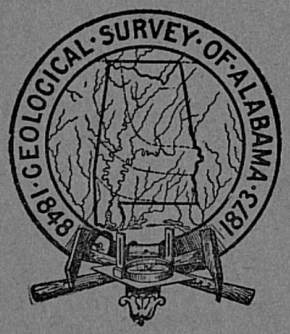
GEOLOGICAL SURVEY OF ALABAMA
WALTER B. JONES, STATE GEOLOGIST

MUSEUM PAPER 26
ALABAMA MUSEUM OF NATURAL HISTORY

LITTLE BEAR CREEK SITE CT°8

COLBERT COUNTY, ALABAMA

By
Wm. S. WEBB
and
DAVID L. DeJARNETTE



Prepared with the assistance of the Work Projects Administration
and the cooperation of the Tennessee Valley Authority.

UNIVERSITY, ALABAMA
1948

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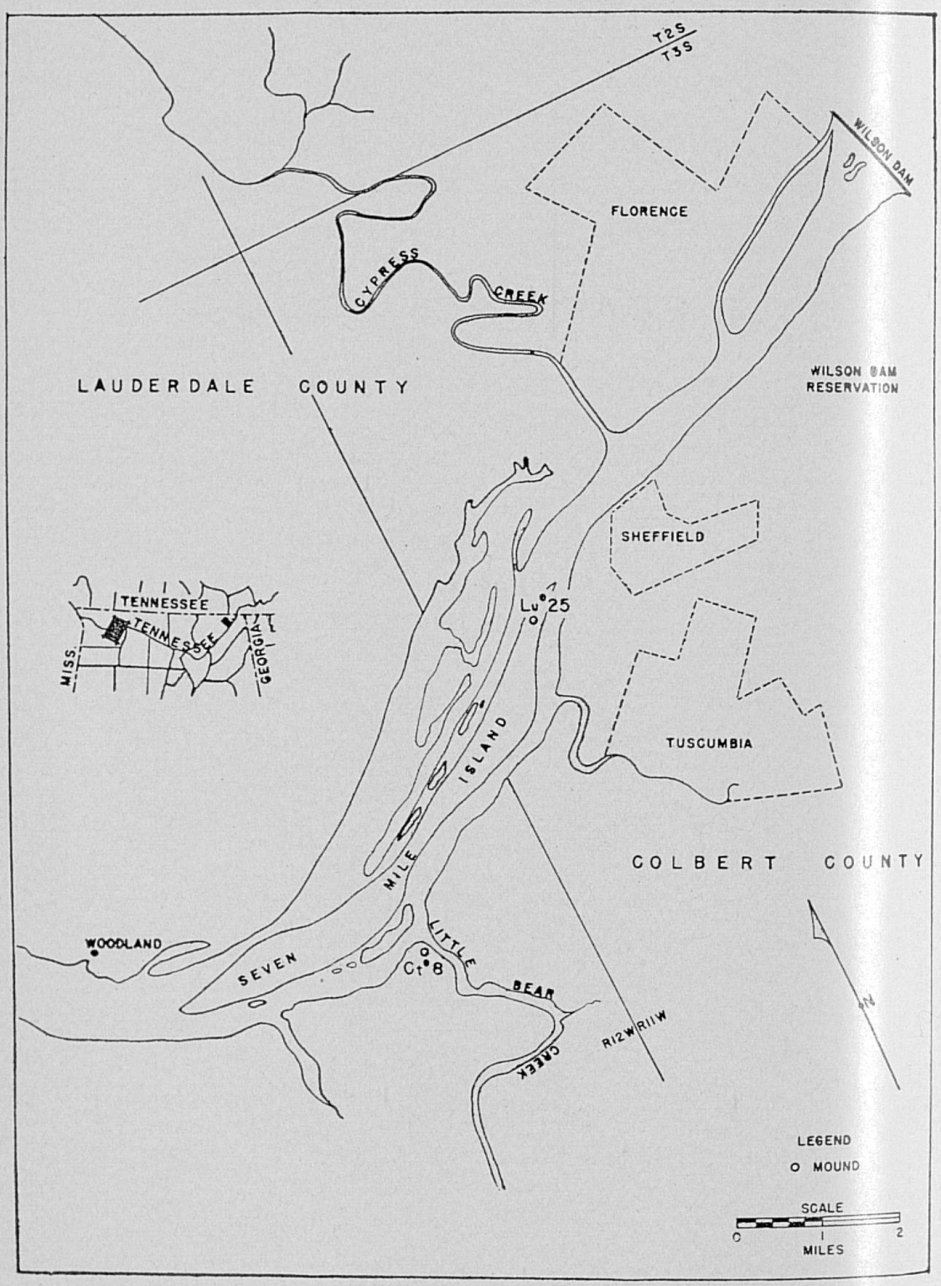

Frontispiece: Map showing location of Little Bear Creek and Seven Mile Island on Tennessee River.

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LETTER OF TRANSMITTAL

University, Alabama
May 24, 1948

Honorable James E. Folsom
Governor of Alabama
Montgomery, Alabama

Sir:

I have the honor to transmit herewith the manuscript of a report on "Little Bear Creek, Site Ct°8, Colbert County, Alabama", by Wm. S. Webb and David L. DeJarnette. It is requested that this be printed as Museum Paper 26 of the Alabama Museum of Natural History.

Respectfully,

WALTER B. JONES,
State Geologist

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INTRODUCTION

At the time of the Archaeological Survey of Pickwick Basin, this site Ct°8 at the mouth of Little Bear Creek on the Tennessee River in Colbert County, Alabama, was not investigated because in the haste of the survey, time did not permit. Also, during that period there was no labor available at that point. Further, this site was marginal to the lake to be formed in Pickwick Basin, and it was considered the part of wisdom to give attention to only those sites which would be completely inundated by the impounded water.

The gates of the newly finished Pickwick Landing Dam were closed February 8, 1938, and Pickwick Lake began to form. In a few months the waters had risen to the base of Ct°8. While most of the midden yet remained barely above water, high wind on the lake caused erosion of the water front profiles by heavy wave action. Further, the water table had been so elevated that now the whole base of the midden was subject to seepage, a condition which makes for early disintegration and decay of skeletal material. Because it was apparent that this site was being seriously damaged, although not submerged, it was decided late in 1938 that it should be investigated.

Excavation was begun in December, 1938, under the direction of Mr. Harold V. Andersen, and was continued with various interruptions until the latter part of June, 1939, at which time it was abandoned since a sufficient sample of its contents had been obtained to permit a study to be made.

ACKNOWLEDGMENTS

Much credit is due Mr. Andersen for the success of these excavations, conducted largely during the winter and spring when the Tennessee River was often at flood stage. His excellent field work and complete records have made possible this report.

This investigation was a cooperative study undertaken by the Alabama Museum of Natural History with the aid of W. P. A. labor and in cooperation with the Tennessee Valley Authority.

These authors desire to express their thanks to Dr. Walter B. Jones, Director of the Alabama Museum of Natural History and to Dr. Lawrence L. Durisch, Chief, Social and Economic Research Division, Tennessee Valley Authority, for many courtesies shown them, and their deep appreciation of the aid and cooperation extended by the agencies represented by these gentlemen.

The material from this site was all processed and prepared for study at the Central Archaeological Laboratories at Birmingham, Alabama. To Mr. Harold V. Dahms, Miss Marion Dunlevy, and Mr. James R. Foster, all of the Central Laboratories, the authors wish to express their appreciation of aid in the preparation of this material and generous assistance in the studies made of the artifacts and the compilation of the statistical records.

LITTLE BEAR CREEK

Site Ct°8

Location

This site is a shell mound situated on the old flood plain of the Tennessee River on the south bank of Pickwick Lake. It is located in the Alabama Survey as in the NE ¼ of Section 11, T. 4S., R. 12W., in Colbert County, Alabama. The mound was built on the immediate west bank of Little Bear Creek at its mouth on the Tennessee River, as shown in figures 2 and 3. Prior to the closing of Pickwick Landing Dam, the site was well above high water, and as a habitat for prehistoric peoples was probably safe from danger of floods. After inundation of the Basin, the site was marginal to the lake and under normal conditions in Pickwick Lake the base of the mound is barely above water level. A very slight elevation of the lake results in inaccessibility of the lower portion of the mound for excavation and causes erosion on the side exposed to wave action of the waters of Pickwick Lake, as shown in figure 2-c. For larger rises in Pickwick Lake level, the site may be cut off from the mainland, as shown in figure 3a, but remains an island except at times of very great floods, when it may be completely inundated, as shown in figure 3c. This photograph was taken from the east bank of Little Bear Creek. The line of trees marks the west bank of the creek, with the site just beyond covered by about 2 feet of water. The trees in the right distance are on Seven Mile Island, with the main body of the Tennessee River beyond the north side of the island some two miles distant.

Excavation

Excavation at this site, begun in December, 1938, was interrupted several times by unavoidable circumstances before the site was abandoned.

The mound was cleared of timber and the grass and rubbish burned, and the mound staked on December 27, 1938, as shown

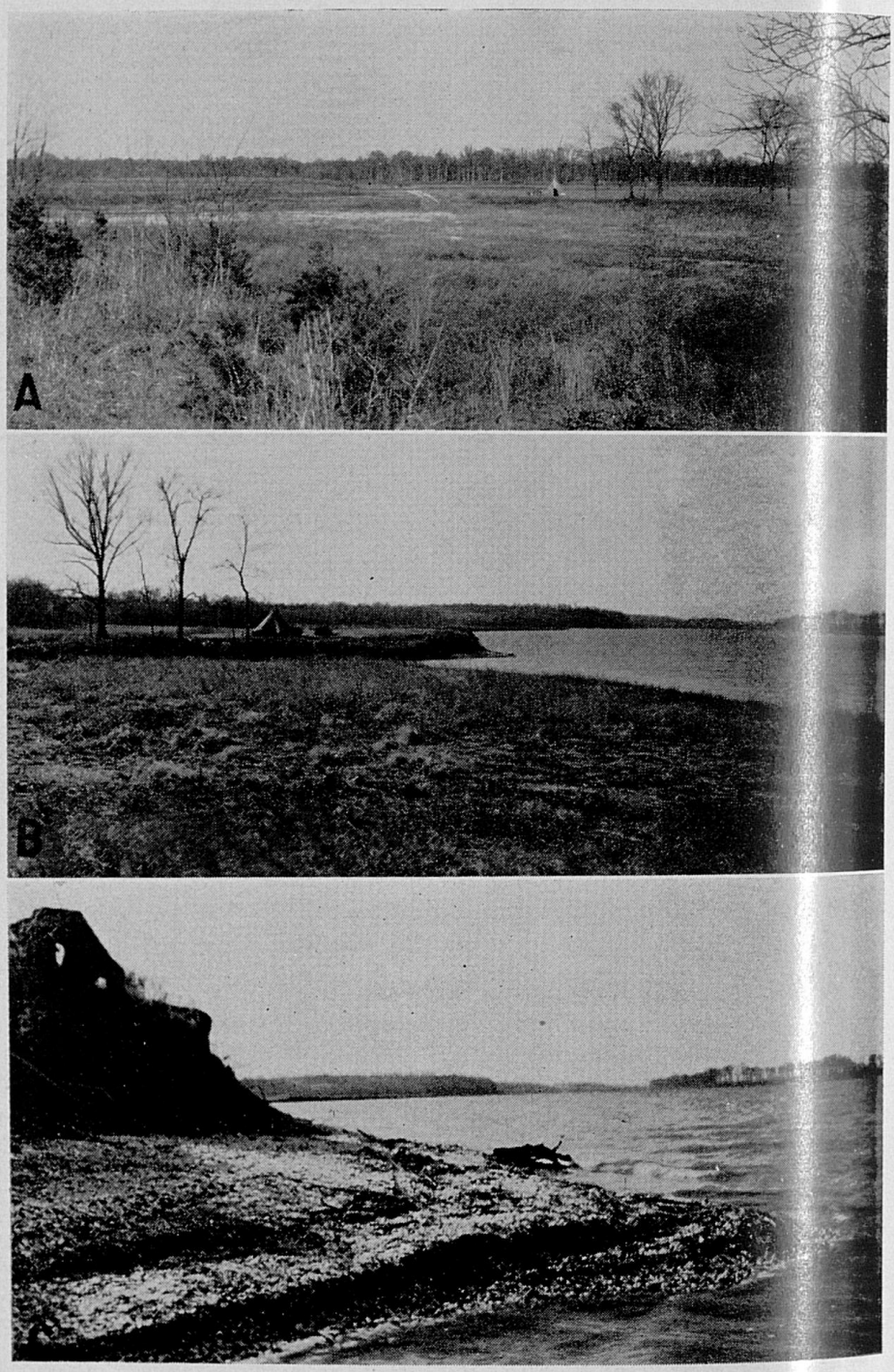

Figure 2. a. Site Ct°8 looking toward the river.
b. Site in left foreground beyond the mouth of Little Bear Creek.
c. Showing erosion of the shell midden by wave action at the lake front.

in figure 4-a. The site was found to be about 210 feet east-west by 170 feet north-south.

A 5-foot test trench was run north to south for 150 feet across the center of the mound at its highest point and Block I was staked off, as shown in figure 4-a. Block I was isolated as shown in figure 4-b. Due to a sudden rise in the river on February 6, 1939, work was interrupted by the flood which covered the site and excavation could not be resumed until March 15, 1939. At that time, the zero trench was cleared of debris and widened to 10 feet, and Block II was isolated, as shown in figure 2-b. After again clearing the site and reestablishing the profiles by removal of debris, work was resumed on Blocks I and II, as shown in figure 4-c.

The work at this site was several times interrupted by inability to obtain transportation of labor crews before the site was finally adandoned on June 27, 1939. During this period, Blocks I and II were completely excavated and Block III was excavated to the level of the 417-foot contour. These various interruptions, delays, and floods, caused the destruction of some profiles and produced an excessive amount of debris, with the consequent loss of records of location and association of the material included in the debris. Seepage water not only prevented excavation at lower levels, but promoted caving of banks and rendered unsafe deep profiles. All of these difficulties had their influence on the techniques used in excavation. In general, in all isolating trenches, the excavation was by horizontal removal of 1-foot levels in 5-foot squares independently of any natural zones. Blocks I and II were excavated by 6-inch levels horizontally, and Block III was excavated by natural zones in 1-foot levels. The tops of Zones D and B are shown in figures 5-a, b.

Natural Zones: In this site it was possible to note four natural zones which may be described as follows:

Zone A. Shell (gastropods equally as abundant as pelecypods) midden material (especially broken sandstone rocks) in a matrix of silty soil—unconsolidated. Average thickness 2.75 feet.

Zone B. Silt-like soil and ash mixture with very little shell except that appearing in lenses—very little midden material. Average thickness 1.25 feet.

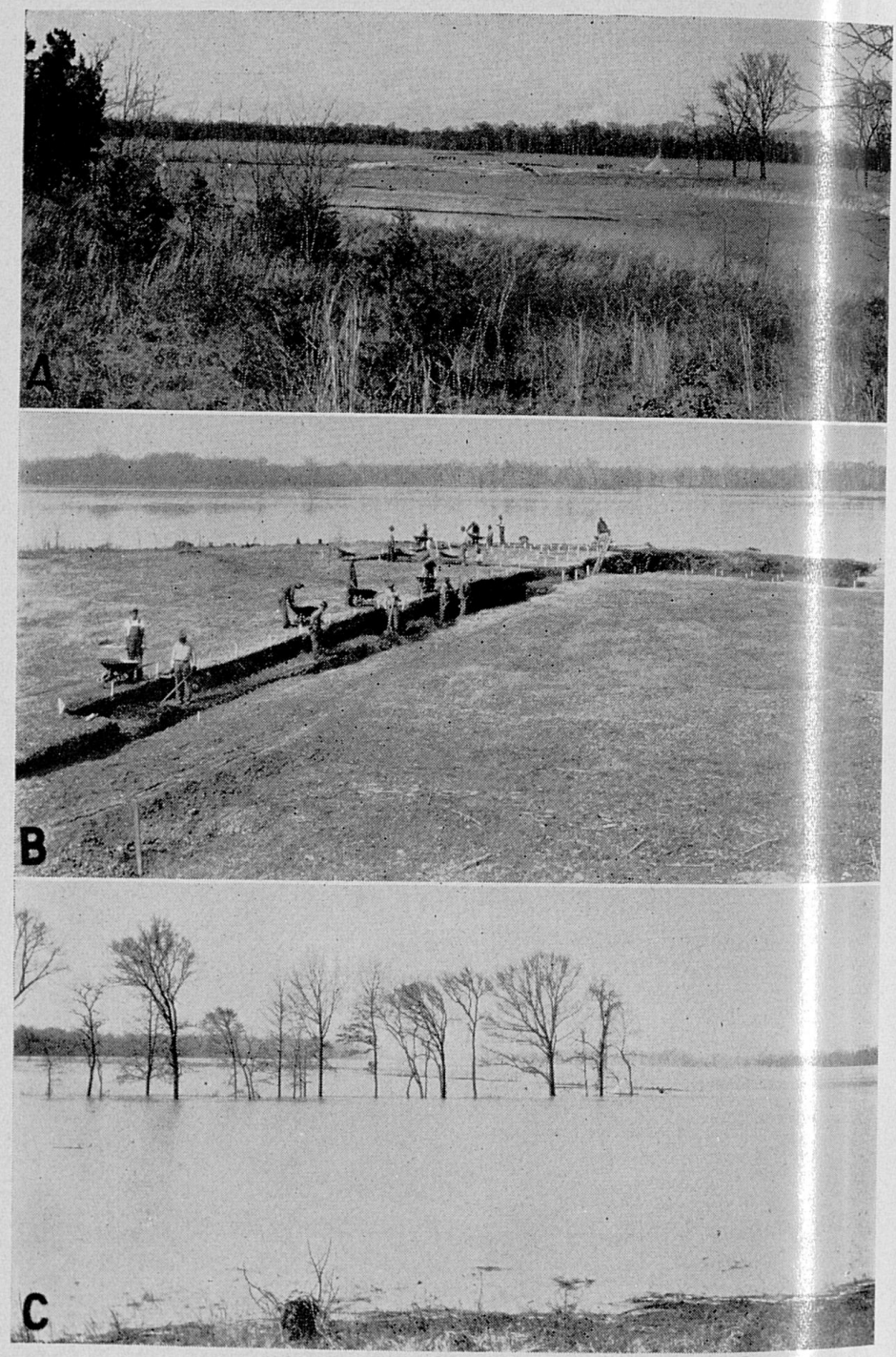

Figure 3. a. Site cut off from mainland by flood.
b. Clearing zero trench and restaking after flood.
c. Site covered by flood, line of trees marks bank of Little Bear Creek, tent shows above water.

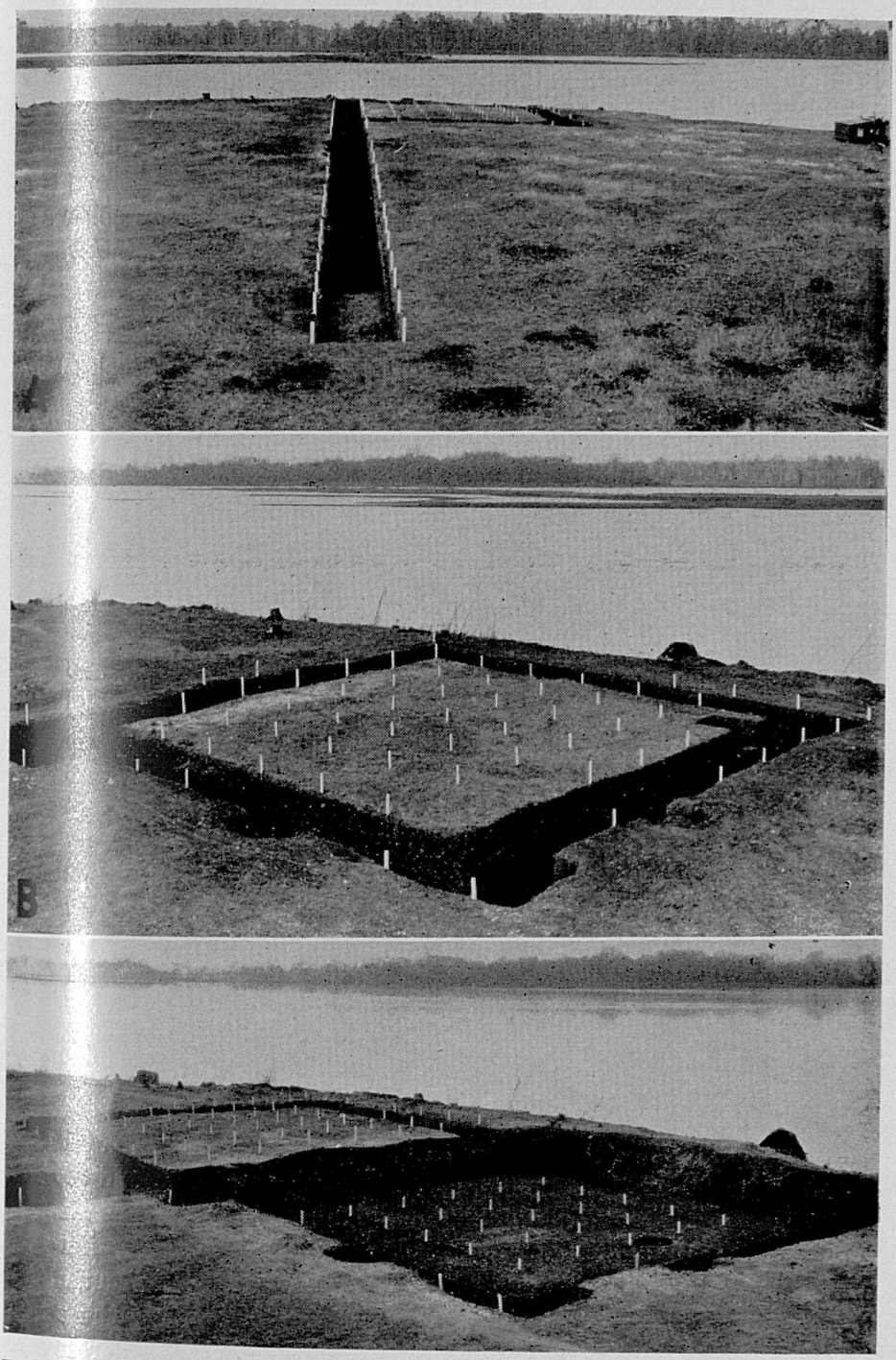

Figure 4. a. The zero trench looking toward the lake.
b. Block 1 isolated.
c. Block 1 partially excavated.
Block 2 isolated.

Zone C. Humus zone, dark brown when freshly exposed; weathers buff color; carries considerable shell—slightly consolidated. Average thickness 1.75 feet.

Zone D. Argillaceous silt and shell, light brown color—consolidated zone. Lower portion of this zone differs from above in only one respect, the deeper brown color suggests greater percentage of humus material. Average thickness 2.25 feet.

These zones are shown in profiles surrounding Blocks I and II in figure 5.

Features

Fifty-four features were listed in this excavation as follows:

Fire pits in midden	6
Fired clay hearths, burned areas on occupational level	15
Fire basins lined with or containing rocks	5
Midden pits containing concentrations of animal bones	6
Pits of sandstone boulders	4
Anvil stone, lapstones	7
Flint workshop areas	2
Clam bakes	7
Cache of limestone celts	1
Clay-lines circular fire basin	1

Several of these features may merit special description.

Feature No. 4, shown in figure 6-a and Feature No. 31 were areas covered with flint spalls at depths of 5.5 feet and 3.5 feet respectively. They were evidently flint workshop sites. Feature No. 4 was an area about 14 feet in diameter upon which flint spalls made by percussion from flint nodules had accumulated to a depth varying from 3 inches to 12 inches. Near the center of this area a large "anvil stone", a waterworn boulder lay, as shown in figure 6-a. This stone had in the top surface a cup-shaped depression evidently worn by percussion. It was un-

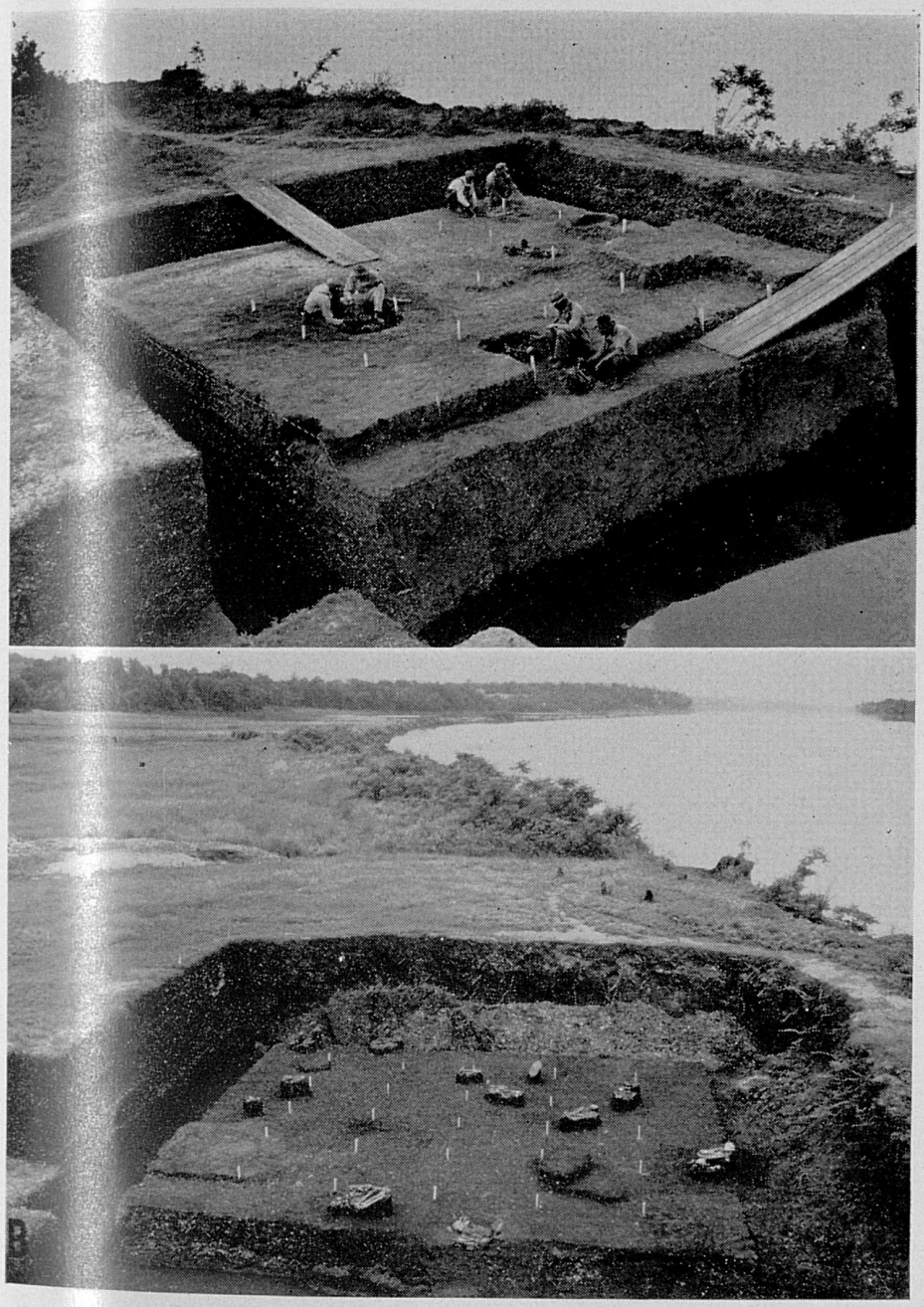

Figure 5. a. Top of Zone B, Block 2.

b. Top of Zone D, Block 2, showing associated features 416.25 above mean sea level.

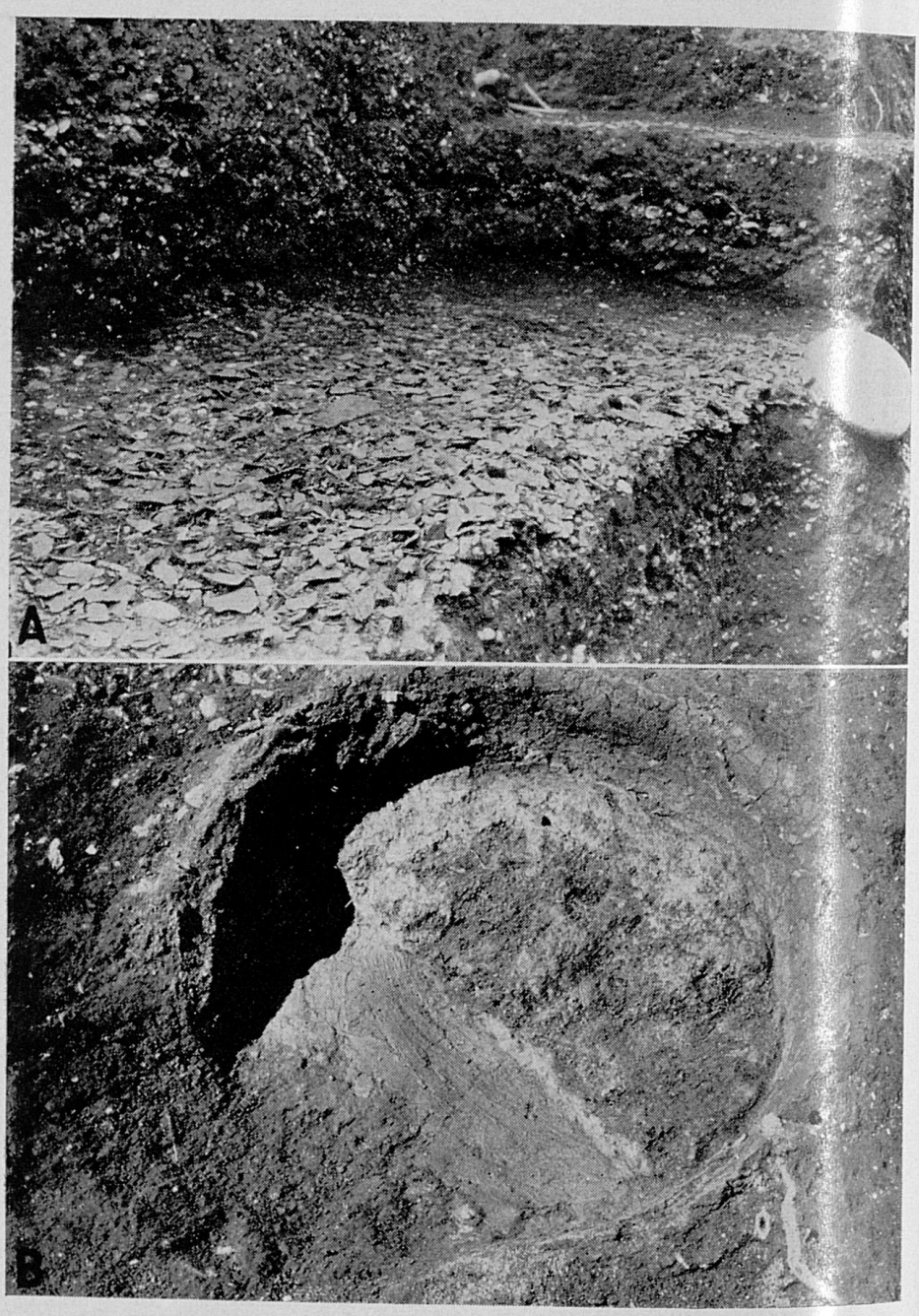

Figure 6. a. Feature No. 4, flint workshop at 5.5 foot level. Note anvil stone at right.

b. Feature No. 44, clay lined fire basin partly excavated.

doubtedly the anvil for this shop. This shop site lies on top of Zone D and marks an important occupational level, the content of this zone being much more consolidated than those above it. Also it is to be noted that there appears to be a concentration of other features at this level. Several clay fire hearths appear on the top of this zone at the 416.25-foot level, as shown in figure 5-b. It should be noted that at this shop site flint fracture was by percussion **entirely.** There were no spalls indicating secondary chipping by pressure fracture.

Feature No. 44 is illustrated in figure 6-b. This is a clay-lined fire basin. As shown, it is only partly excavated. The clay was placed in position while plastic, worked to form and when fired produced a hard basin with rigid walls nearly 1 inch thick. This is an unusual type of basin to be found in a shell mound. In this case, it is believed to have been made by the later occupants of this site who are responsible for the extended burials associated with shell-tempered pottery which was intruded into this midden. This basin was 2 feet in diameter, .7 foot in interior depth, but was only 1.3 feet below the surface of the midden as would be expected if it is to be associated with this last occupancy. Feature No. 23 was a cache of large limestone celts or hoes. They are shown in figure 7-c. They were made by percussion and by some polishing due to use. They seem to have been digging tools, and since they were only .9 foot below the surface, and are not generally found in shell middens, they are deemed to have belonged to the later occupants of this site who dug extended graves intruded into this site from the surface. Feature No. 49 illustrated in figure 7-d was one of four simple fire basins filled with or lined with rock. These showed fire action and were covered with and surrounded by ashes and charcoal in the pit. These pits or basins occur at all depths from 2.5 feet to 8 feet, and seem to be definitely a part of the culture complex of the shell mound people. They probably represent the remains of basins used to heat rocks used in "hot rock cooking". It appears that the river boulders heated very hot in the fire were dropped into a container filled with water thus heating the water to the boiling point by continued application. The rock thus suddenly cooled, after repeated use would fracture and the residue would be thrown out on the midden. Shell mounds abound in fire-cracked pebbles. Such basins as Feature No. 49 seem to represent the remains of such "furnaces" for heating river pebbles.

Figure 7. a. Feature No. 35, clambake pit partially excavated.
b. Feature No. 25, clambake shown in profile, trench L-110.
c. Feature No. 23, cache of limestone celts.
d. Feature No. 49, rock-covered fire hearth.

Another type of cooking may be called "clam bakes." They are illustrated in figures 7-a and b. It appears that pits were dug in the midden—sometimes lined with stones, and a fire built in the pit. On a bed of live coals and hot rocks a quantity of mussels were poured and hastily covered by a skin, textile, or mat. The mussels near the fire released their juices which falling on the fire coals and hot rocks produced steam which by being captured in the pit by the cover, served to partially cook the mussels. Such features in the midden today appear as pits when completely excavated, as in figure 8-d, or as concentrations of nearly pure shell, as in figure 7-a, which may represent a "clam bake" only partly consumed, since some of the pelecypods remained paired as if unused. In a profile a "clam bake" may appear, as in figure 7-b, as a distinct concentration of shell which has settled into the old pit. These seven clam bakes had an average depth of 4.2 feet below the surface. Their distribution in depth is such as to indicate that this practice of cooking was used early in the shell mound occupation and continued throughout its accumulation.

Of the six pits containing concentrations of animal bones one, Feature No. 29, is illustrated in figure 11-a.

Dog Burials

Beside these features, the burial of dogs in the midden was quite common. Figures 8-a and b show how the dog was buried. Seemingly as much care was given to placing the dog in position as was ordinarily given to a human burial. No case in this excavation was found where the dog was placed in the same grave with the human body, but they were of necessity close by in many cases, but not in proven association, as at other shell mound sites where they have been found in the same grave.

Burials

In a former study of shell mounds in Pickwick Basin it was demonstrated that most shell mounds were built almost in their entirety by a relatively continuous occupancy of a single people. These first people developed from a pre-pottery cultural level in the later stages of which they used sandstone and steatite vessels, probably to become the manufacturers of limestone-tempered pottery. Much of the actual midden is to be ascribed to this long occupancy commonly denominated the shell mound

Figure 8. a. Dog burial, 6.8 feet deep in square 13R4.
b. Dog burial, 6 feet deep in square 135L7.
c. Burial No. 7, fully flexed in rock-lined basin.
d. Feature No. 12, clambake pit, interior depth 2 feet.

complex. It has also been demonstrated that on some shell mound sites there was a later occupancy of these sites by a second people which added relatively very little midden to the actual accumulation. This later occupancy is manifested by extended burials intruded from the surface. Shell-tempered pottery is a common inclusion in such graves. This later occupancy, because it was found in quantity, well developed, on Koger's Island in Pickwick Basin, has been called the Koger's Island Complex. This later complex is obviously superficial in placement and in most cases easily distinguishable from the original builders of the shell mounds.

The separation of burials into these two groups may be made on a basis of archaeological data, including form of burial, associated artifacts, depth, etc. It may be made on a basis of observations of the physical anthropology of the individual skeletons, where they can be found sufficiently well-preserved.

In reporting this site it has been interesting to type each burial from archaeological data, and independently assign its type from skeletal measurements and observations. In the tables which follow it will be observed that in most cases, the two methods of classification have lead to the same placement. In the tables which follow "KI" or "SM" indicate Koger's Island or Shell Mound type. When the assignment is in doubt a "?" is used. In the case of burial in pits an "X" indicates the presence of a pit; a dash "—" indicates that no pit existed; and a "?" that the existence of a pit was uncertain.*

This separation of burials as indicated gives a total of 163 burials; 136 are of the shell mound complex and 27 are of the Koger's Island complex. Of the 136 shell mound burials 14 were cremations and have been listed separately.

Koger's Island Complex

Partially flexed burials	22
Extended burials	2
Fully flexed burials	2
Disturbed (aboriginal)	1
TOTAL	27

Figure 9 shows typical Koger's Island burials.

*Other abbreviations used are:
Int.—Intrusive
Inc.—Inclusive
P.F.—Partly Flexed
F.F.—Fully Flexed
Ext.—Extended
Sit.—Sitting
Re.—Reburial

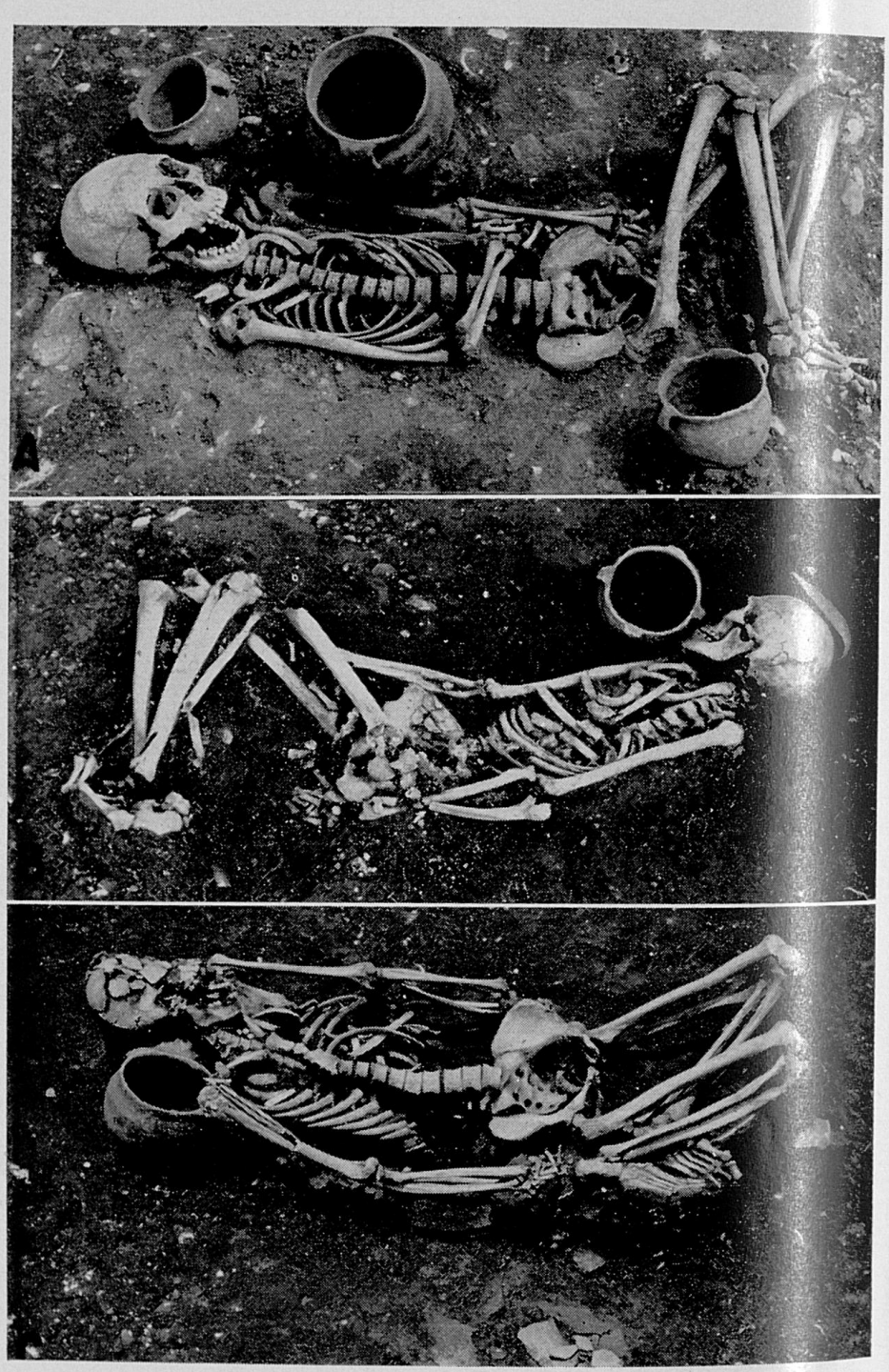

Figure 9. Extended burials, knees flexed, Koger's Island type.
a. Burial No. 90 with artifacts.
b. Burial No. 12.
c. Burial No. 135.

BURIAL DATA AND ASSOCIATIONS—KOGER'S ISLAND COMPLEX

Burial No.	Field Assignment	Position	Below Surface	Pit	Associations and Remarks	Archaeological Assignment	Physical Type	Illustration Figure
11	Int.	P.F.	1.0	X	Infant disturbed	KI	?	
12	Int.	P.F.	1.0	X	Ladle and shell-tempered pot with two strap handles and two lugs.	KI	KI	9-a
13	Int.	Ext.	1.0	X	Small pot, shell-tempered with two loop handles.	KI	?	
14	Int.	P.F.	1.5	X	Pot, shell-tempered, horizontal lugs	KI	KI	
15	Inc.	P.F.	2.0	—	Flintpoint, bone spatula	KI	KI	14-d-2
16	Int.	P.F.	1.5	X	Jar shell-tempered, Disturbed	KI	?	
17	Int.	P.F.	.8	X	Sherds—shell temper	KI	?	
18	Int.	P.F.	2.0	—	Two shell-tempered pottery vessels, red bowl shell-tempered and with two loop handles, shell gorget with excised cross.	KI	?	14-d-3
19	Int.	?	2.0	X	Infant	KI	?	
20	Int.	P.F.	2.0	X	Shell gorget, excised cross	KI	SM?	14-d-4
33	Int.	Ext.	2.0	X	Jar, shell temper. Infant	KI	KI	
34	Int.	P.F.	2.0	X	Sherds shell temper. Asso. Burial No. 35	KI	KI	
35	Int.	P.F.	2.0	X	Sherds shell temper. Asso. Burial No. 34	KI	KI	
36	Int.	P.F.	2.0	X	Jar, shell temper.	KI	?	
37	Inc.	P.F.	2.0	?	Infant	?	KI	
38	Inc.	P.F.	2.0	?	Infant	?	?	
39	Int.	P.F.	2.0	X	Shell-tempered pot with two loop handles and string of slug pearl beads.	KI	?	14-d-11

BURIAL DATA AND ASSOCIATIONS—KOGER'S ISLAND COMPLEX
(Continued)

Burial No.	Field Assignment	Position	Below Surface	Pit	Associations and Remarks	Archaeological Assignment	Physical Type	Illustration Figure
90	Int.	P.F.	1.9	X	Two shell-tempered pots with two strap handles each, one crushed vessel with two loop handles, antler drift, flint projectile point, two flint blades, bird bone gouge, and bone rejected in manufacture of fish hook.	KI	?	9-a
92	Int.	F.F.	.8	—	Infant	KI	?	
93	Int.	P.F.	2.2	X	Two shell-tempered jars.	KI	KI	
97	Int.	P.F.	2.8	X	Duck bowl, two water bottles-shell tempered. Shell spoon, 2 cylindrical awls, antler point, discoidal sandstone, two greenstone celts	KI	?	
134	Int.	P.F.	1.7	X	One pot with 16 loop handles, one crushed pot, shell tempered with two strap handles.	KI	KI	
135	Int.	P.F.	1.4	X	Bone implement, bone awl, bone needle, shell disc beads, small pot.	KI	KI	9-c
136	Int.	P.F.	1.4	X	19 shell-tempered sherds, one shell-tempered jar, pendant and 4 bone spatula implements. Assoc. Burial No. 135.	KI	KI	
137	Int.	P.F.	1.7	X	Two shell-tempered jars.	KI	?	
138	Int.	F.F.	1.4	?	Infant	?	?	
143	Int.	P.F.	1.7	X	Shell-tempered sherds, flint point	KI	KI	

Data from the foregoing tabulations may be summarized as follows:

Infants without artifacts	6
Infants with artifacts	1
Adults with pottery	17
Adults with other artifacts	3
TOTAL	27

The fact that all of the adults have either pottery or other artifacts in association is in striking contrast to the usual lack of artifacts in burials throughout the midden of the shell mound complex.

The Shell Mound Complex

Of the 163 burials excavated in this site 136 are deemed to have belonged to the shell mound complex. These may be classified as follows:

Fully flexed burials	69
Partially flexed burials	22
Sitting posture burials	12
Cremations	14
Disturbed burials (aboriginal)	7
Infants and children	6
Reburial of bones	4
Extended burials	2
TOTAL	136

Of these burials only 30 had artifacts in association. Of these 30, 15 had shell beads, pendants, or gorgets. If one observes the table of burial associations which follows, it will be noted that most associations fall into two classes. One of these consists of shell beads, bone pins, gorgets, etc.,—all articles of dress and adornment which were attached to the clothing or the person and probably were included in the grave as a matter of course, being the property of the deceased and worn by him in life. The other class of association consists of single flint projectile points, often broken chunks of hematite or terrapin shells —objects which are quite common throughout the midden, and which may be actually only chance associations or accidental inclusions in the graves, since many objects are found in the shell

Figure 10 a. Burial No. 157, depth 3 feet.
b. Burial No. 23, depth 5 feet.
c. Burial No. 159, depth 4 feet.
d. Burial No. 152, depth 3 feet.

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Burial No.																									
	1	2	3	4	5	6		7							10	21	22	23	24	25	26				

midden outside of the graves. If we may exclude articles of dress (15 burials) and chance inclusions (7 burials), only 8 burials seem to show definite intentional placement of artifacts with the dead. In listing burial associations of the shell mound complex, it has been convenient to consider the cremations separately.

TABULATION OF BURIAL DATA AND ASSOCIATIONS—SHELL MOUND COMPLEX

Burial No.	Field Assignment	Position	Below Surface	Pit	Associations and Remarks	Archaeological Assignment	Physical Type	Illustration Figure
1	Inc.	F.F.	1.8	—		SM	SM	
2	Inc.	F.F.	2.0	—	Disturbed	SM	?	
3	Inc.	F.F.	2.5	—		SM	?	
4	Inc.	Sit.	3.2	X	Flint point, dentalium beads.	SM	SM	14-d-1
5	Inc.	?	5.8		Infant	SM	?	
6	Inc.	F.F.	3.0	X	5 antler drifts, 3 antler flakers, 8 cylindrical bone awls, 2 tibiotarsal awls, 12 bone pin fragments, 4 conch columella, flint point, 2 deer ulna awls, 10 crinoid stems drilled, large fragment of slate, 2 feline claws, 1 large rodent incisor.	SM	SM	14-a
7	Inc.	F.F.	6.9	X	Pit lined with limestone slabs.	SM	?	8-c
10	Inc.	P.F.	8.0	X	Rock lined pit.	SM	?	
21	Inc.	Sit.	3.9	?		SM	?	
22	Inc.	Ext.	4.2	?		SM?	?	
23	Inc.	Sit.	5.0	?	Two bear teeth, drilled	SM	SM	10-b
24	Inc.	Sit.	4.0	?	Lapstone on top of grave	SM	SM	14-d-5
25	Inc.	F.F.	3.4	?		SM	?	
26	Inc.	F.F.	8.2	?	Four large shell beads, conch strip drilled longitudinally.	SM	SM	14-d-6

b. Burial No. 23, depth 5 feet.

d. Burial No. 152, depth 3 feet.

TABULATION OF BURIAL DATA AND ASSOCIATIONS—SHELL MOUND COMPLEX—(Continued)

Burial No.	Field Assignment	Position	Below Surface	Pit	Associations and Remarks	Archaeological Assignment	Physical Type	Illustration Figure
27	Inc.	F.F.	7.6	?	Deer ulna awl	SM	SM	14-d-7
28	Inc.	F.F.	7.9	X		SM	SM	
29	Inc.	F.F.	9.0	?	Flint point, 2 carapace of terrapin	SM	SM	14-d-8
30	Inc.	F.F.	9.0	?	Associated Burial No. 31.	SM	SM	
31	Inc.	P.F.	9.0	?	Quartz — Associated with Burial No. 30.	SM	SM	
32	Inc.	F.F.	7.5	?	Shell pendant, small	SM	SM	14-d-9
41	Inc.	F.F.	2.7	?		SM	SM	
42	Inc.?	P.F.	1.2	?		SM?	?	
43	Inc.	P.F.?	1.0	?		SM?	?	
44	Inc.	F.F.	3.0	?	Shell disc beads	SM	SM	
45	Inc.	F.F.	1.7	X	Shell bead, terrapin shell cup.	SM	?	14-d-10
46	Inc.	P.F.	2.5	—	Disturbed	SM	?	
47	Inc.	Sit.	3.5	?		SM	?	
48	Inc.	P.F.	4.0	?	Disturbed	SM	?	
49	Inc.	?	4.8	—	Disturbed	SM	?	
50	Inc.	F.F.	5.6	?	Small disc shell beads, 1 stone bead.	SM	?	14-d-13
51	Inc.	F.F.	2.9	?	Disc shell beads. Sandstone vessel	SM	?	14-d-12
52	Inc.?	?			In talus of cave-in, infant.	?	?	
53	Int.	?	2.0	?	Infant	?	?	
55	Inc.	F.F.	5.7	?		SM	SM	
56	Inc.	Re.	5.0	?	Reburial of bones	SM	?	
57	Inc.	F.F.	6.2	X		SM	?	
58	Inc.	?	6.2	X	Disutrbed	SM	SM	

TABULATION OF BURIAL DATA AND ASSOCIATIONS—SHELL MOUND COMPLEX—(Continued)

Burial No.	Field Assignment	Position	Below Surface	Pit	Associations and Remarks	Archaeological Assignment	Physical Type	Illustration Figure
59	Inc.	F.F.	5.8	X	Shell pendant engraved	SM	SM	14-b-1
60	Inc.	Ext.	5.8	?	Bone needle, flint point.	SM	SM	14-b-7
61	Inc.	F.F.?	6.2	?		SM	?	
62	Inc.	P.F.	6.7	?	Deer antler	SM	?	
63	Inc.	F.F.	7.0	—	Bird bone fragments Notched human canine, 2 large disc beads.	SM	?	
64	Inc.	F.F.	6.5	?	Disturbed	SM	?	
65	Inc.	F.F.	7.0	?	Anculosa shell beads	SM	SM	
66	Inc.	F.F.	7.4	?		SM	SM	
67	Inc.	F.F.	7.4	?	Hammerstone diorite	SM	SM	14-b-8
68	Inc.	P.F.	8.6	?	Bone flaker, longitudinally drilled; prismatic stone	SM	?	14-b-4
69	Inc.	?	8.0	—	Disturbed	SM	?	
71	Inc.	P.F.	8.3	?		SM	SM	
72	Inc.	F.F.	5.0	?		SM	?	
73	Inc.	F.F.	4.3	?		SM	SM	
74	Inc.	F.F.	4.8	?		SM	?	
75	Inc.	F.F.	6.0	?	Carapace of terrapin	SM	SM	
76	Inc.	P.F.	5.0	?		SM	?	
77	Inc.	F.F.	4.7	?		SM	SM	
78	Inc.	F.F.	5.3	?	Bone bead, hematite ornament, two bone needles, crinoid beads.	SM	?	14-b-3
79	Inc.	P.F.	5.5	X	Disc shell beads	SM	?	14-b-6
80	Inc.	?	5.0		Disturbed	SM	?	
81	Inc.	P.F.	6.3	?		SM	SM	
82	Inc.	P.F.	5.7	?		SM	SM	

TABULATION OF BURIAL DATA AND ASSOCIATIONS—SHELL MOUND COMPLEX—(Continued)

Burial No.	Field Assignment	Position	Below Surface	Pit	Associations and Remarks	Archaeological Assignment	Physical Type	Illustration Figure
84	Inc.	P.F.	5.6	?	Flint point	SM	SM	
85	Inc.	F.F.	8.3	?		SM	?	
86	Inc.	?	8.8	?	Disturbed	SM	?	
88	Inc.	F.F.	9.5	?	Two flint points, cylindrical bone awl, coal, atlatl weight unfinished	SM	SM	14-c-1
89	Inc.	F.F.	9.5	?	Assoc. Burial No. 88	SM	?	
91	Inc.	F.F.	1.0	—	Disturbed	SM	SM	
94	Inc.	Sit.	2.0	X		SM	?	
95	Inc.	Sit.	2.3	?		SM	?	
96	Inc.	Sit.	2.0	?		SM	SM	
98	Inc.	F.F.	1.8	—		SM	?	
99	Inc.	F.F.	2.8	—	Disturbed	SM	?	
100	Inc.	F.F.	3.0	X		SM	?	
101	Inc.	?	3.0	X	Infant	SM	?	
102	Inc.	F.F.	3.3	—	Block of hematite	SM	?	
103	Inc.	F.F.	4.0	—	Disturbed	SM	?	
104	Inc.	?	4.1	?	Infant-Disturbed	SM	?	
106	Inc.	?	4.0	?	Infant	SM	?	
107	Inc.	?	4.5	—	Disturbed	SM	SM	
108	Inc.	Sit.	4.8	X		SM	SM	
109	Inc.	P.F.	5.0	?		SM	SM	
110	Inc.	F.F.	5.5	?	Two flint points, disc shell beads, string square shell beads.	SM	SM	14-c-2
111	Inc.	F.F.	4.8	?		SM	?	
112	Inc.	F.F.	5.2	?		SM	SM	
113	Inc.	?	5.7	—	Disturbed	SM	?	

TABULATION OF BURIAL DATA AND ASSOCIATIONS—SHELL MOUND COMPLEX—(Continued)

Burial No.	Field Assignment	Position	Below Surface	Pit	Associations and Remarks	Archaeological Assignment	Physical Type	Illustration Figure
114	Inc.	F.F.	5.9	?		SM	SM	
115	Inc.	F.F.	6.3	?		SM	SM	
116	Inc.	F.F.	6.2	?		SM	SM	
117	Inc.	F.F.	5.9	?		SM	SM	
118	Inc.	P.F.	5.8	?		SM	SM	
119	Inc.	P.F.	5.5	?	Shell beads	SM	?	14-c-3
120	Inc.	F.F.	5.7	X		SM	SM	
121	Inc.	F.F.	6.1	X		SM	SM	
122	Inc.	Re.	6.0	?	Reburial of bones	SM	?	
123	Inc.	F.F.	6.0	X		SM	?	
124	Inc.	Re.	5.0	X	Reburial of bones	SM	?	
125	Inc.	P.F.	7.1	—	Stone lined grave	SM	SM	12-a
127	Inc.	P.F.	7.4	?		SM	?	
128	Inc.	F.F.	7.4	?		SM	SM	
129	Inc.	P.F.	7.8	?	Disturbed	SM	?	
130	Inc.	F.F.	8.1	—		SM	?	
131	Inc.	F.F.	8.4	X		SM	SM	
132	Inc.	F.F.	8.4	?		SM	SM	
133	Inc.	F.F.	5.2	?		SM	SM	
139	Inc.	F.F.	1.4	—		SM	SM	
141	Inc.	Re.	1.3	?	Reburial of bones	SM	—	
142	Inc.	F.F.	1.3	?	Assoc. Burial No. 141	SM	SM	
144	Inc.	P.F.	1.5	?		?	?	
145	Inc.	F.F.	1.7	?		?	?	
146	Inc.	F.F.	1.8	?		SM	?	
148	Inc.	P.F.	2.4	?		SM	?	

TABULATION OF BURIAL DATA AND ASSOCIATIONS—SHELL MOUND COMPLEX—(Continued)

Burial No.	Field Assignment	Position	Below Surface	Pit	Associations and Remarks	Archaeological Assignment	Physical Type	Illustration Figure
150	Inc.	F.F.	2.6	?	Bone awl, carapace of terrapin.	SM	SM	
152	Inc.	Sit.	2.7	?		SM	?	10-d
153	Inc.	Sit.	3.0	?		SM	SM	12-b
155	Inc.	F.F.	3.1	?		SM	?	
156	Inc.	F.F.	3.2	—		SM	SM	
157	Inc.	F.F.	3.1	X	Possibly a sitting burial.	SM	?	10-a 11-d
158	Inc.	F.F.	3.1	X	Ulna awl, 4 bone implements, bird bone gouge, hematite, 2 cylindrical shell beads.	SM	SM	14-c-4
159	Inc.	Sit.	3.8	X		SM	SM	10-c
160	Inc.	F.F.	3.9	?		SM	SM	
161	Inc.	F.F.	4.0	—	Disturbed	SM	?	
162	Inc.	F.F.	4.2	?		SM	—	
163	Inc.	F.F.	8.4	?		SM	SM	

All cremated burials (they had very few artifacts in association) have been ascribed to the shell mound complex, although they sometimes occur in the midden near the surface. This assignment is made on the basis that most cremations appear to be similar in kind and they occur throughout the midden, as shown in the following tabulation. In general, the form of cremation at this site indicates the burial of an adult body in a "round grave". The grave of this type leads to extreme flexure of the body. After burial a fire is built on top of the grave and the bones are thus calcined. Sometimes the bones are rather completely calcined, but in some cases there is only partial destruction of the larger bones. Figure 12-c shows Burial No. 126, a complete cremation.

LIST OF CREMATIONS

Burial No.	Field Assignment	Position	Below Surface	Pit	Associations and Remarks	Archaeological Assignment	Physical Type	Illustration Figure
8	Inc.	F.F.	7.0	X	Several thousand anculosa beads, after cremation grave covered with sandstone boulders.	SM	SM	
9	Inc.	P.F.	8.0	—	Partial, in situ.	SM	SM	
40	Inc.	P.F.	2.0	—	Cremation in rock fireplace. Feature No. 19.	SM	SM	
54	Inc.	F.F.	5.0	—	Small disc shell beads. Bead and pendant from conch columella. Partial cremation.	SM	?	14-b-2
70	Inc.	F.F.	8.4	X	In situ, complete cremation. Round grave, fire on top.	SM	SM	
83	Inc.	F.F.	7.0	?	Partial cremation, in situ.	SM	?	
87	Inc.	?	8.5	—	In situ, partial cremation, round grave, disturbed.	SM	?	
105	Inc.	?	4.8	?	In situ, complete, round grave,	SM	SM	
126	Inc.	?	7.1	?	Cremation complete. Anculosa beads deposited after cremation. Disturbed	SM	?	12-c
140	Inc.	F.F.	1.6	X	In situ, partial, extremities not burned.	SM	?	
147	Inc.	?	2.5	?	Skull and bone fragments burned elsewhere and deposited.	SM	?	
149	Inc.	?	2.5	—	In situ, complete cremation, round grave, crinoid bead.	SM	?	
151	Inc.	?	2.0	—	In situ, complete. Bone fragments very small.	SM	?	
154	Inc.	?	2.6	—	Partial cremation. Disturbed.	SM	?	

Figure 11. a. Feature No. 29 concentration of small animal bones in midden.
b. Round grave with large stones on top of skeleton in bottom of pit.
c. Burial No. 26 on top of large river pebbles.
d. Rocks covering Burial No. 157.

An examination of the fully flexed burials and the sitting burials shows that both types occur at all levels as well as the cremations. This may possibly be explained by the fact that all fully flexed burials in shell mounds are essentially "round grave burials." This type, for purpose of study, was subdivided in the Pickwick Basin report[1] into three sub-types: (1a) Completely flexed on the side, (1b) Completely flexed on the back, and (1c) The so-called "frog type" of burial where the body was placed face downward in a pit. A study of the relative positions of the parts of the body, in both completely flexed round grave burials as well as sitting burials, leads to the conclusion that the body at death, fully flexed, was rolled into a close bundle, and probably tied in that position. It also may have been rolled in or covered with textiles to completely encase it, which made the face, back, or sides of the body indistinguishable from each other. When buried, a pit was dug—round, small, just large enough to receive this "egg-shaped" bundle. The manner of its accidental placement in the grave, on face, back or side, probably determined the type of round grave burial, and if placed on end, it produced the effect of a sitting burial.

Sitting burials usually "slump" after the passage of the flesh, but are easily distinguished as shown in figures 10-a to d, inclusive, which present the varied appearance of this type of burial. If a fire was placed on top of the bundled body, cremation or partial cremation was the result. It may be for this reason that all of these apparently different types of burials seem to have been practiced simultaneously at all levels of occupancy in shell mounds.

Some of the shell mound type of burials at this site are notable in the amount of stone used in association. Figure 8-c illustrates a stone basin-like grave built to receive Burial No. 7. The stones are flat, thin limestone slabs. Burial No. 125 was made in a similar stone grave as illustrated in figure 12-a, except that the stones were much more massive. Burial No. 26 was laid on several large waterworn river boulders as shown in figure 11-c. Figure 11-b shows a typical round grave pit into

d. Rocks covering Burial No. 157.

[1]Webb and DeJarnette, 1942.

Figure 12. a. Burial No. 125 in rock lined basin.
b. Sitting Burial No. 153 and nearby a pit filled with fire-cracked stones and burned shell.
c. Burial No. 126, a complete cremation.

which several large stones had been placed on top of the skeleton in the bottom of the grave. Occasionally the body seems to have been laid on the midden and covered by large stones as in the case of Burial No. 157, shown in figure 11-d. Shell was then heaped over the stones and midden finally covered the shell. Occasionally round grave burial pits were partially filled with accumulations of fire-cracked stones of small size.

Artifacts

Beside burial associations, and exclusive of flint artifacts and potsherds, which will be reported upon separately, the artifacts listed were taken from the general excavations:

Stone Artifacts

		Illustration Number
Pestles, cylindrical	1	13a
Pestles, bell shape	9	13a
Hammerstones, water-worn pebbles	7	13a
Limestone hoes	10	13a
Limestone hoe fragments	6	—
Grooved axe fragment	1	13a
Grooved hoe fragment	1	13a
Nut stone or anvil stone	1	—
Cupstone	1	—
Flint chipped axes, grooved	2	13a
Flint celt, heavy	1	—
Discoidals, limestone	3	13b
Sandstone vessel fragments	3	—
Steatite vessel fragments	8	—
Crinoid stems	15	—
Fragments of drilled atlatl weights	5	13b
Fragment hematite gorget	1	13b
Fragment of sandstone tablet	1	13b
Whetstone, shale	3	13b
Fragment slate gorget	1	13b
Pottery, discoidal shell-temper	1	13b
Pottery pipe, elbow, sand-temper	1	13b
Bead, stone barrel shape	1	13b
Cannel coal disk	1	13b

Shell Artifacts

Two cylindrical conch shell beads	1	—
Shell pendant, small	1	—

Figure 13. a. Cylindrical pestle, bell shaped pestle, flint chipped grooved ax, limestone hoe, grooved hoe fragment, river pebble hammerstone.
b. Fragments of drilled prismoidal atlatl weights. Fragment of sandstone tablet, limestone discoidals, fragment of sand-tempered elbow pottery pipe.
c. Bone fish hook fragments, bone beads, drilled canine teeth pendants, needles, hairpins, awls from deer scapula, bone atlatl hooks, and bifurcated spatula.
d. Bone awls and bone projectile points.

		Illustration Number
Bone and Antler Artifacts		
Cut antler, rough	53	14a
Antler drifts	30	14a
Cut horn tips	20	—
Antler projectile points, large	21	—
Cannon bone, deer, cut	5	14a
Deer ulna awls	24	14a
Projectile points-bone	111	13d
Cylindrical bone awls	226	14c
Splinter bone awls	235	13d
Pointed bone splinters	161	—
Bone spatula fragments	38	—
Bone pins (needle awls small)	47	—
Split cannon bone awls	2	—
Tibio-tarsal bird bone awls	15	13d
Scapula deer, awls	5	13c
Bird bone, cylindrical gouges	6	13d
Hair pins, undecorated	22	13c
Hair pins, decorated (carved)	4	13c
Bone bead	12	13c
Atlatl hook fragments	2	13c
Bifurcated bone spatula	3	13c
Fish hook, fragmentary	7	13c
Split deer phalanx for fish hook manufacture	1	13c
Split deer calcanium for fish hook manufacture	1	13c
Bone needles, perforated	4	13c
Canine canine drilled	2	13c
TOTAL	1,143	—

Figure 13 presents some of the artifacts found in the general excavation, and since they were not in burial association are presumptively assignable to the shell mound complex only.

Figure 14 presents artifacts from various burial associations. The number of the burial from which these artifacts were taken indicates its archaeological assignment to either the SM or KI complex.

Illustrations in Figure 14 are as follows:

a. Artifacts from Burial No. 6, SM.

b. (1) Engraved shell pendant, Bu. No. 59, SM.

d. Bone awls and bone projectile points.

(2) Disc shell beads and pendant from conch columella Bu. No. 54, a partial cremation.

(3) Two bone pins, hematite ornament, crinoid beads, Bu. No. 78, SM.

(4) Antler flaker and longitudinally drilled prismatic stone, Bu. No. 68, SM.

(5) Two large disc beads and grooved human canine, Bu. No. 63, SM.

(6) Disc shell beads, Bu. No. 79, SM.

(7) Bone needle and flint point, Bu. No. 60, SM.

(8) Diorite hammer stone, Bu. No. 67, SM.

c. (1) Two flint points, unfinished atlatl weight, cylindrical bone awl, Bu. No. 88, SM.

(2) Disc shell beads and square shell beads, Bu. No. 110, SM.

(3) Shell beads, Bu. No. 119, SM.

(4) Deer ulna awl, bone awl, shell beads, Bu. No. 158, SM.

d. (1) Flint point and dentalium beads, Bu. No. 4, SM.

(2) Flint point and bone spatula, Bu. No. 15, KI.

(3) Shell gorget with excised cross, Bu. No. 18, KI.

(4) Shell gorget with excised cross, Bu. No. 20, KI.

(5) Two canine teeth drilled, Bu. No. 23, SM.

(6) Four large shell beads, conch strip drilled longitudinally, Bu. No. 26, SM.

(7) Deer ulna awl, Bu. 27, SM.

(8) Flint point, Bu. No. 29, SM.

(9) Shell pendant, Bu. No. 32, SM.

(10) Shell bead and terrapin carapace cup, Bu. No. 45, SM.

(11) Slug pearl beads, Bu. No. 39, KI.

(12) Disc shell beads associated with sandstone vessel, Bu. No. 51, SM.

(13) Small disc shell beads and one cylindrical stone bead, Bu. No. 50, SM.

The only artifacts from the general excavation which seemed to have any significant distribution, and which occurred in sufficient numbers to be significant were bone projectile points. Of the 111 bone points found at this site two were taken from a burial pit, hence were not **in situ,** and three were from flood debris. The following tabulation shows the depth distribution of the remaining 106.

DEPTH DISTRIBUTION OF BONE PROJECTILE POINTS

Level	Block No. 1	Block No. 1 Isolating Trenches	Block No. 2	Block No. 2 Isolating Trenches	Block No. 3 Isolating Trenches	L1" Trench	O' Trench	Totals	Totals eliminating columns 6, 7
.5									
1			1	1	1			3	2
1.5			1					1	1
2	1		3		1			5	4
2.5									
3		1				3		4	1
3.5			2		2			4	2
4		1			1			2	1
4.5									
5				1	1	2		4	1
5.5	4	1			Lower	Lower	2	7	7
6	10	5	2	3	portion	portion	2	22	22
6.5	8	1	5		not	not	1	15	15
7		2	7	3	excav-	excav-	1	13	13
7.5	4	1	4		ated	ated	1	10	10
8	1	4	3	2				10	10
8.5	1		3					4	4
9	1			1				2	2
9.5									
TOTALS	30	16	31	11	6	5	7	106	95

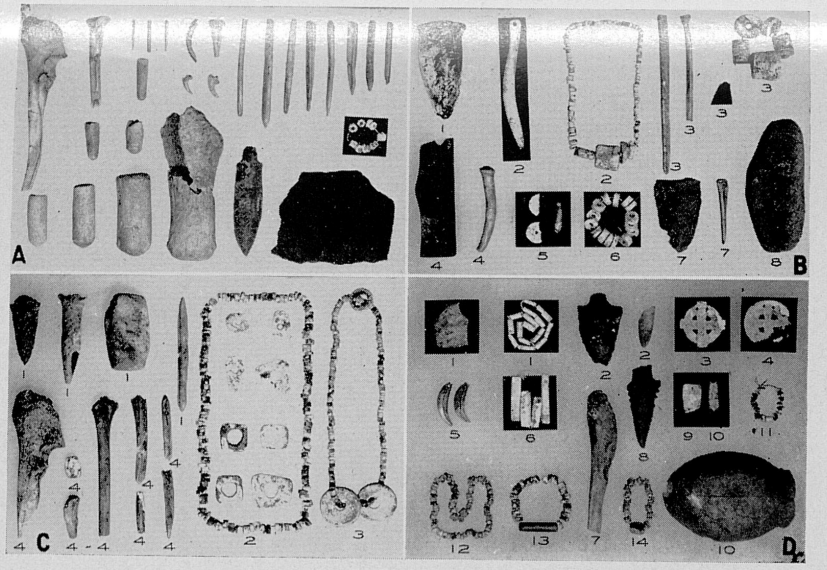

Figure 14. Artifacts from burial association. Descriptions of artifacts are given on pages 41, 42 and 43.

Since trenches isolating Block No. III and the L1 trench were not completely excavated below the 6-foot level, they probably should be eliminated in a depth distribution study. Column 10 in the tabulation shows the occurrence of 95 of the remaining 106 points. The histogram, figure 15, emphasizes a maximum occurrence of bone projectile points at the 6-foot level, and their rapid diminution in levels above the 6.5 foot. They were thus much more important in the early stage of this midden development than in the latter half of its history. That is, between the 5.5-foot level and the 9.5-foot level, a 4-foot thickness held 83 bone points, while in the top 5-foot thickness there were only 12.

FLINT ARTIFACTS

Several thousand flint artifacts were taken from this general digging, which were not in burial association and which therefore represent portions of the accumulated debris.

In attempting a depth distribution study the material from isolating trenches was not included because of the chance of material falling from the profile to lower depths. It was decided in the study to use only the material from Blocks I and II which were taken down by 6-inch levels. From Block I 706 flint specimens were recorded and from Block II, 699 specimens. Since this site was in the vicinity of other similar sites in Pickwick Basin, previously reported, it was not surprising that the flint type forms observed here should be quite similar to those reported from site Lu°25, Seven Mile Island and other sites in the general region.

The type numbers as designated herein correspond to the Pickwick Basin classification. These specimens were distributed among the some sixty types and it was found that the great majority of the specimens were included in the six types as shown in the following tabulation.

Flint Types*		Block 1		Block 2	
Blades and Knives	Projectile Points	Number	Number	Number	Number
3	-----	112	-----	171	-----
23	-----	178	-----	196	-----
25	-----	40	-----	44	-----
26	-----	70	-----	43	-----
-----	6	-----	47	-----	35
-----	17	-----	68	-----	42
TOTAL ----		400	115	454	77
Total of Six Types ---		-----	515	-----	531
Remainder distributed among the 54 remaining types		-----	190	-----	168
Grand Total for Each Block ----------		-----	705	-----	699

These other types thus possessed so few specimens that it appeared their depth distribution could hardly be significant. Depth studies were, therefore, confined to Types 3, 6, 17, 23, 25, and 26.

The following tabulation shows the depth distribution by half-foot levels in Blocks I and II of flint knives and blades, Types 3, 23, 25, and 26, compared to the distribution of the total complex of 60 types.

*See figure 34 in Webb and DeJarnette, 1948.

Depth Distribution of Flint Knives by Half-foot Levels. Compared to Total for all Types

Half Foot Levels	Block No. I Type No. 3	23	25&26	Total All Types	Block No. II Type No. 3	23	25&26	Total All Types
5	-----	4	-----	10	3	9	1	20
1.0	-----	4	1	14	4	9	1	20
1.5	-----	4	-----	30	4	10	2	27
2.0	5	20	4	74	17	17	2	56
2.5	9	25	6	70	9	5	2	28
3.0	9	17	6	49	21	21	2	65
3.5	5	23	4	61	8	19	1	66
4.0	5	7	5	37	4	11	1	36
4.5	7	10	9	47	11	8	4	47
5.0	2	2	3	13	-----	9	1	15
5.5	17	9	21	69	5	5	7	26
6.0	28	26	29	109	15	12	12	48
6.5	17	19	17	79	44	33	25	123
7.0	-----	2	1	4	18	15	15	64
7.5	3	2	4	13	6	11	9	39
8.0	1	2	1	10	1	1	1	6
8.5	3	1	-----	12	1	1	1	13
9.0	-----	1	-----	2	-----	-----	-----	-----
9.5	1	-----	-----	3	-----	-----	-----	-----
Totals	112	178	111	706	171	196	87	699

These results, in part, are shown graphically in the following histogram dealing with Block I—see figure 15. It will be remembered that Types 25 and 26 are points and bases of what possibly were large flint blades. Being similar they are considered together. The crude unbroken blades of somewhat similar type, from which Types 25 and 26 must have been made, were classified as Types 3 and 23.

It will be observed that in the early levels of this site very few flint artifacts were found. While these histograms illustrate only Block I, data on Block II, given above, show even less flint in the lower levels. In the lower three feet of this midden, from the 9.5-foot level to the 6.5-foot level, very little flint was found. It is in exactly this region that the bone points are most numerous. It appears that in the history of this site, when the 6.5-foot level was laid down there was a sudden desire for flint artifacts, resulting in their very rapid increase. This seems to have been connected with the appearance of shop sites in the midden as illustrated by Feature No. 4 shown in figure 6-a. These work shops, which produced rough blades by percussion only, seemingly gave rise to Types 25, 26, 3 and 23 which are the dominant types in this midden. From that time on, these types occur in considerable abundance to the top of the midden, but the bone points are reduced to negligible proportions above the 6-foot level. It is also interesting to note that other types of flint projectile points, the long slender forms as represented by Type 17 and Type 6, reach maximum distribution much above the shop site level and their occurrence is negligible below it, as shown by the attached tabulations and histograms, figure 16.

This tabulation contains a summary for Blocks I and II of all stemmed types which could be regarded as projectile points. The histogram, figure 16, shows the depth distribution of the total "projectile point" group. This group includes no obvious knives, scrapers, drills, or special forms.

Depth Distribution by Half-foot Levels of the Twenty-four Projectile Point Types Occurring in Block I

Depth	Type Numbers																						
	6	7	8	9	13	15	16	17	18	22	27	28	29	30	36	37	38	43	44	50	51	53	57	58	Total
0.5	2	1	1			1	1	9									1		1	1					18
1.0	3	2	2				1	9		1							1	1							20
1.5	3		4				1	6		2	1								2						19
2.0	4		4				2	6		3	2					1			2						24
2.5	8	2	2		2		1	2		3			1						2				3	1	27
3.0	5	3	2		1			1		1									1						14
3.5	8			2	3			6	1	1	1											1	3	1	27
4.0	1		3	2	3			4	1				1									1			16
4.5	6	1		2			1	3						2						1				1	17
5.0								1		1									1			1			4
5.5	4							11	2	2							1		1						21
6.0	1			1				6		3				2			2								15
6.5	2	3			1			3					2				3								14
7.0																									0
7.5					1																				1
8.0															1							1	1		3
8.5		2						1				1			1						1				6
9.0																	1								1
9.5		1								1															2
Total																									249

BLOCK ONE
DEPTH DISTRIBUTION
OF
FLINT TYPES
(COMPARED WITH BONE PROJECTILE POINTS)

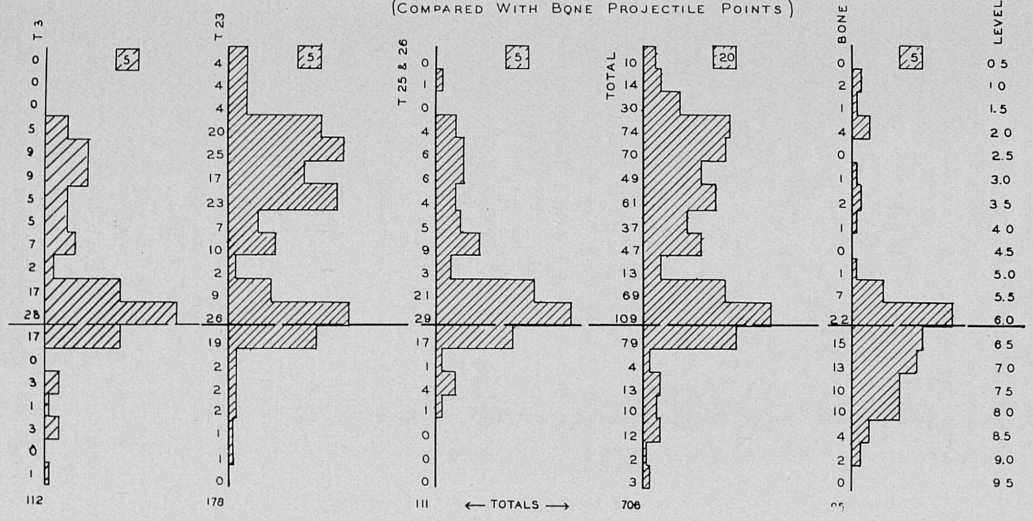

FIGURE 15

Depth Distribution by Half-foot Levels of the Twenty-six Projectile Point Types Occurring in Block II

Type Numbers

Depth	6	7	8	9	12	13	14	15	16	17	18	22	27	28	29	30	34	37	38	43	44	48	53	54	57	58	Total
0.5	2		2						1	2											1						8
1.0	3		2			1			1	3								1									11
1.5	1	1	3		1					1		1									1						9
2.0	2	1	3	1					1			1									2						11
2.5	4		2							1						1					1				1		10
3.0	7		3	1		3			1	2		1			1												19
3.5	7	3	1	1		1		1	1	8			1		1			1						1	2		28
4.0	4	1		3		3			1	3	1				1							1		1			19
4.5	3	1		1			1		1	2				2							2				1	1	15
5.0			1							1								1			1		1	2	1		8
5.5						1			1	2		1							1		2						8
6.0						1				3									2		1						7
6.5						1				6							1		2		1						11
7.0						1				4									1					2			8
7.5										4				1	1										1		7
8.0																											0
8.5		1				2			1					1													5
9.0																											0
9.5																											0
Total																											184

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These summaries seem to suggest that these types, and all the better formed stemmed types were produced later in the history of the midden development and that the first types made were the crude types, 25-36, and Types 3 and 23, which beginning first, are most numerous, and continued to the close of occupancy.

Another important observation should be noted as to flint distribution as well as other artifacts. At about the 5-foot level, there is a narrow band of infiltrated silt, which is almost sterile of artifacts. This may represent a flood which for some period of time closed the occupancy at this site. It will be noted in figure 15 that this interruption of occupancy occurred shortly after the flint workshop sites had produced an abundance of crude flint knives. After occupancy was resumed crude knives of Types 25-26 were never again so numerous, there were very few bone projectile points used, but flint projectile points reached a maximum development about the 3-foot level. Other than the concentration of potsherds about the 2-foot level and the occasional occurrences of sandstone and steatite bowl fragments, there seems to be no outstanding observable change in material culture immediately above or below the 3-foot level.

It may be objected by some that since a few specimens of flint occur in the lowest levels—two in the 9-foot level and three in the 9.5-foot level in Block I, and since a few bone points occur near the top of the midden that no conclusions are valid as to their distribution. It would of course be very interesting if stratigraphy could be found where boundaries were sharp and well defined, but in the light of field experience, if one must wait for such ideal data before attempting any conclusions, there would be no use of investigation.

When one considers the manner in which these shell midden were laid down, by occupancy here and there over a surface which was never kept level, and which always shows definite drifts, and inclinations, and when one considers the great amount of digging in these midden by those building them, for purpose of, cooking, for storage bins, and for burial, it is almost incredible that there remains any evidence of the original stratigraphy. When one considers the numerous agencies at work to mar the record, and how efficient such agencies are in operation, it appears the part of wisdom to regard with increased rather than

DEPTH DISTRIBUTION OF FLINT PROJECTILE POINT TYPES

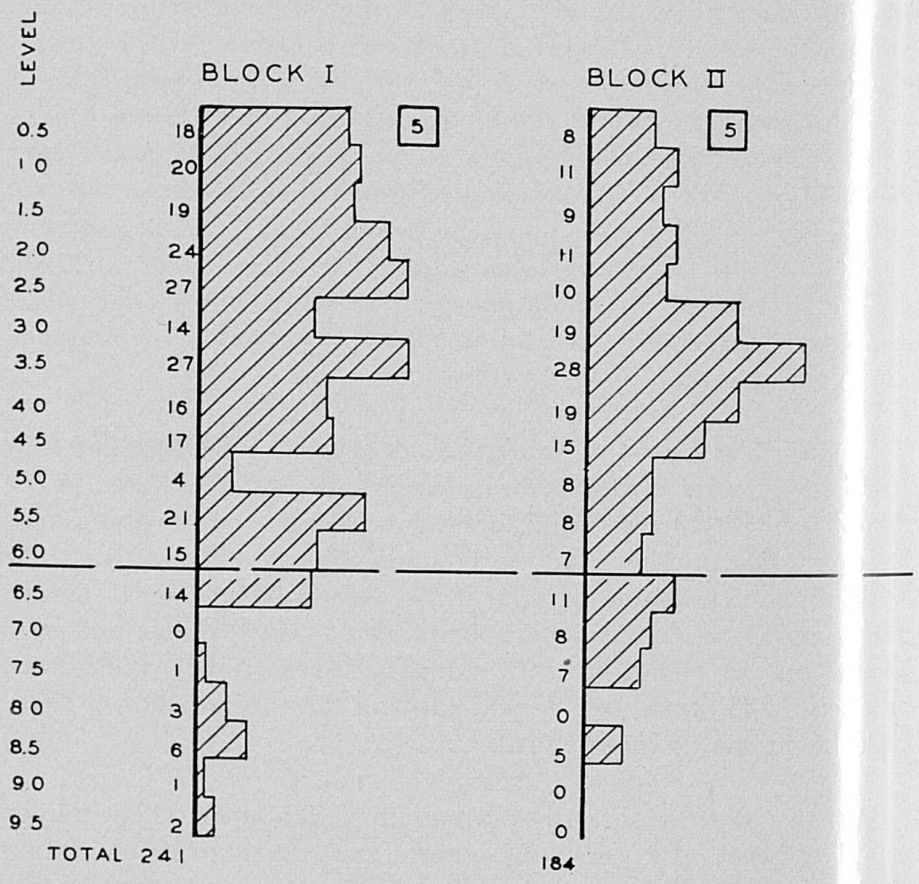


FIGURE 16

with diminished importance evidence of stratigraphy which still remains observable. This suggests that one should base interpretation on occurrence of maxima in any form of trait, and while not neglecting to consider minimum occurrences, should attach to them much less importance since it is so obviously easy for a few specimens to be found far outside of their normal and rightful zone of occurrence.

The flint from this site is the typical blue-gray chert commonly found on all shop sites in shell mounds in this region. In general it may be observed that all of this flint work is heavy, rough, and of rather crude workmanship as compared to the artifacts produced by pressure fracture by other and later peoples. The small triangular point, commonly designated Mississippian, was entirely missing at this point. This is the more remarkable since there are some extended burials with shell-tempered pottery in association intruded into this midden.

Pottery Study

By Marion L. Dunlevy

Pottery was fairly evenly distributed over the area of excavation, but confined to the upper levels. The 1,044 sherds recovered were analyzed and first tabulated by levels for each block and individual trenches. In the blocks the bulk of the pottery occurred in the upper 2 feet, and only a few sherds were found to a depth of 3.5 feet. While scattered sherds occurred to a greater depth in the trenches it should be considered that the upper 2 to 3 feet represent the pottery horizon. In the vertical slicing of the trenches to establish profiles it would be possible for sherds to drop below their original position while the horizontal removal of the block material serves as a depth check.

A summary tabulation is presented because there is little areal differentiation. Typologically the pottery is predominantly shell-tempered with a small but consistent proportion of clay-grit tempered and just a scattering of limestone and sand-tempered sherds. In Block I clay-grit tempered ware occurs fairly consistently through the levels while the quantity of shell-tempered pottery decreases from 66 sherds in the 1-foot level to one sherd in the 3.5-foot level. Only one sherd each of sand and limestone tempering occurred.

In Block II, 120 shell, 38 clay-grit, 12 sand and 7 limestone-tempered sherds occurred in the 1-foot level while 7 shell and 1 clay-grit-tempered occurred in the 2-foot level. Only 5 sherds occurred below the 2-foot level in Block III. The proportion of tempers in Block III is similar to that of Block II. The material from the trenches does not differ except for the distribution of a few sherds to a depth of 6 feet.

POTTERY STUDY

Summary of Blocks I, II and III

LEVEL	TYPE	Number of Sherds	Percentage by Type	Total by Temper	Percentage by Temper
1′	2a O'Neal Plain	13	2.78		
	2b Alexander Incised	4	.85		
	2f Alexander Pinched	9	1.92	26	5.55
	3a Mulberry Creek Plain	8	1.71		
	3b Long Branch Fabric Marked	7	1.50		
	3f Pickwick Complicated Stamped	2	.43	17	3.64
	4a McKelvey Plain	35	7.48		
	4b Mulberry Creek Cord Marked	20	4.27		
	4c Benson Punctated	1	.21		
	4d & e Wheeler Check Stamped	3	.64		
	4i Cox Fabric Marked	1	.21		
	Unclassified	3	.64	63	13.45
	5a Plain Shell	357	76.29		
	5d Moundville Incised	2	.43		
	5j Moundville Black Filmed	3	.64	362	77.36
	TOTAL	468	100.00	468	100.00
1.5′	2a O'Neal Plain	1	8.33	1	8.33
	3b Long Branch Fabric Marked	1	8.33		
	3e Bluff Creek Simple Stamped	1	8.33	2	16.66
	5a Plain Shell	9	75.01	9	75.01
	TOTAL	12	100.00	12	100.00
2′	2a O'Neal Plain	1	1.19		
	2g Columbus Punctated	1	1.19	2	2.38
	3b Long Branch Fabric Marked	1	1.19		
	3e Bluff Creek Simple Stamped	1	1.19	2	2.38

POTTERY STUDY

Summary of Blocks I, II and III—(Continued)

LEVEL	TYPE	Number of Sherds	Percentage by Type	Total by Temper	Percentage by Temper
	4a McKelvey Plain	1	1.19		
	4b Mulberry Creek Cord Marked	3	3.54	4	4.73
	5a Plain Shell	74	88.13		
	5c Langston Fabric Marked	1	1.19		
	5d Moundville Incised	1	1.19	76	90.51
	TOTAL	84	100.00	84	100.00
3′	2a O'Neal Plain	1	4.35	1	4.35
	4a McKelvey Plain	5	21.74		
	4b Mulberry Creek Cord Marked	2	8.70	7	30.44
	5a Plain Shell	15	65.21	15	65.21
	TOTAL	23	100.00	23	100.00
3.5′	4a McKelvey Plain	1	20.00	1	20.00
	5a Plain Shell	4	80.00	4	80.00
	TOTAL	5	100.00	5	100.00
	TOTAL FOR BLOCKS II, I, III	580		580	

Summary of Trenches

1′	1b Bluff Creek Punctated	1	.35	1	.35
	2b Alexander Incised	4	1.38		
	2f Alexander Pinched	4	1.38	8	2.76
	3a Mulberry Creek Plain	1	.35		
	3b Long Branch Fabric Marked	2	.69	3	1.04
	4a McKelvey Plain	30	10.38		
	4b Mulberry Creek Cord Marked	7	2.42		
	4d & e Wheeler Check Stamped	10	3.46	47	16.26
	5a Plain Shell	229	79.24		
	5e Langston Fabric Marked	1	.35	230	79.59
	TOTAL	289	100.00	289	100.00

POTTERY STUDY

Summary of Blocks I, II and III—(Continued)

LEVEL	TYPE	Number of Sherds	Percentage by Type	Total by Temper	Percentage by Temper
2'	2a O'Neal Plain	4	7.27		
	2b Alexander Incised	1	1.82		
	2f Alexander Pinched	1	1.82	6	10.91
	3b Long Branch Fabric Marked	1	1.82	1	1.82
	4a McKelvey Plain	3	5.45		
	4b Mulberry Creek Cord Marked	2	3.64	5	9.09
	5a Plain Shell	43	78.18	43	78.13
	TOTAL	55	100.00	55	100.00
3'	2g Columbus Punctated	1	5.88		
	2j Kirby Complicated Stamped	1	5.88	2	11.76
	3a Mulberry Creek Plain	2	11.77		
	3c & d Wright Check Stamped	1	5.88	3	17.65
	5a Plain Shell	12	70.59	12	70.59
	TOTAL	17	100.00	17	100.00
4'	4b Mulberry Creek Cord Marked	1	50.00	1	50.00
	5a Plain Shell	1	50.00	1	50.00
	TOTAL	2	100.00	2	100.00
5'	4a McKelvey Plain	1	25.00		
	4d & e Wheeler Check Stamped	1	25.00	2	50.00
	5a Plain Shell	2	50.00	2	50.00
	TOTAL	4	100.00	4	100.00
6'	5a Plain Shell	1	100.00	1	100.00
	TOTAL FOR TRENCHES	368		368	

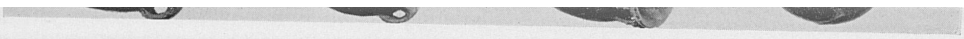
POTTERY STUDY

Summary of Blocks I, II and III—(Continued)

Summary Debris

LEVEL	TYPE	Number of Sherds	Percentage by Type	Total by Temper	Percentage by Temper
No vertical separation	2a O'Neal Plain	8	8.33		
	2f Alexander Pinched	3	3.14		
	2j Kirby Complicated Stamped	1	1.04	12	12.51
	3a Mulberry Creek Plain	1	1.04		
	3b Long Branch Fabric Marked	1	1.04		
	3c & d Wright Check Stamped	1	1.04		
	3g Flint River Incised	1	1.04	4	4.16
	4a McKelvey Plain	8	8.33		
	4b Mulberry Creek Cord Marked	2	2.08	10	10.41
	5a Plain Shell	70	72.92	70	72.92
	TOTAL	96	100.00	96	100.00
	TOTAL FOR SITE	1,044		1,044	

Figure 17. Pottery vessels from Site Ct°8. All are shell-tempered. Field specimen numbers for these vessels are, from left to right: Top row; 135, 29, 145: 2nd row; 31, 175, 127: 3rd row; 128, 131, 28: Bottom row; 132, 60, 170. Photographs of these vessels are not to the same scale. See table in text for dimensions of each vessel.



CT°8

POTTERY VESSELS

Type	Vessel Form	Field Specimen Number	Location or Association	Max. Diam. in inches	Height in inches	Orifice in inches	Appendages	Photo. Number	Figure Number
5a Plain Shell	Jar	28	B. # 12	6.25	4.75	5	Paired strap handles	159	17
5a Plain Shell	Ladle	29	B. # 12	1.5	6.25*	3**	None	157	17
5a Plain Shell	Jar	30	B. # 13	3.75	2.75	3.5	Oval strap handles	161	
5a Plain Shell	Jar	31	B. # 14	6.75	6.5	5.25	Paired Horizontal Lugs	158	17
5a Plain Shell	Frag.	35	B. # 16	5.25	5	6	None		
5a Plain Shell	Jar	36	115 R 2 close to B. # 16	4.38	3	4	Paired Horizontal Lugs		
5a Plain Shell	Open Bowl	38	B. # 18	—	4	7	Broken	167	
5a Plain Shell	Jar	39	B. # 18	7.75	5.5	7	Paired strap handles	166	
5a Plain Shell	Frag. Jar	51	Fill of B. # 33	4	3.25	3.5	Paired Loop handles		
5a Plain Shell	Jar	60	B. # 39	5.5	4.75	4.25	Paired strap handles	164	17
5a Plain Shell	Jar	127	1.7 Foot level 110 R 2 B. #134	5.75	4.25	6.25	16 Loop handles	163	17
5a Plain Shell	Jar	128	B. #134	8.75	6.75	7.5	Paired strap handles	165	17
5a Plain Shell	Jar	131	B. # 90	4.5	4	3.5	Paired strap handles	160	17
5a Plain Shell	Jar	132	B. # 90	7.25	6.5	5.25	Paired strap handles	159	17
5a Plain Shell	Jar	133	B. # 90	4.5	3.5	3.75	Paired oval straped handles	160	9a
5m Effigy Vessel	Open Bowl	135	B. # 97	6.25	3.5	5.75	Modelled Duck head and tail	156	17
5a Plain Shell	Water Bottle	139	B. # 97	3.75	4.75	1.25	None	167	
5h Moundville Red Filmed	Water Bottle	145	B. # 97	5.75	6	2	None	161	17
5a Plain Shell	Jar	170	B. #135 & #136	7	5.75	5.5	Paired strap handles	158	17
5a Plain Shell	Jar	175	B. #137	4.5	3.75	3.75	Paired horizontal lugs	161	17

* Length

**Width

The pottery at Ct°8 is preponderantly a shell-tempered ware which occurs in all the pottery bearing levels. Clay-grit and sand-tempering are fairly consistently represented through the levels while limestone-tempered pottery occurs sporadically and in smaller quantities. Plain surfaces occur in all the temper groups and the more common decorations are fabric impressing on shell, clay-grit and limestone tempering; cord marking on clay-grit and stamping on clay-grit and limestone tempering. The whole vessels are undecorated but present a variety of forms.

The suggestion of similarity between the pottery of Site Ct°8, Koger's Island (Luv92) and Moundville is noteworthy. Though not common at Site Ct°8 the occurrence of black filmed shell-tempered sherds is recorded. A red filmed shell-tempered water bottle, F.S. No. 145, and a noded multiple handled jar, F.S. No. 127 appear to be typologically identical with vessels found at Moundville.

CONCLUSION

From what has been said in the body of this report, it is apparent that the chronological development of this great shell midden at the mouth of Bear Creek on the Tennessee River has followed the usual pattern with only minor variations.

Occupancy began in the Archaic 1 period on the restricted area in the angle between Bear Creek and the Tennessee River, and while lateral movement of any minor occupational area such as a dwelling site was possible, nevertheless, the restriction was so great that this midden grew to a depth of about 3 feet where the dominant type of projectile point (and it is believed the only type) was made of bone.* Such flint specimens as are found in this portion of the midden are clearly intrusions from above. These people using bone, antlers and hammer stones in their mechanic arts, buried their dead in round graves without artifacts and occasionally produced partial or total cremations by building fires over the grave, the body being only thinly covered with shell. After three feet of midden had been laid down, sud-

*For a discussion of Archaic 1, 2 and 3 and Pottery 1, 2 and 3, see; Webb and DeJarnette, 1948.

denly there appeared a series of flint workshops at the six foot level. These shops were as extensive as their appearance was sudden, and their product, crude, unspecialized flint blades, were produced in large quantities by percussion only. This initiated the Archaic 2 period during which time many new customs and artifacts were developed. At this site it is difficult exactly to determine at what point in the midden Archaic 3 period began. The number of sandstone and steatite bowl fragments was not large, and it is apparent that the use of such stone vessels was never very common at this site as compared to some sites, yet they were known and used here. Burial No. 51, a fully flexed burial, had a broken sandstone vessel in the grave. It was at a depth of 2.9 feet which may well be taken as the point in depth marking the beginning of the Archaic 3 period. Thus the Archaic 2 period is responsible for about 3 feet of the midden deposit, i.e., from the 6 foot level to the 3 foot level. In the levels above the 3 foot level and intruded through it are many of the sitting burials which are usually associated with the Archaic 3 pattern of culture.

The pottery zone appears to be not more than two feet deep, leaving only about one foot of debris as the deposit of Archaic 3 period. There has been so much digging in this midden in prehistoric times that some potsherds are found at all levels, but it is apparent that the concentrations of potsherds is in the top two feet of the midden. It is not possible here to separate the Pottery 1 from the Pottery 2 period. There is very little fiber tempered pottery to be found at this site. The amount is negligible, but there is some sand tempered pottery with which it is often associated. It is possible that the site may have been only lightly occupied in this period or that the pottery development here was so telescoped that limestone, sandstone and grit tempered ware differed little in the time of their introduction. There can be no doubt that the people of the Pottery 2 period largely completed the building of the midden, laying down the top two feet of deposit.

It is possible that in the Pottery 3 period, the Koger's Island people may have actually lived on the site. They did bury some 100 of their dead in the area excavated, but they seem not to have increased the depth of the midden perceptibly. The very considerable amount of broken shell-tempered pottery in the top

foot level would seem to indicate actual residence of the Koger's Island people on the top of the mound as well as its use by them as a cemetery. They were the first people having pottery at this site who used it as burial accompaniment.

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