate them. (Several times, unknown persons entered the site when no member of the association was present and dug promiscous holes, presumably looking for relics, etc.).

The tractor-scraper was furnished by one of our members at cost of oil, gas and transportation.

With this scraper in the sandy soil on this site, we could scrape 2" to 3" at a pass on the upper levels, but when we got down to near the sub-soil, we scraped only about ½" at a time, thus leaving a surface that required little or no troweling to expose the discolored areas of the features, intrusions, etc., in the sub-soil. With two observers and the tractor driver, we averaged about 1900 sq. ft. of sub-soil uncovered in five hours. Back filling took somewhat less time and without the observers. The "observers" are necessary because the top-soil varied in depth frequently, and the observers followed the scraper to spot any abnormality and to see that none of the sub-soil is scraped away but that a maximum of the top-soil is removed. They also collected any artifacts that happened to be exposed and put them with the top-soil collection.

MEMBERS OF THE S.A.A. WHO WORKED ON THE MISPILLION SITE

	W. H. Callaway	Wm. Galalee	D. Guillaume	P. S. Flegel	L. Gooden	S. W. Hammond	H. H. Hutchinson	D. Marine	H. G. Omwake	O. H. Peets
F-1	x						x	x		
F-2	x						x	x		
F-3	x						x	x		
F-4	x	x					x	x		
F-5							x	x		
F-6	x						x	x		
F-7	x						x	x		
F-8							x	x		
F-9							x	x		
F-10							x	x		
F-11	x						x	x		
F-12	x							x		
F-13							x	x		
F-14								x		
F-15							x	x		
F-16	x	x				x	x	x		
F-17			x				x	x		
F-18								x		
F-19								x		
P-1		x					x	x		
P-2							x	x		
P-3	x						x	x		
P-4						x	x	x		
P-5										
P-6									x	
P-7				x			x	x		x
P-8				x				x		x
P-9										
P-10									x	
P-11									x	
P-12									x	
P-13									x	
P-14									x	
P-15	x						x	x		
P-16							x	x		
P-17							x	x		
B-1									x	
B-2	x						x	x		
B-3	x	x					x	x		

GUEST WORKERS

Wm. Riley ..... Guest of Hutchinson

C. A. Weslager ..... Guest of Omwake

R. Rodignes ..... Guest of Marine

Before the Site Committee was formed, the S.A.A. had as their guests, the following who worked on Burial #1 and possibly other places:

Dr. T. Dale Stewart ..... National Museum

Dr. Waldo Wedel ..... National Museum

T. Latimer Ford ..... Maryland Arch. Soc.

Robert Hale ..... Maryland Arch. Soc.

Henry Sturdy ..... Maryland Arch. Soc.

J. R. Stackhouse ..... Maryland Arch. Soc.

Charles Schaffer ..... Maryland Arch. Soc.

Henry Mayr ..... Maryland Arch. Soc.

Mr. & Mrs. Michael Lederer .. Maryland Arch. Soc.

APPENDIX V

DEFINITION OF STONE ARTIFACT TERMS

Point or Projectile Point: - A stone that has been worked until it has acquired definite shape of an arrowhead, or spear, or blade. Though it may be broken, it looks like it had once been usable.

Reject: - A partially formed point, that apparently was thrown away before being completed, probably due to unsatisfactory chipping or flaking.

Sample: - A stone or pebble that had one or more flakes knocked off of it, and then thrown away, due to unsatisfactory cleavage, or other reason.

Core: - A stone that has had several flakes satisfactorily knocked off of it, - flakes of a size that a point or blade could be made therefrom.

Blade or Knife: - A worked stone with one or more worked edges, generally with secondary chipping, apparently used for cutting rather than penetrating.

Scraper: - A stone with one or more edges sharpened by chipping or secondary flaking, suitable for scraping hides, pottery, etc.

Drill: - A stone point worked to make a long narrow point with almost parallel sides. Base may be enlarged, hafted, or notched, etc.

Gorget: - A flat stone generally an elongated oval in shape, with one or more holes drilled through it, so it may be used as a pendant, or on a necklace, or wrist band.

Blank: - A stone that has been roughly flaked by percussion to form a large leaf shaped object, presumably in preparation for further final chipping into a more finished point or blade.

Chips and Flakes: - These two terms are used more or less synonymously, meaning those small pieces of stone broken off a core or artifact by percussion or pressure in the process of manufacturing and finishing artifacts.

Hammer Stone: - A rounded river stone or large pebble, of a size suitable to be held in one hand, which shows peck marks on one or more sides or ends, indicating it has been used repeatdly for hammering or chipping other stone. It may have one or more depressions on the sides sometimes called "finger marks" which are somewhat polished by being held with the fingers.

Grinding Stone: - (1) Mortar, - a flat stone with a ground and/or polished depression in one or both flat sides. (2) Pestle: - an elongated stone, generally loaf shaped, with polished side or sides, and sometimes polished end.

Anvil Stone: - A fairly large stone of any shape on which are many peck marks indicating repeated blows from another stone. Presumably used as an anvil in percussion chipping of other artifacts. May also have been used in breaking open shell fish, and breaking bone to get at marrow.

TABLE I
SUMMARY OF POTTERY SHERDS

	Type	By Count #	By Count %	By Weight oz.	By Weight %
GRIT TEMPERED					
(G-1)	Net Impressed	1	.1	1.5	.37
(G-2)	Fabric Impressed	102	7.9	44.37	10.1
(G-3)	Fabric Impressed scraped inside	6	.5	5.2	1.25
(G-7)	Fabric Impressed "corn cob"	1	.1	1.	.25
(G-8)	Fabric Impressed, inside & out	1	.1	1.	.25
(G-9)	Fab. Imp. cord impressed circumferential	28	2.4	48.	10.17
(G-10)	Cord Marked	55	4.75	24.3	6.
(G-12)	Cord wrapped Stick Impressed	2	.2	3.5	1.25
	ditto notched rim	1	.1	.5	.12
(G-13)	Paddled outside scraped inside	7	.6	3.	.75
(G-14)	Smooth	23	2.0	6.	1.5
	Sub-total Grit Temp.	(227)	(19.4)	(138.37)	(34.2)
SHELL TEMPERED					
(S-2)	Fabric Impressed	283.	24.5	126.9	31.
(S-3)	Fabric Impressed scraped inside	6.	.5	1.57	.38
(S-4)	Fabric Impressed smoothed over	251.	21.9	78.23	19.2
(S-5)	Fabric Impressed "criss-cross"	13.	1.1	6.4	1.6
(S-6)	Fabric Impressed Incised straight line	80	6.9	16.6	4.1
(S-8)	Fabric Impressed inside and out	8	.7	3.2	.85
(S-9)	Fab. Imp. Cord Impress circumferential	5	.5	.5	.12
(S-10)	Cord Marked	7	.6	2.7	.6
(S-11)	Cord Marked, inside and out	1	.1	.25	.06
(S-14)	Smooth	126	10.9	21.5	5.3
(S-15)	Smooth with Incised straight lines	2	.2	.45	.1
	Too small to classify	122	10.6	5.5	1.3
	Sub-total Shell Temper	(904)	(78.6)	(263.8)	(64.4)
OTHER TEMPERED					
(O-14)	Very Fine or No Temp. Smooth	17	1.5	2.8	.68
(O-16)	ditto scraped inside	1	.1	.5	.12
(M-2)	Mica Temp. Fab. Impressed	3	.3	1.3	.3
(P-10)	Potsherd Temp. Cord Marked	1	.1	.15	.03
(P-17)	ditto Scraped inside and out	1	.1	.1	.02
	Sub-total Other Tempers	(23)	(2.)	(4.82)	(0.21)
	TOTAL	1154		407.02	

TOTALS OF STONE REFUSE	
Jasper Chips	1504
Jasper Rejects	23
Jasper Samples	58
Quartz Chips	106
Quartz Rejects	1
Quartz Samples	10
Other Stone Chips	63

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