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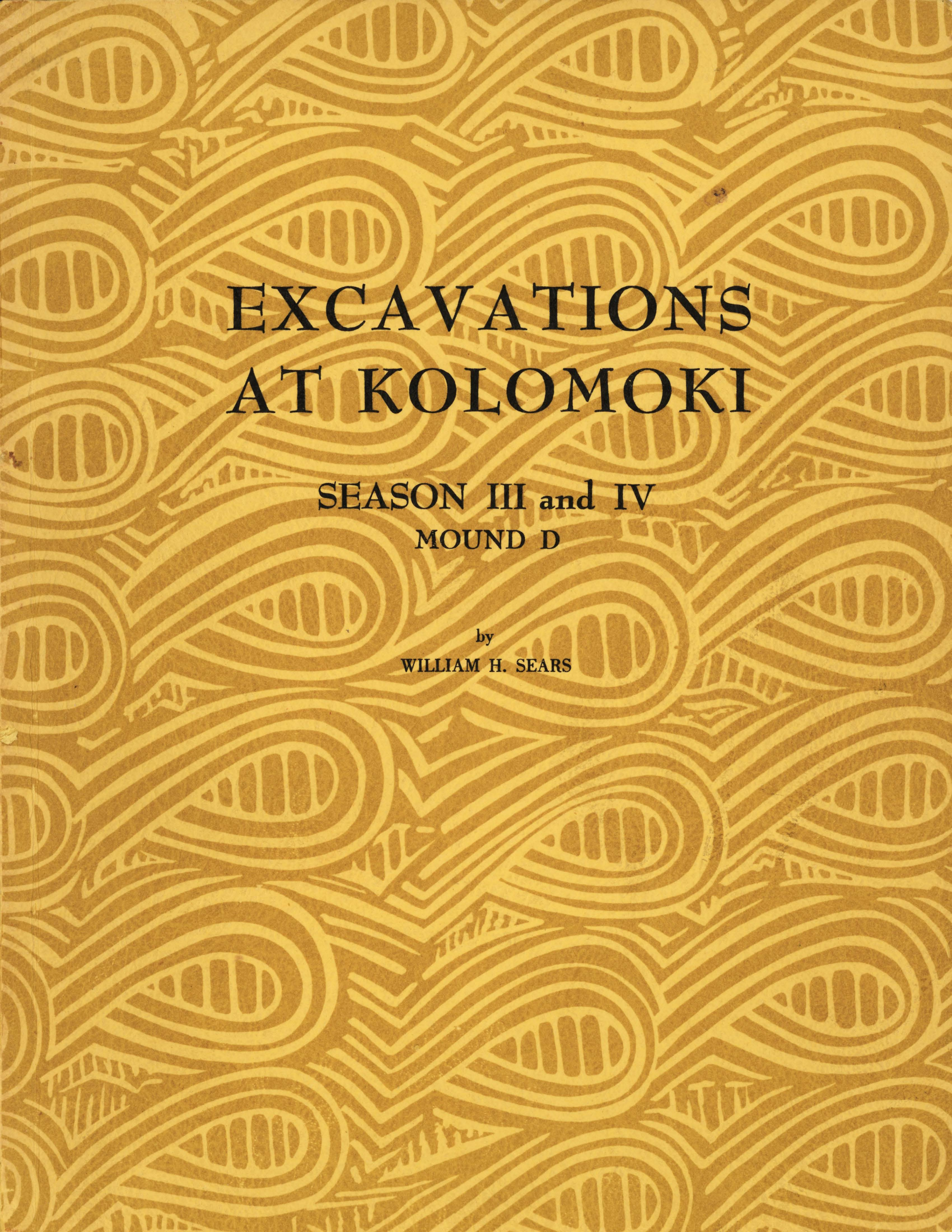
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EXCAVATIONS AT KOLOMOKI
Season III and IV - Mound D

WILLIAM H. SEARS

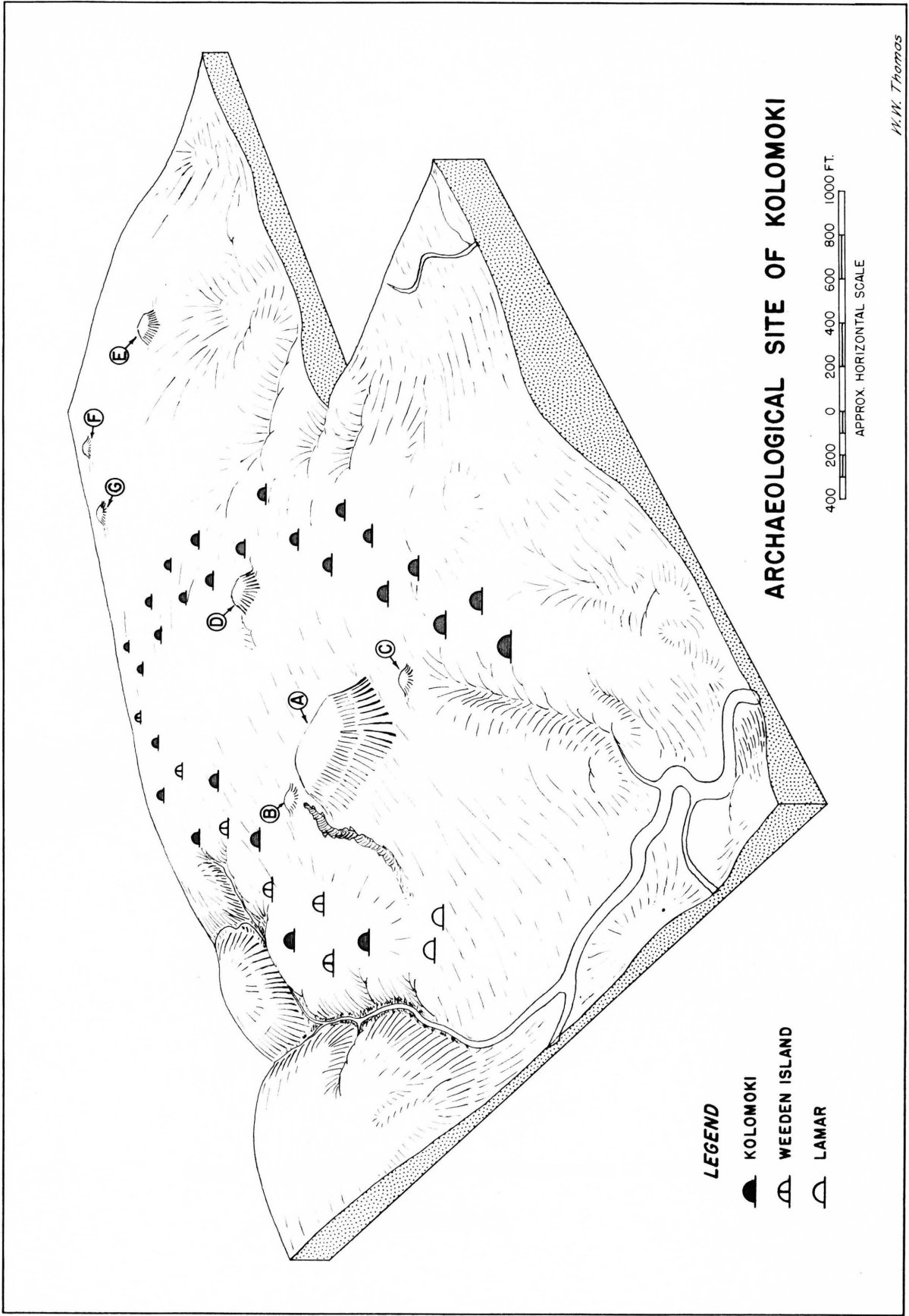


**EXCAVATIONS
AT KOLOMOKI**

**SEASON III and IV
MOUND D**

by
WILLIAM H. SEARS

EXCAVATIONS AT KOLOMOKI



LEGEND

● KOLOMOKI

◐ WEEDEN ISLAND

◑ LAMAR

ARCHAEOLOGICAL SITE OF KOLOMOKI

400 200 0 200 400 600 800 1000 FT.
 APPROX. HORIZONTAL SCALE

W.W. Thomas

EXCAVATIONS AT KOLOMOKI

SEASON III and IV
MOUND D

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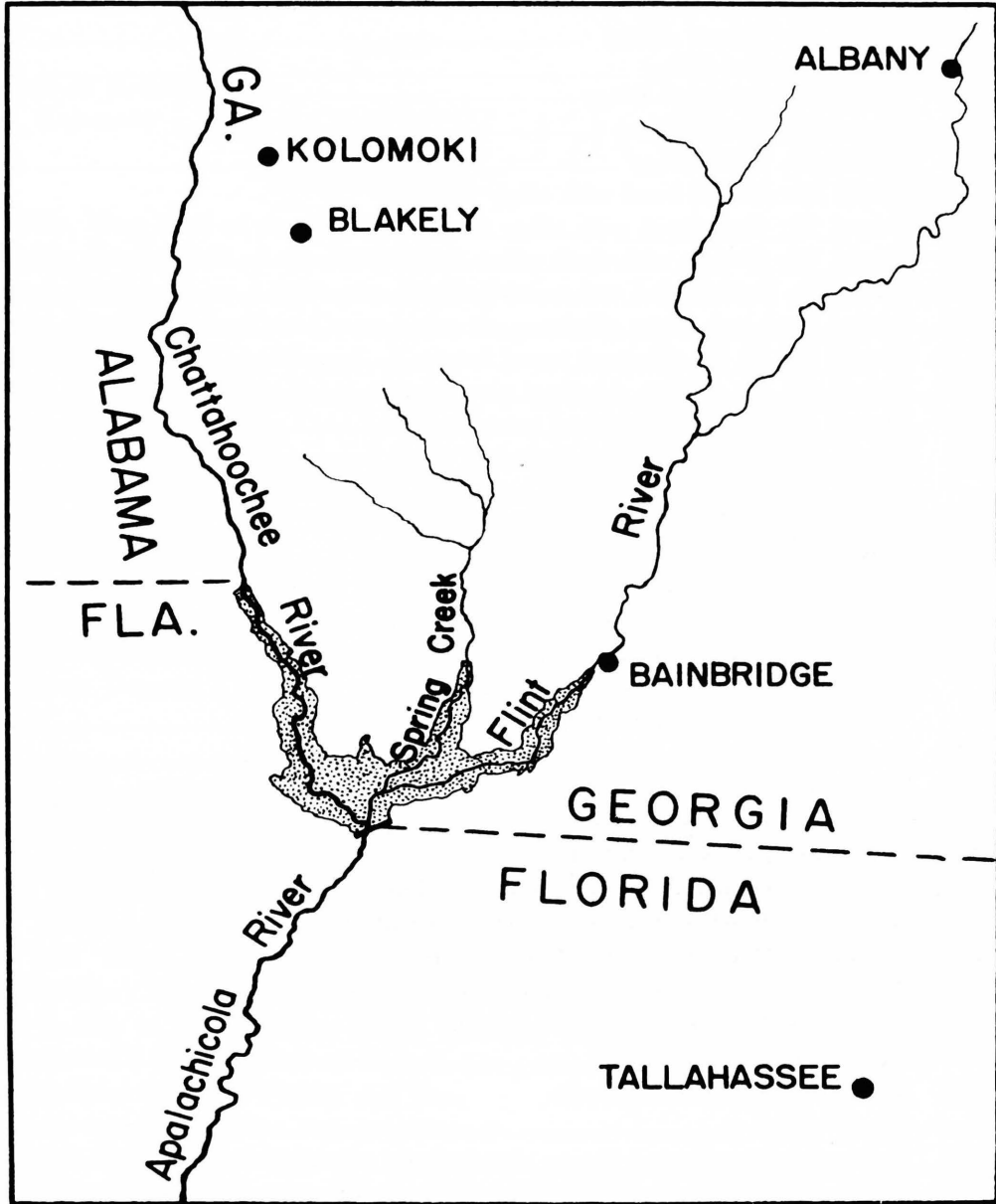
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Location of Kolomoki

FOREWORD

This report is intended to describe the excavation of Mound D at Kolomoki and to describe and discuss the information obtained through this excavation. Mound D was second in size only to the great temple mound at this site. Because of its size, its structural complexity, and the large mass of exotic ceramics in the mortuary cache under the east edge of the mound, excavation occupied all of the 1950 and 1951 field seasons.

Due to the structural complexity, representative of rather involved and elaborate mortuary ceremonies, this report is somewhat fuller than the report on work in the village (Sears, 1951a) or the report on Mound E (Sears, 1951b). As in those reports, chapters are devoted to excavation technique, features of construction, and ceramics. And, as in the Mound E report, all restorable vessels (except duplicates), partially restored vessels, and type sherds are illustrated.

This same elaboration in mortuary ritual, reflected both in mound construction and in the ceramics, has necessitated a somewhat lengthy concluding section which discusses immediately relevant comparative material and presents the writer's views as to the probable ceremonialism and related social, political, and religious systems involved.

Since I was in charge both seasons, all errors of omission and commission in field work, analysis, and

in the writing of this report may be attributed directly to me. Mr. Henry Brett was Field Assistant in 1950. Much of the work on the initial approach trench was in his charge, and was efficiently carried out. Many of the photographs were also taken by Mr. Brett. In 1951 Mr. L. Larsen was assistant. Although chiefly occupied with the excavation of Mound H, he was of great assistance in the work on Mound D.

Funds for the work were provided by the Department of State Parks, State of Georgia, as in past seasons, since the archaeological work and exhibit preparation are part of the plan for over-all development of the park. As always, the central office in Atlanta was helpful and co-operative, with Mr. A. Moye, Director, and Mr. John Mann, Assistant Director, helping out on a number of problems.

A great deal of the interminable and tedious work of pottery reconstruction was done by Miss Mary Kellogg. Without her able assistance, I sincerely doubt that many of the vessels would have been restored to their present state. Thanks are also due Miss Carol Camp and Mr. Jim Daley, who did the drafting, and Mr. Daniel Voss for line drawings of the pottery.

If the reader finds some of the burial practices and some of the pottery vessels incredible, I can only assure him that I share his feelings, as do Mr. Brett, Mr. Larson, Miss Kellogg, and Dr. A. J. Waring, Jr., who helped excavate some of them.

1 INTRODUCTION

Excavations in portions of the village area at Kolomoki (Sears, 1951a) demonstrated that two distinct ceramic, and hence cultural, complexes existed at Kolomoki. One of these is the Weeden Island, characterized by the various painted, punctated, incised, etc., types of the Weeden Island series (Willey, 1949, pp. 407-408) plus a representation of *Napier Complicated Stamp* and a Swift Creek II complicated stamp. The other complex possessed only *Kolomoki Complicated Stamp*, a late development in the Swift Creek tradition, and a plain ware, *Kolomoki Plain* (Sears, 1951a). This was called the Kolomoki complex, and is diagnostic of the Kolomoki period, the period of temple mound and burial mound construction at this site.

In 1949, Mound E was excavated (Sears, 1951b). This burial mound proved to be in the Weeden Island tradition, employing a mass pottery deposit on the east edge of the mound, a deposit of the cremated remains of one individual in a central pre-mound pit, several trophy skulls, and three extended burials. However, although vessels classifiable as Weeden Island types were present in the pottery deposit, the dominant types were *Kolomoki Complicated Stamp* and *Mercier Red on Buff*. The latter type employs free hand red painted designs on Mississippian vessel forms. The presence of *Kolomoki Complicated Stamp* is particularly important in that it relates the burial mound, classifiable as Weeden Island I in Willey's seriation (Willey, 1949) to the Kolomoki period. This makes clear two rather important points concerning Weeden Island and the Kolomoki complex:

(a) Weeden Island burial mounds and mortuary ceramics need not be produced by a culture classifiable as Weeden Island on the basis of pottery found in their village area;

(b) a Weeden Island type burial mound need not have *Wakulla Check Stamp* in it to belong to the period of fully developed Mississippian culture. This is in direct contradiction to Willey's seriation, but has been documented in the Mound E report and will be elaborated on at some length in the concluding section to this report.

Mound D, the subject of this report, adds to this picture in many ways since it is also, after much elaboration has been factored out, a Weeden Island type burial mound employing a cache of specially made pottery.

The evidence to be presented in detail indicates that Mound D is the result of an extremely involved and elaborate set of mortuary practices, apparently centering around the burial of one individual—involving in addition the burial of other persons who may have been slain during the rites—and the deposition of trophy heads, long bone bundles, and cremated remains. The ceremonialism implied is extremely reminiscent of the mortuary ceremonies described for the Natchez and Taensa in the 17th century (Swanton, 1911, pp. 138-158, 264-265). The pottery complex includes many elaborate effigies and some unusual painted ware, but on the whole the ceramics may be viewed as a development out of the Mound E complex, particularly out of the free incised effigies there.

A midden deposit under Mound D, in place in a few spots and scraped up into the fill of a primary mound in others, contains only sherds typical of the Kolomoki complex, a large number of them typologically late in the development of the complicated stamped type. This midden serves to date the burial mound securely in the latter part of the Kolomoki period.

Comparisons of the Mound D material with other Southeastern manifestations, carried out in limited fashion in this report, indicate that this mound, as a part of the Kolomoki complex, is related to Florida Weeden Island sites, the Coles Creek-Plaquemine period in Louisiana, and other mature Mississippian (Sears, 1951, n. d.) complexes in the general Southeastern area.

A detailed summation of the evidence for temporal and cultural allocation of this burial manifestation will be found in the conclusions to this report, accompanied by a summation of the probable mortuary ceremonialism involved and its survival into the historic period.

2 EXCAVATION

The aboriginal construction of Mound D was so involved and elaborate that frequent changes in technique were required in its excavation. No one excavation method would have made feasible a proper recording of the details of construction. After all, the only function of an excavation technique is to make possible such recording. It does not matter, abstractly, whether excavation proceeds along arbitrary lines or whether one follows the details of construction. What does matter is uncovering or slicing up these details in such a way as to make possible the two-dimensional recording of three-dimensional features.

The interrelated systems of horizontal and vertical control remained constant through the two seasons of work. Before excavation began, the entire mound and some area on each side was staked out in a ten foot grid system, using the standard Chicago (Cole and Duel, 1937) system of stake and square nomenclature. All stakes were located on a one foot contour interval map of the mound and adjacent area, with precise notation of the elevation of each stake at the point of entry into the mound. The grid system, arbitrarily oriented with the cardinal directions for purposes of convenience, was tied into the base map of the site for future reference.

An arbitrary datum plane slightly above the highest point on the mound was established, using a sturdy permanently-emplaced tower as an instrument station. All vertical measurements were measured down from the arbitrary level by use of a transit. Usually profiles were drawn by marking a level horizontal line on the earth face and recording its elevation. Subsequent vertical measurements involved in scale drawings were made up or down from this line, while horizontal measurements were made from the permanently-emplaced stakes of the grid system. Locations for all features were also handled in this fashion. Except for the production of a contour map of one of the early mound stages (See Fig. 12) the transit was used only as a level after the first contour map had been produced.

Actual excavation began with a north-south trench placed well east of the apparent mound edge. This trench was longer than the mound was wide, so that after the cut reached the actual mound edge, the long profile would show mound fill in the center and undisturbed earth beneath the plow zone to the north and south.

After this trench had been opened, and its base carried well down into undisturbed soil, we began vertical slicing on the west edge of the trench. Thus

the west profile moved constantly toward the mound. At first, few features of interest appeared, including only a few scattered patches of thin midden. At the lower edge of the mound, patches of yellow clay, in strong contrast to the normal red clay, were encountered.

Eventually, the face of the cut revealed a thick slice of mound fill, composed of a sandy red clay, superimposed on a thin, but very rich midden deposit which in turn rested on undisturbed basic soil. Movement of the central portion of the face a few feet farther west—far enough so that mound fill in the profile was $4\frac{1}{2}$ feet thick—produced the first vessel of the specialized mortuary ware (Plate XVI, 19). A few sherds of this specialized ware with decorative perforations, heavy modeling, or red paint, had appeared in the preceding two or three feet, but this vessel was certain evidence that we were coming into a mass pottery deposit on the east side of the mound, in the Weeden Island tradition. As it later turned out, another six inch cut in this profile would have put us into a solid mass of pottery.

Since we had no desire to work in such a deposit while involved with a four to ten foot thick mass of superincumbent mound fill, we changed our technique again and began to excavate from the top down. In the vain hope that only excavation of the central part of the mound would be necessary, we limited our work from the top down to the central section of the mound, encompassing the crest, some distance down the back slope, and eastward to connect up with the face which had moved in from the east. As things worked out, this centrally located cut encompassed the entire pottery deposit, but did not give us enough data on other features.

In this type of excavation, rather difficult to control, no attempt was made to excavate in arbitrary levels. As the profiles (Figs. 1 & 2) show, a thick layer of red clay was penetrated first. As soon as we reached the base of this, we became involved in a number of badly decayed burials, including single skulls, partial cremations in place, and long bone bundles. Charcoal over and around the bones indicated an attempt at mass cremation of the entire set of burials, although most bones were not even slightly calcined. Since these were lying on the yellow clay (See Fig. 11) we had penetrated into the yellow and brown earths to some extent by the time we had cleaned up the burials. photographed them in place, and removed them. After we removed the burials, progress downward was halted except for that necessary in planing a level floor.

Most of these burials had decayed to a one inch thick layer of yellowish material, which extended almost over the top of the yellow-brown earth stage, but the material could not be recognized as individual burials.

At this point, it was realized that the vertical walls of the cut were going to be too high for safety if we continued directly downward as planned. Therefore the walls were cut back two and one half feet from the stake lines so that after continued cutting downward on the stake lines we would have a two and one half foot step back in the three vertical walls. By the time we reached the mound base, these set-backs were about one-third of the way down from the mound top.

Continued cutting downward revealed a number of new features which eventually necessitated another change in procedure. First, we encountered log molds, large empty holes, with traces of wood around their peripheries, remaining from large vertical logs which had decayed in place. We also found traces of wood from horizontal poles, which apparently were fastened originally to the tops of the vertical logs. Elevations on the tops of the vertical holes were taken, and the horizontal logs were plotted on flat floor plans. To keep track of the vertical logs, we left small cylinders of earth around the holes. The tops were cut off as their height became awkward, but in this way, we were certain that postholes in the old ground surface, as much as eight feet lower, related to these holes.

Working down still further, we discovered an abrupt change in soil type, color, and texture, indicating a new feature. The later layers were stripped off of that part of this early construction which was within the limits of our cut, revealing part of an apparently circular flat-topped core mound. At this point, work downward in most of the main cut ceased because of the appearance of two features in front of this core mound. First, a rock slab and log tomb containing the body of a female was located at the northeast corner of the core mound. After cleaning this, and stripping away some of the earth around the outside, we were back down to the mass pottery deposit (see Plates II, III, IV). Cleaning this mass of complete and broken vessels in place took up most of the remainder of the 1951 season.

Plates III and IV indicate the problems involved better than words can. Obviously, it was necessary to clean the entire mass in place, moving as few sherds or vessels as was humanly possible. Thus associations could be worked out in proper context, particularly the associations of sherds belonging to specific vessels which had collapsed in place from the weight of the earth. We accomplished this with only moderate success, and although material was eventually removed in batches of sherds probably associated, the final work of restoration took up approximately two thousand

hours of labor. As indicated in Chapter V, Ceramics, most sherds from particular vessels have probably been associated. This is not certain, however, and, unfortunately, other soft-paste vessels were unrestorable.

The location of individual vessels is given on a diagram, Fig. 12. However, the locations are not completely reliable because of conditions noted above. Another factor contributing to the confusion is that many vessels were undoubtedly thrown onto the pile, or otherwise deliberately smashed. As indicated on Fig. 12, the body and head of the seated human effigy, vessel 1 (Plate VII), were found almost fifteen feet apart.

The problem of recording locations for individual vessels was solved by using the camera. A grid was superimposed on the deposit, and the vessels were photographed from above with the grid in place. We used a ten foot square grid with cross strings at the five foot mid points. Vessels were not moved until rush 8x10 prints were on hand so that individual vessel numbers could be entered directly on the print, which was kept as a permanent record. Not only was this method very satisfactory, but it is doubtful that scale drawings of equal value could have been produced by any other method.

After the vessels were removed, it became apparent that portions of a midden deposit of the Kolomoki period lay in place beneath the pottery. The stripping off of the midden finally placed the base of this portion of the excavation on sterile basic soil beneath the mound.

Work thus far had resulted in stripping various earth layers, burials, pottery deposits, and so on, away from the nearly vertical east face of a portion of the core mound. In an attempt to determine the inner construction of this core mound we initiated cautious vertical slicing into this face. After only two or three feet of progress, it was obvious that the yellow-green sandy clay covering over the core mound concealed an assortment of primary structures, which would require use of a stripping technique for proper definition. Work in the 1950 field season was called to a halt at this point, since we were confronted by another full season of work in stripping most of the remainder of the mound, layer by layer. Tarpaper was laid over the section of the core mound exposed, and several feet of earth was piled over the paper to secure things for the winter.

At the beginning of the 1951 season, we first removed the earth and tarpaper in the central cut. With this out of the way, a reasonably successful stripping program was initiated, which was adhered to until the core mound had been isolated, two major construction stages down. The entire mound was still not removed, however, since we left the shoulders intact all the way around except in the front (east) where our cut had advanced through them. This re-

duced the amount of earth to be removed and restored by one-third. Although a few minor burials may have been missed in these shoulders, it seems relatively certain that only minor features were missed and that the saving in time and money offset the slight risk.

Before entering into a layer-by-layer description of the remainder of the work, it should be noted that the layered construction frequently broke down on the west side of the mound. Apparently in this area it was not considered necessary to adhere to the use of the special earths, and the small amounts which were used had their pattern confused because of pits intruding into the earlier stages from the surface of the next to last construction stage. However, the picture generally is as follows:

The outer capping over the mound was of the local red clay, somewhat sandier than that in the plaza in front, indicating that it came from a pit of some depth. Probably the head of a nearby gully is involved in the borrow pit. As work proceeded, it shortly became apparent that whenever we encountered masses of rock well down in the red clay, they were covering burials which rested on the next stratum, a yellow clay derived from stream beds about one-half mile distant. In no case were burials actually in the red clay cap.

Finally, after we had stripped red clay off most of the mound and had sorted out the tangle of rocks and burials, the stage preceding the red clay became apparent. This stage, covered with a thick layer of yellow clay, was apparently circular in ground plan, but was flat-topped (See profile, Fig. 10). The summit plateau, about ten feet above the old ground surface, was approximately fifteen feet in diameter. This plateau was covered almost solidly with human remains, partially cremated in place. Complete bodies, skulls, and bundles of arm and leg bones were deposited on this surface, wood piled over them, and the mass ignited. Before combustion was complete, earth and rocks—the beginning of the red clay cap—were piled over the mass, causing the preservation of large amounts of charcoal. Unfortunately, slightly roasted human remains do not seem to keep as well as either thoroughly calcined ones or untouched bones. In most cases, the bone had disintegrated to masses of yellowish-blue material, the color and consistency of Roquefort cheese. As noted earlier, we were able to plot specific burials in only a few cases. A great many other burials were disposed on the sides of this flat-topped yellow clay mound, including the above types as well as extended bodies in log-outlined tombs, the latter also usually partially cremated in place. Ornaments listed in the next chapter were found with many of these.

The precise location of each burial on the surface of this stage will be found on p. 11, where they are individually described, and on the stage drawing,

Fig. 11. Very surprisingly, although the mound was three-quarters completed with this flat-topped yellow clay mound, three large pits were dug through its peripheries (See Fig. 12 for location) all the way back down into basic soil. A number of burials were placed on the log-lined bottom of each, and more burials were placed in the earth as the pits were being refilled.

A number of problems arose during the excavation of this yellow earth stage. As may be noted on the profile, Fig. 2, the stage was actually built of yellow clay only in the southern half of the mound. The northern half was built of brown earth, with only a thin layer of yellow clay over the surface. After working down into the yellow clay in the southern half, we discovered that it had been used to cover a succession of burials over, or nearly over, the round core mound cap. Reading from the top down, we encountered first two single skulls with a long bone bundle between them, then a mass cremation involving several individuals, next an extended body in a log-outlined niche, and finally another extended body in a log-outlined niche. Others were in the immediate area, as shown in Fig. 11, but not directly over the core mound cap. Except in this area, very few burials were actually included in the fill of this stage. As shown by the neat interlensing of the brown and yellow earths on the west profile of the main cut (Fig. 2 and Plate III-a), this stacking of burials, covering them with rocks and yellow earth, went on concurrently with piling the brown earth in the northern half of the mound. The brown earth, as noted earlier in the discussion of work in the main cut, covered the remains of the scaffolding. Apparently we have here a case of specialization in types of earth used—yellow clay carried from stream beds half a mile away to cover burials, and brown earth, apparently top soil from a wooded area, used over the scaffolding. Each area, of course, had great ceremonial importance, but apparently it was considered desirable to keep them separated.

As noted in the discussion of work in the main cut, the vertical postholes in this brown earth were usually open so that the highest points found were plotted, and then a ring of earth was left around the hole to keep track of it. In this way, we were certain of the relationships of postholes finally found in the original ground surface beneath the mound and the upper portions of these same posts first found as much as eight feet higher. Horizontal logs, the top framing of a scaffolding, were plotted on flat plans whenever a number of them were cleared. Also elevations were noted on the plans.

The problem in removing the yellow-clay and brown-earth stage was the isolation of the core mound, not an especially difficult task except for complications introduced by burials, usually single

skulls, tucked into niches along its nearly vertical sides. Another problem was raised by the mass cremation, roughly in the center of the core mound, just north of the circular cap (See Fig. 12). Obviously, a rectangular outline between four of the large vertical logs was something out of the ordinary, the most immediately obvious feature being masses of decayed wood. In careful excavation, workmen first went through a log cribbing, composed of criss-crossed light poles arranged between large horizontal side logs. Under this, on a burned surface, masses of the now familiar cheesy bone were encountered. At least two individuals were present, since outlines of four femurs could be traced when the mass was sliced up. There may have been more than this. Only one set of teeth was encountered, but since they were in conjunction with some long bones near the center of the mass, obviously we were not dealing with even one articulated burial. The partial cremation definitely took place in the log outline, two logs high, since the surface under the bones was burned, as were the horizontal side logs. The cribbing, however, was certainly put on after the cremation was considered to be complete.

Finally, the stripping operations revealed the outline of this core mound, a rectangular platform with steep sides and a circular summit section near the south end. In most respects, this core mound is a miniature of the temple mound across the plaza. Even the circular summit on the core mound may have some significance, since the south end of the temple mound is also higher than the north end.

From the position of pottery, burials, etc., moved previously, it was apparent that this core structure with the poles of the scaffold protruding from it, was completed when the mass pottery deposit was made.

Technique was changed again to work out the interior construction of this mound. Now that we could see the total edifice, we returned to the slicing technique, previously initiated into a portion of the mound and then dropped. It seemed the only proper method, now that the total structure was clear. Now, however, we were enabled to start cutting from the north end, using a cut extending completely across the mound. The base of the cut, constantly moving south, was kept on what seemed to be the general level of the pre-mound building soil surface, although it was realized that numbers of intrusions went into the basic soil from the base of the core mound. We came back to these later, after the core mound had been removed.

As the face moved northward, with recording of the profile every few feet, we obtained verifications of the supposition derived from the first short cut into the core mound—that its unity was only apparent and that in fact it covered several other structures. Particularly important was a primary mound, apparently

the only structural stage in which local earths were used. Most of it was the excess dirt resulting from the excavation of the graves noted below. To this was added a large amount of midden material which had been scraped aside before the graves were dug, and more of the same midden scraped from adjacent areas. This solved one problem quite neatly, i.e., why we had found fair amounts of midden in place in some areas, particularly to the east, and none at all in other sections, particularly to the west. This stage was finally covered with rocks in a loose covering. Presumably it was intended to be a solid covering on completion, but little attempt was made to fit the rocks closely. It seems almost certain that the large vertical logs for the scaffolding were set in place and held erect by earth piled around them. Several of them did not enter into the subsoil at all, although others did, and one sat squarely on one of the side logs of a sub-mound grave. In all probability, then, this primary mound was constructed at least in part to support the scaffolding.

One skull, with an elaborate iron-copper-pearl ear ornament (Burial 50) was placed squarely on top of this mound, exactly as a skull had been placed on the primary mound at Mound E, although the Mound E specimen had a copper-covered wooden ear ornament (Sears, 1951b, p. 4).

When the face finally reached the edge of the circular cap on the core mound platform (See Fig. 12), traces of a log construction, resting almost on the original ground surface, appeared. We cut into this from all four sides, and then sliced down from above, revealing a roughly square framework of logs some four to six inches in diameter, with lighter poles running lengthwise at approximately six inch intervals (Fig. 10). This rested on a low platform of burned earth, which had on its surface, under the logs, more partially cremated bone. This platform in turn was over the grave of one individual, almost certainly the key individual whose death and burial had initiated the cycle of mound building and mortuary ceremonies. The earth platform, burned on top, represents the earth which would not go back into the grave, since space was taken up by the body, rocks, and logs. The square framework, having no actual function in supporting anything, was, I am convinced, the litter on which the individual's body was transported to this point.

This main grave, which was of normal size (See Fig. 10), was of a composite rock slab and log type. The walls had been lined with roughly-fitted slabs of the local sandstone, and then two or more large logs had been fitted across the top. More of the slabs, laid horizontally, were then supported in place by these logs. The remains of the individual himself (See description of burial 77) were decidedly unre-

markable, those of an adult and rather robust male, accompanied only by large numbers of good sized barrel-shaped conch shell beads. However, the differential preservation of this burial was rather amazing. Most of the body had decayed to the usual mass of bone splinters and stains so common in this mound. Part of the right arm, most of the right ribs, part of the right side of the pelvis, and the upper half of the right femur were in perfect condition, almost as hard as fresh bone. The wide difference in preservation was due solely to a large mass of white mold and rotted wood, products of one of the large logs, which had collapsed around and encased this well-preserved portion of the body.

All other burials in the original ground surface had been covered by the primary mound. A floor plan of these graves in relationship to the main burial and the primary mound will be found in Fig. 10. The important point is that they were all complete bodies, extended with knees slightly flexed and heads to the east, with one exception. All graves were log-lined and no ornaments were found except conch shell beads. The exception was a small mass of cremated bones, placed in a shallow pit (Fig. 10, burial 75) which had either been lined with split cane matting, or which retained the impression of the split cane basket in which the bones had been stored and buried. All bodies, in a sad state of decay, were adult males, as best as we could tell.

It may be helpful at this point to reverse normal procedure and outline the construction of this mound as it was built. A reconstruction and interpretation of the ceremonies involved, as well as comparisons to possibly related mortuary ceremonies known at other times and places in the Southeast, will be found in the concluding section of this report.

The first step, of course, was the interment, in an area cleaned of debris, of the five bodies and one bundle or basket of cremated bones. The bodies were placed in graves, the sides of at least two supported by, or lined by, large logs. Since the bodies and logs took up much of the excavated space in each grave, piling of the earth into and over these graves produced a small mound. In this process of piling, six large logs were supported in a vertical position, and lighter poles were fastened across their tops to form a scaffolding. Additional earth, perhaps needed to support the vertical logs properly, was scraped up from immediately adjacent areas, thus concentrating a large amount of midden material. Rocks were then piled over the surface of this mound, and a single skull (trophy head) was placed squarely on top, directly under the center of the scaffold.

Three burials, all in rock slab and log tombs, were made immediately after this scaffold had been completed. These were:

1- The main burial (No. 77) was off the south edge of the scaffold. Probably this body had rested on the litter atop the scaffold, and was taken down on the litter, then placed in the grave. Since the grave top of rock slabs and logs prevented earth from seeping into the grave, the earth removed from its excavation produced a small platform or mound when placed back on top. Some bones, almost certainly including a human skull, were then partially cremated on top of this platform, after which the litter was placed on top of the partially cremated bones.

2 and 3- Two other bodies, the only two definitely female skeletons in the mound, were then placed side by side in two log and rock slab tombs, with heads to the east, directly in front (east) of the scaffolding. These tombs were set on top of the front edge of the primary mound, and were actually above-ground sepulchres for some time, until the next construction stage had been completed, and possibly after that. The fact that these three bodies all date from the time of completion of the scaffolding, prior to other developments, plus the common tomb type, indicates a definite relationship between the three individuals involved. Shared use of the undoubtedly ceremonially-important scaffold and of the rock slab and log tombs are features of too great significance to be dismissed as coincidence.

The next step was that of constructing the rectangular core mound, with yellow clay sheathing, to combine the area of the main burial and the primary mound. Apparently it was considered necessary to keep track of the location of the main burial. Not only was the yellow clay thickest here, but over the main burial and its superimposed litter a circular cap, several feet high, was added to the otherwise rectangular and flat-topped core mound (See Fig. 12 and Plate III). I might point out here that the Temple mound at Kolomoki, some three hundred yards across the plaza, of which this core mound is a miniature, is also higher on the south end, perhaps the location of the more important of two temples or the priest-chief's dwelling which had, of course, a sacred character.

The cremation in place of several individuals apparently took place while this cap was being added (Burial 49). The burial is just off the north edge of the core mound cap, although the relationships of the large logs running east-west on the south side of this cremation to the fill in the circular cap indicate that the logs were in place before the fill was added. In any event, two or more individuals were cremated here in a sunken area outlined by large logs, which was then roofed over by criss-crossed poles. It is just possible that these poles may have supported a thin layer of yellow earth, which would have given the flat top of the core mound a superficially completed and uninterrupted appearance.

This yellow clay was also packed around the sides of the two rock slab and log tombs in the front-center of the core mound. Apparently, the clay did not cover their tops, but was simply packed carefully around the outside. Some heavily fired red clay found on top of them may be this yellow clay which was turned red by burning in place. If so, the charcoal and ashes were carefully removed. Only a few fragments of charcoal were found when we removed the clay.

The mass pottery deposit was made after this core mound platform had been completed, some of the vessels lying against its front surface. This relationship is indicated in Fig. 12. Four trophy skulls, or heads, were included as parts of this pottery deposit.

During the next period of construction brown earth was piled around the framework of the scaffolding, comprising the northern half of the mound, while yellow clay was piled over the southern half. No burials were included in the brown earth at all. Evidently it was carefully chosen for the specific function of covering the scaffold remains. Yellow clay was reserved for burials. A steady succession of interments was made in the southern half of the mound, over the primary burials, the location of which had been marked by the disc-shaped superstructure on the core mound. Just over this disc, one individual was placed in a log outline, extended, with his head to the east. Some attempt was made to cremate this body in place, resulting largely in breaking down the bone structure for easier decay. The charcoal and remains were covered with rocks and clay, the area was smoothed out, and another body treated in precisely the same fashion was placed immediately over the first one. After some smoothing of the area again, a mass cremation took place, involving several individuals. Finally, as the last stage in this immediate location, two single skulls and a bundle of long bones were placed on the ground, and the covering and levelling of the area produced the southern edge of a flat-topped mound. In addition to this stack of burials over the main burial, other bodies, skulls, and long bone bundles were interred in the adjacent area (See Fig. 2). A particularly interesting burial (23), deposited at the same time as one of the extended bodies over the core mound cap, contained a body which had been cremated in a log outline—a cremation like that of the above mentioned individuals. However, the body was decapitated first. After the calcined bones from the body had been scraped together in a pile, the skull was placed at the east end of the log outling.

A superficial layer of yellow clay was placed over the brown earth (See Fig. 1) and the top of the mound, completely covered with yellow earth at this stage was levelled off to produce a platform ten feet high and fifteen feet in diameter.

Two events took place at this time. First, an assortment of skulls, long bones, and bodies was partially

cremated in place on the platform (See Fig. 11). Second, apparently some people had been forgotten in earlier ceremonies because three large pits were let down from the surface at this time (Features 3, 4, 6), and burials in log outlines were made at the base of them. In two cases (See Fig. 12) one body seems to have been extended, pressed closely against the wall, and accompanied by a single skull in the central position. Then, as the pit was filled, more single skulls were added. Apparently, the sets of trophy skulls placed as the pits were filled bore some definite relationship to the individual whose body was buried. The walls of these pits were not vertical so that burials in Fig. 11 which seem merely adjacent to the pits were actually in the pits.

More single skulls were placed in the sides of the mound at this stage, although in view of the tremendous numbers of cremated individuals and human parts at the top, we might almost suspect that they had rolled down the mound sides out of the crematory fire. However, since they were facing east in all determinable cases, we ruled accident out. This was the last stage of ceremonialism. The mound was completed by piling a thick layer of red clay over the entire structure, particularly the sides.

The mound had remained almost unchanged until we began our excavation. The only disturbance noted of any consequence was a large, but shallow, pit coming down from the mound crest. In all probability this may be attributed to the work of Palmer for the Bureau of American Ethnology in 1881 (Waring, A. J., Jr., personal communication). Further, there had been some shifting around of the soil on top of the mound. Thick humus characterized the surface in one quadrant, whereas the remainder of the mound crest had none at all; in fact it appeared to have been planed off to a degree. Some of the movement also produced a buried sod line down the front (east) face, covered by a layer of red clay (See Fig. 2) with a newly-developed humus on top of it. This disturbance was probably the result of the removal of trees by the C.C.C. in the thirties (Fairbanks, C. C., personal communication). This work was tremendously helpful, since all roots had rotted to bark cylinders by 1950. Without the earlier tree removal, excavation of Mound D would have been much more expensive and difficult.

As noted above several times, comparisons of the probable mortuary ceremonialism involved in Mound D to those apparent in other archaeological manifestations and in ethno-historical accounts will be found in the concluding section of this report. The same section also contains a hypothetical reconstruction of the ceremonies, derived from the comparison made. It may be pointed out here that there is an amazing resemblance of these ceremonies to the Natchez funeral ceremonies as they were observed in the 17th century (Swanton, 1911, pp. 138-158).

100R40

100R60

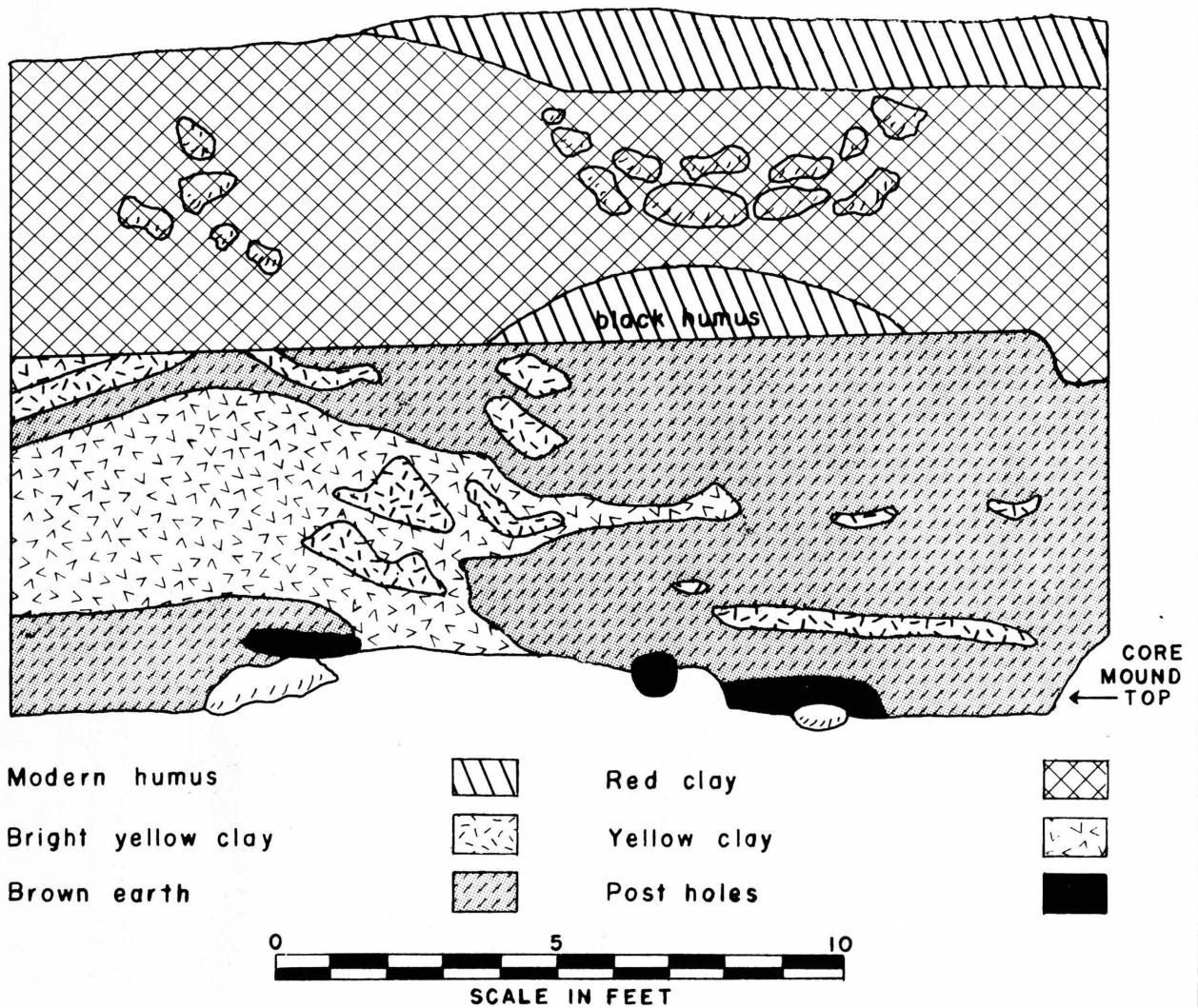


Fig. 1. Profile. West wall of the main cut. Black humus is related to burial 32 (See Fig. 11).

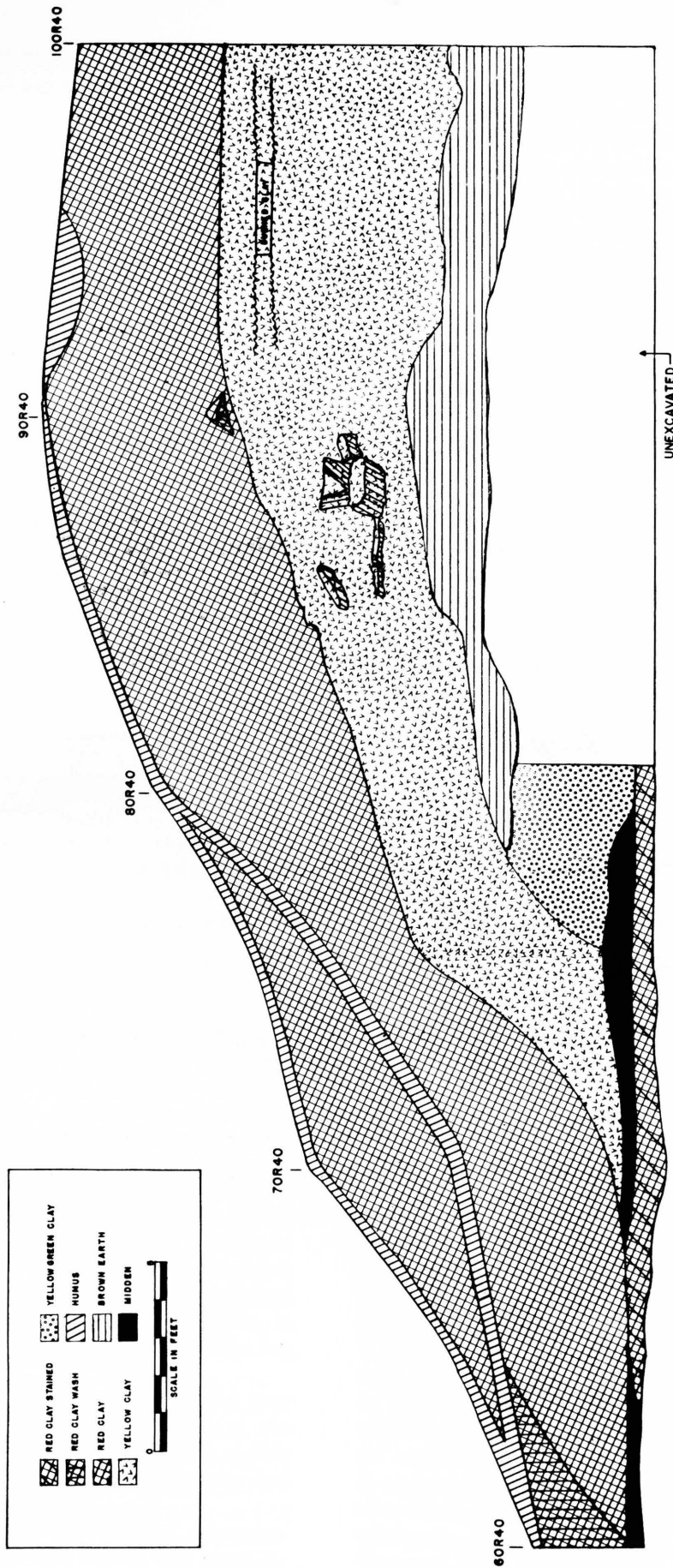


Fig. 2. Profile. South wall of the main cut. Rocks and burned clay are connected with burials to south (See Fig. 11).

3 THE BURIALS

The large number of burials in Mound D, the great diversity of burial types, and the relationship between the types of burials and the several levels of mound construction necessitate rather involved descriptions and tabulations of the burials. This has been done in as concise a fashion as seemed possible, and it is believed that any desired information can be found in one or more of the four sections which follow. Section I lists the burials serially, the numbers being those which were assigned as the burials were encountered in the field. A description of each burial, its context and accompaniments, if any, is included. For convenience in comparative work, the burials are tabulated by type in section II and by strata in section III. Section IV is a tabulated list of artifacts found with burials.

SECTION I—SERIAL LISTING OF BURIALS

- 1-Complete body. Cremation, performed outside mound area. Interred as mass (basketful) thoroughly calcined bone. Resting on yellow clay surface.
- 2-Complete body. Relatively thorough cremation in place. On yellow clay surface. Long stone chisel (See Plate No. XXXII) accompanying burial.
- 3-Long bones, apparently only one arm. On yellow clay surface.
- 4-Bundle of long bones, apparently arm(s) and leg(s). On yellow clay surface.
- 5-Single skull. Calvarium only? No teeth found. On yellow clay surface.
- 6-Single skull. In yellow clay stratum.
- 7-Complete(?) body. Partial cremation in place. On yellow clay surface.
- 8-Complete body, Slightly flexed at the knees. Grave base the surface of the primary mound, grave sides and ends rock slabs, top rock slabs supported by logs. No accompaniments. On east (front) edge of core mound, east of scaffolding. Female.
- 9-Complete body, probably flexed. On yellow clay surface.
- 10-Single skull, in pottery deposit. String very small cylindrical shell beads, av. 1 mm. by 1 mm., in neck area. One cymbal-shaped copper ornament, with two larger barrel-shaped conch shell beads near lower edge, near mid-point of left fronto-parietal suture.
- 11-Single skull. In pottery deposit. Single cymbal-shaped copper ornament, located roughly on skull as number 10. Male.
- 12-Single skull. On central east edge of pottery deposit. Male.
- 13-Complete body. Partial cremation in place. On yellow clay surface.
- 14-Complete(?) body. Cremated outside mound area, deposited as basketful thoroughly calcined bone fragments. In yellow clay surface.
- 15-Long bone bundle, long bones from two or more individuals. In yellow clay. (One of stack over disc-shaped core mound cap.) One large cymbal-shaped iron ornament with burial.
- 16-Single skull, adjacent to burial 15, deposited at same time. Sheets of mica, including one shaped roughly like a projectile point, with the skull. Probably male.
- 17-Single skull. Accompanied by a few medium-sized conch shell beads. On yellow clay surface. Very heavy parietals, probably male.
- 18-Single skull, resting on hand. On yellow clay surface.
- 19-Single skull plus a few long bones. Probably not complete body. Attempted cremation in place. Copper cymbal-shaped ornament with skull, pad of cordage, fabric, and grass preserved on back of ornament. On yellow clay surface.
- 20-Single skull. On yellow clay surface.
- 21-Single skull. On yellow clay surface.
- 22-Mass cremation, more than two individuals. Partial cremation in place.
- 23-Mixed type. Niche in yellow clay surface, grave size, outlined by logs. Body cremated inside this outline, ashes gathered and deposited in center. Skull, not cremated, placed on top of nest of rocks at east end of niche. (Mica discs on ears of skull.)
- 24-Single skull. On yellow clay surface. Male.
- 25-Extended burial in log-outlined grave. Pearl beads in small mass of soft black material on chest, large sheet of mica near head. In yellow clay, one of stack over circular core mound cap. Rocks and clay placed over burial before crematory fire extinguished.
- 26-Single skull, accompanied by a few unidentifiable long bones. On yellow clay surface. Male.
- 27-Cremation. Cremation carried on outside mound area, deposited as basketful thoroughly calcined bone. On yellow clay surface.
- 28-Extended burial in log outline. Slight cremation in place. Few barrel-shaped conch shell beads around neck. One cymbal-shaped iron ornament at waist, another at neck. In yellow clay over core mound cap. Rocks and clay placed over body before crematory fire extinguished.
- 29-Single skull. On brown earth under yellow.
- 30-Single skull. Position as number 29.
- 31-Extended burial in log outline. Slight cremation in place. Pearls at neck and waist. One of stack in

- yellow clay over disc-shaped core mound cap. Rocks and clay placed over burial before fire extinguished.
- 32-Almost complete cremation in place, complete body? In log outline at top center of the yellow clay stage. White clay and rocks placed over before fire completely burned out. Probably part of mass cremation at this stage, but special treatment in part.
- 33-Calvarium. On yellow clay surface.
- 34-Extended burial in log outline. Partial cremation in place. Over south edge core mound cap.
- 35-Single skull. Iron cymbal-shaped ornament near chin. In yellow clay.
- 36-Single skull, in brown earth.
- 37-Single skull, in brown earth.
- 38-Calvarium, on yellow clay surface.
- 39-Single skull, on yellow clay surface.
- 40-Single skull. On original ground surface adjacent to rear (west) edge of the core mound.
- 41-Single skull plus fragments radius, ulna, possibly traces of hand bones. Eight cymbal-shaped iron ornaments in string (line) under skull. Skull resting on hand with forearm attached? In top levels feature three fill.
- 42-Leg bones. Two femurs, traces of other long bones. Apparently a bundle. In lower levels feature three fill.
- 43-Single skull. In lower levels feature three fill. Male.
- 44-Single skull. On brown earth.
- 45-Single skull. Part way down in feature three fill.
- 46-Extended burial. Against north wall at base of feature three. Burial on basic soil at base of feature, bones against log mold from log lining feature base.
- 47-Extended burial, partial cremation in place. Pearl in chest area, medium-sized barrel-shaped conch shell beads around neck. Just above burial 46, skull adjacent to skull of burial 45. Male.
- 48-Single skull, in feature three fill. Near north wall, same level as burials 46 and 48.
- 49-Partial cremation in place, number of individuals. Four femurs observed on slicing through mass. In tomb set into core mound surface. (Core mound built around lining logs, two logs high.) Covered with cribbing of light poles, upper poles east-west, lower layer north-south. Some indication that yellow earth may have been piled over cribbing on the level of the core mound platform so that the platform, on completion, had a uniform, flat, and level surface. Few perforated pearls near one set of teeth in center of the mass.
- 50-Single skull. Elaborate copper-iron-pearl ornament over right orbit. In approximate center of primary mound outer surface. Male.
- 51-52-53-Two, possibly three calvaria (collapsed in mass, cheesy consistency), one long bone bundle. On the base of feature three, resting on sterile basic soil.
- 54-Single skull. On rear (west) edge core mound, part way down slope. Almost certainly in feature four fill. Male.
- 55-Cremation, complete body. Cremation carried out outside mound area, basketful thoroughly calcined bone fragments deposited, in yellow clay slightly above core mound surface.
- 56-Single skull. Location as number 54. Also almost certainly in feature four fill.
- 57-Extended burial in log and rock slab tomb. In front edge of core mound, adjacent to other rock slab and log tomb. Female.
- 58-Two sets cut human jaws, fragments of upper and lower jaw in each set. In brown earth over rear (west) edge core mound.
- 59-Single skull resting on hand with forearm attached. In top levels feature six.
- 60-Single skull. On old ground surface in front (east) of core mound. At the south end of the pottery deposit. Few large conch shell beads, barrel-shaped, with the skull.
- 61-Single skull. Approximately half way down in feature four fill. Resting on hand bones, traces of radius and ulna present. Few large barrel-shaped conch shell beads accompanying bones. Probably male.
- 62-Single skull, on hand definitely, traces of radius and ulna present. In upper levels of feature four fill. Male.
- 63-Single skull, definitely resting on hand, forearm attached. Large irregular sheet of mica attached. In upper levels of feature four fill.
- 64-Single skull. On basic soil at base of feature four.
- 65-Single skull. Covered with thin sheet of mica on upper surfaces. Upper levels of feature six fill.
- 66-Single skull. Fragment of cymbal-shaped iron ornament, probably cymbal-shaped, near right side of skull. On base of feature six, resting on basic soil.
- 67-Calvarium. Resting on basic soil beneath core mound, near the main burial (number 77).
- 68-Semi-flexed burial, knees slightly bent, hands over abdomen. In log-lined pit in basic soil, beneath primary mound.
- 69-Semi-flexed burial, in log-outlined pit into basic soil, beneath primary mound. Number of medium-sized conch shell beads, barrel-shaped, in the neck region, several more in knee area. Male.
- 70-Semi-flexed burial in rectangular pit, possibly log-lined, in basic soil. Few medium-sized barrel-shaped conch shell beads in neck area.
- 71-Semi-flexed burial in rectangular pit, probably without logs, in basic soil. Few small barrel-shaped beads in neck area.
- 72-As 71, no beads.
- 73-Cremated remains complete body. Cremated outside mound area, deposited as basketful thoroughly calcined bones. Three projectile points mixed with

- bones. Standard Kolomoki type. Bottom of calcined mass resting on slabs sheet mica, also calcined. Adjacent to northwest corner litter over main burial.
- 74-Partial cremation, in place, of two or more individuals. Resting on grave fill of the main burial, under litter.
- 75-Pocket of partially cremated bones, deposited in mat-lined pit or in basket. Pit retained slight impression of split cane basketry or matting (See Plate XXXVI). In basic soil under primary mound.
- 76-Semi-flexed burial in log-outlined grave into basic soil beneath primary mound.
- 77-Main burial. Semi-flexed body, in pit outlined with rock slabs; rock slab cover supported by logs. Many large conch shell beads in neck, waist, knee and ankle areas.

SECTION II — TABULATION BY BURIAL TYPES

Cremations: 11

- 1-Basketful thoroughly calcined bones. One individual.
- 2-Partial cremation in place. Possibly complete bundled body. Stone chisel (See Plate XXXII) accompanying.
- 14-Basketful thoroughly calcined bones. One individual.
- 19-Partial cremation in place. Skull plus a few long bones. Accompanied by copper cymbal-shaped ornament, large, with pad of cordage and grass preserved on back.
- 22-Partial cremation in place. More than two individuals.
- 27-Basketful calcined bones. One individual.
- 49-Partial cremation in place, more than two individuals. Area outlined by logs, two high, covered with cross poles after cremation. Few pearls with mass.
- 55-Basketful thoroughly calcined bones. One individual.
- 73-Basketful thoroughly calcined bones. One individual. Three projectile points with bones.
- 74-Cremation in place, two or more individuals.
- 75-Partially cremated bones in mat-lined or basket-lined pit.

Long Bone Bundles: 5

- 3-Apparently arm(s?) only.
- 4-Arm(s?) and leg(s?).
- 15-Bundle many long bones. Accompanied by large cymbal-shaped iron ornament.
- 42-Two or more sets legs bones.
- 53-(?)

Extended Burials: 18

- 7-Complete(?) body, partially cremated in place.
- 13-Complete body, partial cremation in place.
- 25-Log-outlined tomb. Fully extended body. Partial cremation in place. Pearls and mica.

- 28-Complete body. Fully extended. Log outline. Some attempt at cremation in place.
- 31-Complete body. Fully extended. Log outline. Some attempt at cremation in place. Pearls.
- 32-Fully extended(?). Partial cremation in place. Log outline.
- 34-Fully extended. Partial cremation in place. Log outline.
- 46-Fully extended, but jammed laterally against north wall log at base feature three.
- 47-Completely extended, log outline, in feature three above 46. Pearls and conch shell beads.
- 8-Rock slab and log tomb. Female, fully extended. Conch beads.
- 57-Rock slab and log tomb. Fully extended. Female.
- 68-Flexed at knees, hand on abdomen. Log-outlined pit.
- 69-Flexed at knees, hands on abdomen. Log-outlined pit.
- 70-Same as 69.
- 71-Flexed at knees, hands on abdomen. Conch beads. Rectangular pit.
- 72-Flexed at knees. Rectangular pit.
- 76-Flexed at knees, hand on abdomen. Log-outlined pit.
- 77-Main burial. Flexed at knees, hands on abdomen. Rock slab-lined pit, rock slab roof supported by large logs. Conch shell beads at neck, waist, knee, and ankle.

Single Skulls: 40

- 5-Calvarium
- 6-
- 10-Accompanied by one copper cymbal, very small conch beads in neck area.
- 11-Accompanied by copper cymbal.
- 12-
- 16-Sheet mica over skull.
- 17-Conch beads with skull, hand under skull.
- 18-Hand and forearm with skull, hand under skull.
- 20-
- 21-
- 24-
- 29-
- 30-
- 33-Calvarium
- 35-Accompanied by one iron ornament.
- 36-
- 37-
- 38-Calvarium only.
- 39-
- 40-
- 41-Resting on hand. String of eight iron ornaments under skull.
- 43-
- 44-
- 45-
- 48-
- 50-

- 51-
- 52-
- 53-
- 54-
- 56-
- 59-Skull resting on hand.
- 60-Accompanied by medium size conch beads.
- 61-Skull resting on hand. Medium size conch shell beads accompanying.
- 62-Skull resting on hand.
- 63-Skull resting on hand, irregular sheet of mica accompanying.
- 64-
- 65-Sheet of mica over skull, iron ornament also accompanying.
- 66-
- 67-Calvarium only.

Uncertain or mixed types: 4

- 9-Flexed burial? On yellow clay surface over east edge of the core mound.
- 23-Log Tomb. Skull buried in flesh. Body cremated in log outline, ashes scraped together in middle of grave.
- 26-Single skull and few unidentifiable long bones.
- 58-Two pairs of cut human jaws.

SECTION III—BURIAL TYPES IN EACH CONSTRUCTION STAGE

Burials in graves into old ground surface, covered by primary mound.

Burial Body Type Condition	Pit	Log Outline	Rock Slab	Extended	Knees Flexed	Partial Cremation in Place	Complete Cremation	Other	Total
Complete			8 57 77		8 57 77				3
Skull								50	1
Skull and Arm									
Long Bone Bundle									
Stage Total									4

CEC

CHART—Fig. 3

Burials on or adjacent to primary mound. The most important graves related to this stage. 8, 57 and 77, rock slab tombs, are those of the one male and two females, presumed to be the individual whose death initiated the ceremonial construction and two related females, presumably wives.

Burial Body Type Condition	Pit	Log Outline	Rock Slab	Extended	Knees Flexed	Partial Cremation in Place	Complete Cremation	Other	Total
Complete	68 69 70 71 72	75 76 69 70 76			68 69 70 71 72		75		7
Skull									
Skull and Arm									
Long Bone Bundle									
Stage Total									7

CEC

CHART—Fig. 4

Burials on the core mound (rectangular platform) No. 49 was a mass cremation. Grave may have been dug into core mound, or may have had core mound built around its log crib sides, and then been covered with superficial layer of yellow green clay, special earth for core mound covering.

Burial Body Type Condition	Pit	Log Outline	Rock Slab	Extended	Knees Flexed	Partial Cremation in Place	Complete Cremation	Other	Total
Complete		49				49	55		2
Skull									
Skull and Arm									
Long Bone Bundle									
Stage Total									2

CEC

CHART—Fig. 5

Burials in the yellow clay-brown earth stage of construction. The most important burials here are the extended bodies in log-outlined tombs, stacked up in the general area over the disc-shaped core mound cap, and consequently over the main burial. (Number 77)

Burial Body Type Condition	Pit	Log Outline	Rock Slab	Extended	Knees Flexed	Partial Cremation in Place	Complete Cremation	On a Surface	Total
Complete		25 28 31 34		25 28 31 34		22 25 28 31 34			5
Skull								6 35 16 40 29 37 30	7
Skull and Arm									
Long Bone Bundle								15	1
+ 2 sets cut jaws - 58									
Stage Total									14
CEC									

CHART—Fig. 6

Burials in the yellow clay surface. These are in large part the isolable units in the mass cremation which took place on the flat top of the mound at this construction stage. This area contained a fairly uniform layer of human remains, charcoal, burned earth, and rocks. In cases where the layer was extremely thin, units could not be isolated or numbered. I would estimate that the number below, 24, represents less than half the number of individuals disposed of in this mass cremation.

Burial Body Type Condition	Pit	Log Outline	Rock Slab	Extended	Knees Flexed	Partial Cremation in Place	Complete Cremation	On a Surface	Total
Complete		32				2 7 13 32	1 14 27	9	8
Skull								5 33 17 36 20 38 24 44	10
Skull and Arm						19		18 26	3
Long Bone Bundle								3 4	2
Other								23	1
Stage Total								24	
CEC									

CHART—Fig. 7

Burials in pits from yellow clay surface. The burials of the various types noted were at the bottoms of features 3, 4, and 6, and at various levels in the fill of these inexplicable ceremonial afterthoughts. It may be of some importance that most of the "head on hand" combinations were in the fill of these pits.

Burial Body Type Condition	Pit	Log Outline	Rock Slab	Extended	Knees Flexed	Partial Cremation in Place	Complete Cremation	Other	Total
Complete		46 47		46 47		47			2
Skull								43 64 45 65 48 66 51 52 54 56	10
Skull and Arm								41 59 61 62 63	5
Long Bone Bundle								42 53	2
Stage Total									19
CEC									

CHART—Fig. 8

Burials in the pottery deposit. These four skulls were so intimately associated with the mass pottery deposit placed against the east edge of the core mound that it seems certain that they were deposited, as fleshed heads, with the pots.

Burial Body Type Condition	Pit	Log Outline	Rock Slab	Extended	Knees Flexed	Partial Cremation in Place	Complete Cremation	Other	Total
Complete									
Skull								10 11 12 60	4
Skull arm Arm									
Long Bone Bundle									
Stage Total									4
CEC									

CHART—Fig. 9

Miscellaneous burial locations. Three burials, numbers 73, 74, and 67, are related to the main burial, and were found under the portion of the core mound erected over that burial. (Number 77)

SECTION IV—ORNAMENTS ASSOCIATED WITH BURIALS

Beads, conch:

Large: 28-47-60-61-69-70-71-77

Small: 10

Copper ornaments, cymbal-shaped: 10-11-19-50

Iron ornaments, cymbal-shaped: 15-28-35-41-66

Mica, irregular sheets: 16-25-63-65

Mica, perforated discs: 23

Pearls, perforated: 25-31-47-49

Descriptions of these ornaments and a discussion of their spatial, temporal, and cultural distribution in the Southeast will be found in a subsequent section. I might point out here, however, that the cymbal-shaped ornaments are not necessarily ear ornaments. A glance back through the burial descriptions will indicate that they occur most often singly, on the temporal region of skulls. Thus they might have served as hair ornaments. However, they also seem to have functioned as ear ornaments in some cases, were worn in strings around the neck in others, and in still other cases must have been used on belts, etc., around the waist, knees, and elsewhere. Probably Le Moyne's pictures of the Timucua (Lorant, 1946) give a fairly accurate idea of the variety of usages to which these all-purpose ornaments were put.

The probable significance of the stratification of burial types has been considered briefly in the preceding section, in terms of the several aspects of a continuing set of ceremonies. The same problem will be taken up again in the conclusions to this report, after more data have been presented in the chapters on pottery and artifacts, at which time some ethno-historical support for the interpretations drawn will be offered. A point which probably does need re-emphasis here is that all of the evidence clearly indicates continual growth of the mound without any appreciable time lag or interruption at any point. The total set of mortuary deposits, deposition of human remains, and building stages must be interpreted in terms of days, weeks, and perhaps, but not probably, months. The mound was certainly not produced by the deposition of sporadic interments over a long term of years, a term during which burial practices changed several times.

We may point out here that similar situations, associations of different burial types with different stages of mound growth, were observed in several Weeden Island period mounds on the Florida west coast, the Tampa Bay area, although the interpretation of the situations observed in these mounds is decidedly at variance with our interpretation of the Mound D situation. The excavation of two of these sites, Weeden Island and Thomas, has been reported in summary fashion by Willey (Willey, G. R., 1949, pp. 103-125), who was obviously suffering from a severe handicap imposed by the indifferently kept field

records of the various field supervisors, and by the policy of splitting material into lots for distribution between several agencies before even preliminary ceramic analysis had been performed.

The famous Weeden Island site itself had a very definitely stratified construction, burials occurring in at least the old ground surface, a core or primary mound, and a final capping. Flexed burials in round pits located in the old ground surface may not be related to the mound, since there appears to be an earlier (Glades period) midden. It does seem rather improbable that peoples in the Weeden Island period, well past the Glades period, should have selected the precise site of a Glades period burial concentration for their mound. In view of this, I am inclined to equate these burials with the slightly flexed burials in pre-mound graves in Mound D (See Chapter III).

As in Mound D, most of the primary extended burials were associated with the primary mound. Secondary bundle burials and single skulls were mostly in the last construction stage.

Willey's conclusion that the mound was built and used in the Weeden Island II period equates reasonably well with our data, assuming that Weeden Island II and Late Weeden Island are chronologically equivalent, if differing interpretatively. To his conclusion, I would add that the pre-mound flexed burials are probably of the same time (and culture) period as the rest of the mound, that among them is the individual whose death initiated the mound building, and that the total mound was probably produced through a continuing set of ceremonies so initiated, as was Mound D.

A somewhat similar situation obtained in the case of the Thomas Mound. Here, too, there appears to have been at least two construction stages, with a tendency for primary burials to occur in the lower levels with secondary burials at higher levels. Cremation occurred, as in Mound D, although apparently more rarely. One burial lay beneath limestone rocks, this being another Kolomoki feature (See Mound E. Sears, 1951b).

Since three separate field workers supervised excavation in the Thomas Mound over a span of thirty-seven years, from 1900 to 1937, one wonders whether a few sub-floor burials may not have been missed in the confusion. In any event, the total picture is again quite similar to that of Mound D, and again a Weeden Island II dateline is offered.

A similar situation was encountered again in the Prine burial mound at the Terra Ceia site, a site with a good sized temple mound (Bullen, 1951). Here the excavation was competently carried out and meticulously reported, so that we are sure of flexed burials in the lowest levels, at least partially intrusive into the old ground surface. Bundle burials, single skulls, and long bone bundles were found in higher levels.

This mound, too, is classified as Weeden Island II, since *Wakulla Check Stamped* is among the Weeden Island types.

Parrish Mound II (Willey, 1949, pp. 146-151) also offers useful comparative data, although it is in the Safety Harbor period and consequently later than Mound D or the Tampa Bay mounds discussed above. The first interments in this mound were in the form of a deposit of ashes from a mass cremation, the ashes being interred in a large pit. Over this pit was a primary mound containing secondary cremated burials, primary cremated burials, and secondary burials of other types. Many logs were then erected to form a rectangular enclosure, which appears to have been roofed over. A final layer of sand then covered the earlier mound and the remains of the structure, which had been burned.

Points of resemblance to Mound D are:

- 1-The sub-mound burial, a mass cremation in this case .
- 2-The primary mound, containing secondary burials.
- 3-The common use of cremation, including cremation in place of complete bodies (See No. 4).
- 4-Two bodies, on the east edge of Parrish II primary mound, were placed in log-lined pits and cremated in place. This was a common practice in Mound D. Too, the special treatment of two burials, placed east of mound center, may have some significance.
- 5-Erection of a structure in the primary mound.

The Mound D structure was definitely a scaffolding, while this seems to have been a building.

While there seem to be more differences than points of similarity, it may be important that we do have

cremation in place, secondarily deposited cremations, and a contained rectangular structure in this mound. This implies a continuity from the mortuary practices represented in Mound D at Kolomoki into the Safety Harbor period, an implication which has some importance in connection with the apparently late position of Mound D and the Kolomoki period in the Weeden Island time scale. More conclusive documentation for this apparent temporal position will be found in Chapters IV and V and will be summed up in the conclusion.

A few important points concerning the burials might be recapitulated here:

- 1-All semi-flexed burials were made in graves in the sub-soil beneath the mound. Note, however, that one of these—number 77—was not made until after a primary mound had been erected over the others. 77 deserves special notice because of the rock slabs used to construct the tomb.
- 2-Two other rock slab graves, containing the only two definitely female burials in Mound D, were on top of the primary mound, and consequently were made at the same time as burial 77 was made in the sub-soil.
- 3-All subsequent burials were either extended cremations in log outlines, single skulls, or long bone bundles.

Therefore it is certainly true that we have stratification in burial types in Mound D. However, when this stratification is interpreted in terms of the construction methods, levels, soils, and in relation to the scaffolding remains and the pottery deposit, it is relatively certain that the mound was produced through a continuous set of ceremonies, presumably initiated by the death of the individual represented in burial 77.

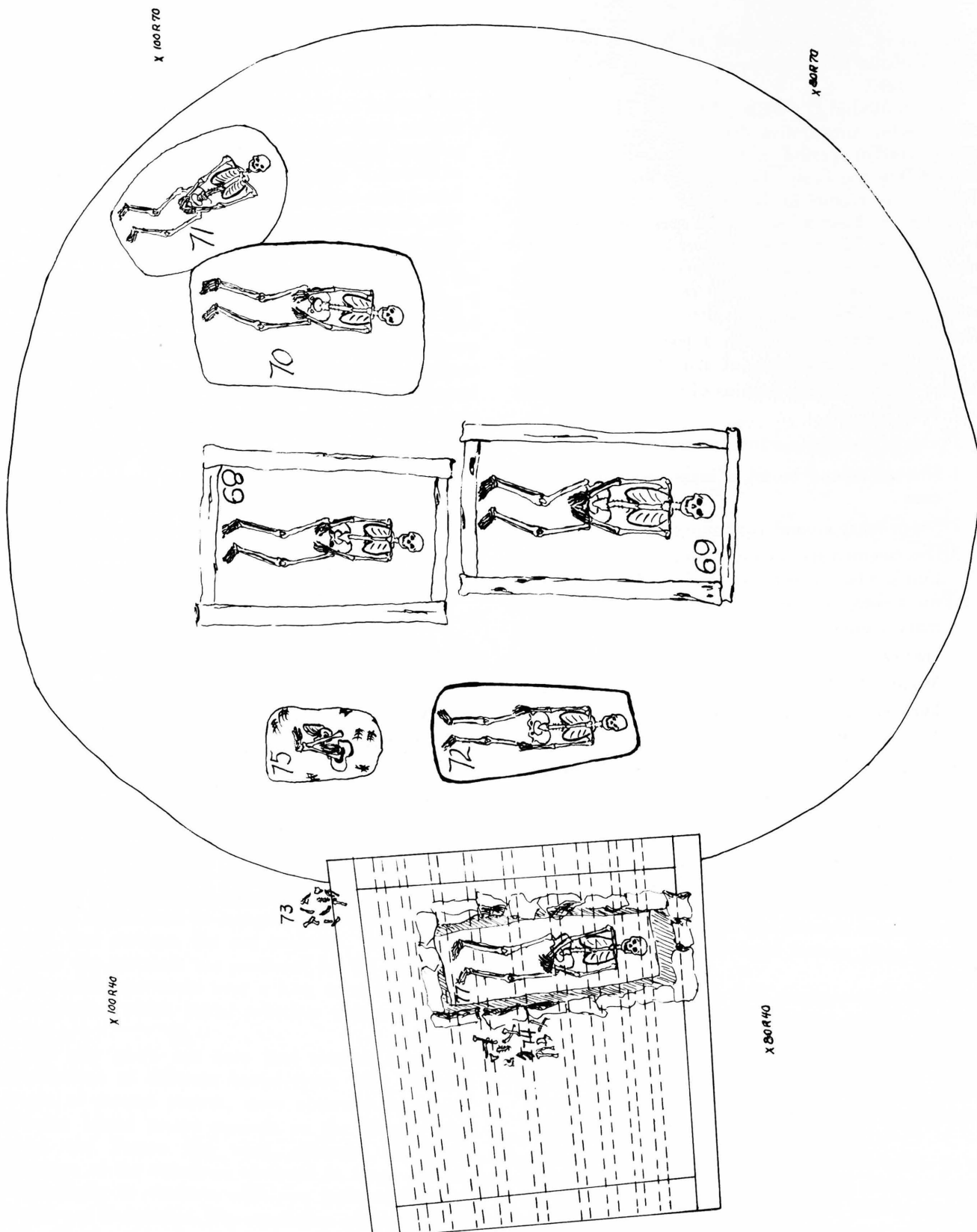


Fig. 10. Sub-Mound Burials. Graves 72, 75, 68, 69, 70 and 71 go into original ground surface beneath the primary mound whose outline is represented by the circle. Burial 77, the main burial, lies under a log framework, probably a litter. 73 and 74 are cremations. Scale 30 feet from 80R40 to 80R70. North to right.

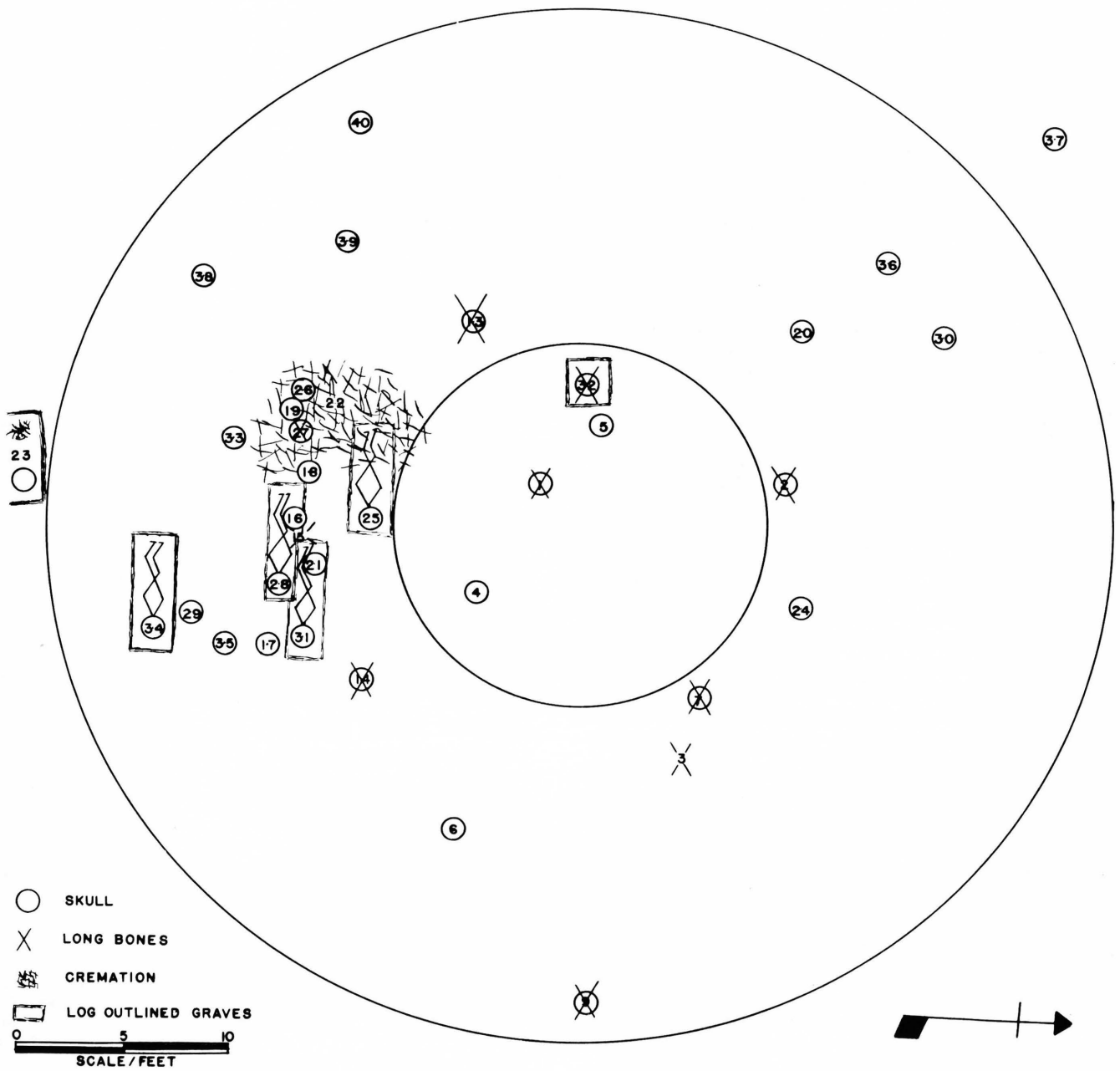


Fig. 11. Burials on and in yellow-brown stage. Rectangles are log outlines. Outer circle is the lower edge of this stage, inner circle the limits of the platform. Inner circle, 20 feet in diameter, has 100R50 as its center.

4 ARTIFACTS

The commonest artifacts in Mound D, other than pottery vessels, were personal ornaments of several varieties, in most cases in place on bodies or skulls at the time of burial.

The largest class consists of conch shell beads in a variety of sizes. Cymbal-shaped copper or iron ornaments compose the second largest class, with perforated pearls running a poor third. Probably the sheets and slabs of mica, some roughly shaped and a few with perforations for attachment, also fall in this class of personal decorations. A few pieces of cut conch shell were also found, and it may be that one specimen with traces of geometric incision is of some significance.

Other than the decorations, we have for consideration only projectile points—both with burials and from the midden—and one long stone chisel.

Conch shell beads may be divided into three classes on the basis of size: large, medium, and small. The division between large and medium, seemingly arbitrary, apparently has some real significance. Large beads, 2 to 3 cm. long, do tend to occur most commonly with the burials of individuals whom we assume to have been of particular importance, judging on the basis of position in the mound, grave type, and other associations. Medium-sized beads, from 1 to 2 cm. in length, are found with the burials of less important individuals. This phenomenon was also observed in Mound E at this site (Sears, 1951b). Of the large beads salvaged in Mound D, most were with the main burial, while six or eight more were scattered through the first burials under the primary mound. A few medium-sized beads were found with other extended burials and skulls, such as No. 61.

The very small beads, 1 x 1 mm. average, were found with only one burial (No. 10), a single skull in the pottery deposit.

Apparently, these beads are of little value in comparative studies. Identical forms seem to have a space-time range covering most of the prehistory of eastern United States, although they may be somewhat commoner in such later sites as Etowah, Moundville, Spiro, the Dallas focus, and so on.

Four of the copper cymbal-shaped ornaments, all differing slightly, were found with skulls. One plain one was on the forehead of a skull in the pottery deposit, and one which seemed to have had two small conch shell beads pendant from the lower rim was on the forehead of another pottery deposit skull. This seems to have been the sort of ornament shown on certain cult figures, for example, those on the copper plates from the Etowah site (Moorehead, 1932,

Figs. 13, 14, 15). This is the skull which had the very small conch beads, probably the same sort of beads as those shown in bands around the arms and legs of these cult figures. In the main burial in Mound E, similar beads were found adhering to each other in parallel rows (Sears, 1951b, p. 3).

The largest copper ornament found was also notable for the pad of fiber found behind it, preserved by the copper salts. Twine and fabric from this pad are illustrated and described in the appendix by Miss Dorothy O'Reilly.

The fourth copper ornament is unusual in that it is a composite form. The basic cymbal is copper, and is similar to the three specimens noted above. Inset in the central depression is a disc of iron, surmounted in turn by a pearl, which is held in place by a strand of cord running through the perforations.

The cymbal-shaped copper ornament has a wide spatial distribution in the Southeast, but in some degree a more limited range in time. Plain copper cymbals, in some cases with bone pins at the back for attachment, or, from the Florida sites, with embossed decoration, have been found at:

Site	No.	Type	Period	Reference
Mount Royal	2	Oval, plain Round, plain	St. Johns IIb	Moore, 1894 pp. 30-35 Moore, 1895 pp. 138-143
	4	1 Oval, pl. 1 round, pl. 2 Round, embossed		
Grant	9 plus	Square, round centers embossed some cases.	St. Johns IIa	Moore, 1895 pp. 482-488
Low Mounds South of Grant	1	plain	Late W.I.	Moore, 1895 pp. 493 Willey, 1949 pp. 277-278
Huckleberry Landing	2	plain, with pottery discs.	SR-SC	Moore, 1902 pp. 234-238 Willey, 1949 pp. 277-278
Crystal River	6	2 Rnd. perf. 2 Rnd. perf. silver plate, looks like Hopewell type, may be pair stuck together 2 precisely as Kolomoki	SR-SC	Moore, 1903 pp. 408-412 Willey, 1949 pp. 316-323

Site	No.	Type	Period	Reference
Moundville		Plain	Mature Miss. (cult)	Moore, 1905 pp. 161-162 Moore, 1907 pp. 402-404
Krogers Island	6	Plain	Mature Miss.	Webb, 1942 pp. 230, 253, 254
Etowah	41	Plain	Mature Miss. (cult)	Moorehead, 1932—p. 80
Tennessee	1	Plain	cult	Thruston, 1897 p. 303
Crooks	5	Conoidal	Troyville	Ford & Willey, 1940—pp. 121-123

The same artifact, with a pearl over the central perforation, has been found in Mound E at this site (Sears, 1951b, p. 3), at Spring Creek (Moore, 1902, pp. 304-305), at site classified as Santa Rosa-Swift Creek by Willey (1949, p. 292), and at Crystal River, also recently classified as Santa Rosa-Swift Creek (Willey, 1949, pp. 316-323). The latter site has been and is currently a subject for a good deal of debate, being re-classified almost monthly by someone. I prefer the dating in the Mississippian period, since there are points of resemblance to Kolomoki.

Specimens which are quite similar in appearance, and presumably in function, are those of wood covered with a thin coating of copper. These have a decidedly late distribution. I have been able to find mention of artifacts in this class at the following sites, although it is certain that many others have been found.

Site	No.	Period	Reference
Moundville		Mature Miss.	Moore, 1905 pp. 140, 198
Wheeler, site ten	2	Large Log	Webb, 1949 Plate no. 64
Krogers Island	1	Mature Miss.	Webb, 1942 pp. 227-228
Lu ^o 59		Mature Miss.	Webb, 1942 p. 114
Hiwassee	2	Mature Miss.	Lewis & Kneberg 1941-Plate 859
Etowah	2	Mature Miss.	Moorehead, 1932 p. 73

Although the one object of copper-covered wood from Mound D is not of this type, it is obviously a related form. Moreover, a copper-covered wooden specimen similar to those in the above tabulation was found in Mound E, which is slightly earlier than Mound D.

As noted in the tables above, the plain copper specimens are commonest in sites which are quite definitely late—the period of the Southern Cult or just before.

At Krogers Island, Mount Royal, Etowah, and Moundville the specimens are definitely associated with artifacts of the Southern Cult, and the two from Tennessee were in a grave with a cult gorget, the four-headed woodpecker type. Grant Mound, of a slightly earlier period, is classified as St. Johns IIa in Goggin's development (1949, p. 27), a site which is linked via the Long Nosed God to the Gahagan site and thus to the Davis site and the Alto Focus, the earlier level of the Gibson aspect (Krieger, 1949, pp. 197-199). Since this level is considered by Krieger to just precede the cult development at Spiro, we have a two-way check on time development.

I would not be surprised if the Low Mounds South of Grant, or at least Mound E in that group, were not of nearly the same time period as the Grant Mound itself. Mound E produced, in addition to the copper ornament, a vessel of the type *Mound Field Complicated Stamp* (Moore, 1948, Plate XXVII), the stamp placing it near the Kolomoki level. (*Op. cit.*, Plate LXXV).

The occurrence of these ornaments at Crystal River, Huckleberry Landing, Spring Creek, and Crooks Mound provides exceptions to the generally late position assigned to them. As already pointed out I prefer the later dating for Crystal River. Spring Creek may not be in the Santa Rosa-Swift Creek period either, Willey's assignment depending on one pot (Willey, 1949, p. 292). Since this vessel is typed as Crystal River Incised, the temporal-cultural allocation of Spring Creek obviously depends on the somewhat dubious position of Crystal River.

Huckleberry Landing and Crooks Mound are undeniably early, of the Troyville period and its probable partial equivalent in Florida—Santa Rosa-Swift Creek. However, these specimens are only superficially similar to the Mound D, etc., late specimens. They are deeply conoidal—reflecting the Hopewellian Bi-cymbal type whose center had to be fastened into a cylinder—and have buttons of various types at the back. This mode of attachment was lacking in the later specimens, which seem to have been attached to the ear lobe by bone pins, strands of cord, etc., when they were used in the ears at all.

In terms of form, the iron cymbals may be classed directly with the copper ones, the raw material otherwise confined to the Hopewellian period in the Midwest being their only unique point. Spectrographic analysis demonstrates that they are made of meteoric iron. Analysis performed by A. Uchiyama at the University of Chicago Institute for Nuclear Studies yielded the following nickel percentages for three samples: 20.93, 18.3, and 18.7. The opinion of the analysts is: "There is a possibility that the fragments are not of meteoric origin, but I would consider this possibility to be remote." (Harrison Brown, personal

communication, dated November 30, 1951.)

In addition to the Midwestern Hopewellian occurrences, meteoric iron has appeared at one Eastern site, Crystal River, the specimen having a central disc or plate on a copper ornament (Moore, 1907, p. 421).

While the use of meteoric iron for these artifacts is rather interesting, it is doubtful that it has any particular significance culturally, implying only that a Kolomoki craftsman secured some meteoric iron and discovered that it could be hammered out as could copper. Perhaps, since these ornaments were found mostly with trophy skulls, the craftsman was not even at Kolomoki.

It was pointed out earlier in this chapter that these cymbal-shaped ornaments cannot be classified entirely as ear ornaments, although some of them were certainly used in that manner. Unfortunately, this point can be documented only for Kolomoki, since burial descriptions at other sites rarely include the exact location of these cymbals on the body when found. The following table summarizes their find spots at Kolomoki.

<i>Type</i>	<i>No.</i>	<i>Burial</i>	<i>Burial Type</i>	<i>Pos. in Burial</i>
Plain	1	10	skull	left forehead
Copper	1	11	skull	left forehead
	1	19	skull	?near skull
Iron center with pearl	1	50	skull	right forehead
Iron	1	15	long bone bundle	center of bundle
	2	28	extended body	I at waist, one at neck
	1	35	skull	under chin
	8	41	skull with hand	in line (string?) under skull.
	1	66	skull	near right side skull.
Perforated mica disc	2	23	skull-body cremated	at ears

The copper-covered wooden specimen from Mound E (Sears, 1951, p. 4) was also on the left forehead, although the copper and pearl specimens with the main burial in that mound may have been worn at the ears, since there was a pair of them.

Considering the Mound D ornaments as a class, regardless of material, it is quite obvious that their use as ear ornaments is rare, only the mica specimens having definitely been so used. They were worn most commonly on the forehead, perhaps as hair ornaments. One of the Spiro copper plates seems to show such a

usage (Burnett, 1945, Plate LXXV). There is also evidence for their use in strings, perhaps around the neck (burial 41), at the waist (burial 28), and singly at the neck (burials 28 and 35). Le Moynes pictures of the Timucua (Lorant, 1946) probably illustrate the use of this type of ornament quite well. The cymbal-shaped ornaments appear almost everywhere on these Indians except in the ears, most ear ornaments among the Timucua being inflated fish bladders.

Perhaps the most unusual thing about these ornaments is their complete absence from the burials of personages who, we are sure, on the basis of position in the mound, grave type, etc., were of special importance in the ceremonies. All of the ornaments were with skulls except the two iron cymbals with burial 28, and one large cymbal with a long bone bundle (burial 15). This in itself is not particularly noteworthy, since human heads carried by the dancing figures in Southern Cult shell engravings and embossed copper plates usually have such ornaments at their ears. What is odd in Mound D is their absence from the more important burials. I can only point to the peculiar distribution of these items—objects representing considerable wealth at the time. The significance of this distribution is difficult to understand.

Perforated pearls were associated with burials 25, 31, 47, and 49. In no case was there any clear evidence that they were worn in strings. In fact, those with burials 25 were imbedded in a mass of soft black material, leading to the conclusion that they had been sewn to a piece of leather or fabric. As with the conch beads, the pearls give us no indication of cultural affiliations or temporal position, since they occur with some frequency from Middle Woodland times on in Eastern United States.

Mica sheets also have a rather wide distribution, although they are more common in the south Georgia-northwest Florida area than elsewhere. The sheet roughly given the shape of a projectile point has relatives at Hare Hammock (Moore, 1902, p. 207), at Yent with three specimens (Moore, 1902, p. 271), at Spring Creek (Moore, 1902, p. 304), and at Aspalaga (Moore, 1902, p. 482). The Yent mound is in the Santa Rosa-Swift Creek period, the others are Weeden Island and may be in the general Kolomoki period.

Mica discs with central perforations, four specimens in Mound D, are not at all common. I have found mention of them only at Hopson Mound (Moore, 1895, p. 529) and at Moundville (Moore, 1907, p. 395). Small square sheets from the Grant Mound (Moore, 1895, p. 476), may be functionally related.

Irregular sheets perforated for attachment, such as the set found in feature six (See Plate No. 36), are uncommon. Moore mentions similar specimens from

the Gilbert Mound (Moore, 1895, p. 469) and describes something of the sort from Davis Field (Moore, 1903, p. 469). Both of these sites are in the time range assigned to Mound D and the Kolomoki period (See Chapter VI and Sears, 1950).

Exact duplicates for the single stone chisel found with burial 2, almost certainly a ceremonial object, are difficult to find. Comparable specimens have a habit of leaning toward elongated celts, which in turn shade in to the various sorts of spatulate implements classed as "spuds". The best example of this tendency, and several of the best comparative specimens, is at Gahagan (Webb, 1939, Plate 27). Webb illustrates a range of elongated polished stone tools. Several of them are quite close to our specimen, for example numbers 3 and 5 in Plate 27, 3. Even closer is the third specimen from the left in the bottom row of Section 2 on the same plate. Mount Roval (Moore, 1894, Fig. 11) has nine specimens similar to those from Gahagan, covering a range from specimens very similar to the Mound D specimen to quite different ones. Another large assortment comes from Creighton Island, a Lamar period site on the Georgia coast (Moore, 1897, p. 33). The Haley site has also yielded comparable artifacts (Moore, 1912, Figs. 25, 30). Generally speaking, our implement seems to belong to a class of ceremonial artifacts which also includes the spud, and which occurs in a time range from the Alto-Gahagan level, just pre-Southern Cult, on to the proto-historic period. This is in line with other evidence concerning the temporal position and cultural relationships of Mound D to be discussed in the concluding section of this report.

Projectile points were found both with several burials and in the sub-mound midden. In either case, they fit into the rather loose class characteristic of the site as defined on the basis of work in the village areas. Twelve points were recovered from the sub-

mound midden. Eight points fall between 3.5 and 4.2 cm. Three points are 3.5 cm. and one is triangular, 3.5 cm. long. They tend to be thin, probably chipped from small flakes without a great deal of waste. Hafting appurtenances range from definite side notches through rather weak expanding stems to slight contracting stems. Seemingly there was no decided tradition in this area. A full range of these points is illustrated on Plate XXXVI.

I have been unable to find any described variety of points directly comparable to these, except those illustrated by Willey (1949, Plate 42). These are directly comparable, including the one triangular point. In general, these Weeden Island-Kolomoki points fall into a class of small, thin projectile points with slight stems or side notches, which seems to be a rather widespread Mississippian feature, contrasting with the earlier large dart points and the widespread later triangles.

It may be noted here that two triangular points appeared in Mound D. This may be an indication that a shift toward unmodified triangles had begun. The remains of one conch shell dipper was in the pottery deposit. It appears in Plate IV. A fragment of the upper portion of another shell with traces of geometric engravings (Plate 36) was also found.

No further discussion of the Mound D artifacts will be entered into at this point, except to indicate that the general level of temporal-cultural relationship seems to be the horizon characterized by such manifestations as Grant-Gahagan-Alto-Old Village. The period seems to be one in which the elaborate ceremonialism of the full blown Southern Cult was forming, but had not yet crystallized. In terms of time, a matter to be discussed again, it is believed that the grandchildren of people buried in these mounds may have witnessed or participated in cult ceremonies.

5 CERAMICS

Ceramics were found in three distinguishable contexts within Mound D. Since the ceramics in each context were distinctive, the three will be discussed and described separately. Relationships of the total assemblage will be discussed at the end of this section. The three contexts are:

I-The sub-mound midden, a deposit in place when the mound was built, or which was partially scraped up into a primary mound.

II-Sherds from the mound fill. Presumably most of these derive from the ground surface in the vicinity of the mound which was scraped up to provide part of the mound fill.

III-Vessels and sherds from the mass pottery deposit on the eastern edge of the mound.

Sherds from the lower eastern edge of the mound have not been included in any of the counts, except in cases of restored or partially restorable vessels obviously pertaining to the mass pottery deposit. Since the three pottery-bearing contexts made contact here, separation was uncertain in most cases.

SECTION I — THE SUB-MOUND MIDDEN

This small area of midden, only six to eight inches thick where undisturbed, was unusually rich even for Kolomoki. It yielded a total of 4,410 sherds, almost entirely confined to *Kolomoki Complicated Stamp* and the associated plain ware.

2,116 sherds, 48 per cent of the total, were decorated with complicated stamps, and may be classified as *Kolomoki Complicated Stamp*. This type was split in analysis, however, since it seemed desirable to check design distribution and rim forms associated with some very heavy stamps with lands and grooves running from 5 to 8 mm. in width (average 5.7 mm.), as contrasted with the normal Kolomoki range of 2 to 4 mm. (average 3 mm.). 1,817 sherds, 64.5 per cent of the total, fall into the normal, narrower class. Distribution of motifs in this class, with 235 sherds bearing recognizable motifs, is as follows:

Snowshoe	XXXX	18%
Bullseye	XXXXX	26%
Scroll	XXXXXXXX	34%
Others—each less than 5%	XXXX	22%
(X equals 5% to nearest 5%)		

Illustrations of most of these motifs will be found on Plates XXXIII and XXXIV. They are also illustrated in the report on the first season's work at this site (Sears, 1951a, Plate I and Fig. 4).

159 rim sherds were found, the percentage occurrence being:

Form I	51
I Ib	14
II	27
III	4
Others	4

(Rim form designation, cf. Sears, 1951a, Fig. 4)

A few of the rims bore recognizable motifs, but as in other samples, there was no association of specific motifs with specific rim forms.

329 sherds had stamping in the heavy range, 5 to 8 mm. Design distribution is as follows:

Snowshoe	XXXX	20%
Bullseye	XXX	15%
Concentric circles	XXXX	18%
Scroll	XXXXXX	27%
Others, each less than 5%	XXXX	20%

(X equals 5% to nearest 5%)

Rims, 28 in number, occur in only three forms:

I	39.3
I Ib	17.8
V	35.7

The form V rims are occasionally notched (See Plate XXXV), a reversal in these few cases to the Early Swift Creek tradition.

1,981 sherds are undecorated and sand tempered. As has been pointed out elsewhere (Sears, 1951b), regardless of the puristic feelings obtaining in some parts of the Southeast, plain sherds are of absolutely no value in this area from the end of the period of fiber tempering until the appearance of grit temper, in the very late Lamar period. Plain sand-tempered sherds in the intermediate period vary only in rim forms. To include them in our counts and percentages might make these counts and percentages more directly comparable to those published for the Lower Mississippi Valley, but would obscure real differences in the occurrence of the various culturally-significant types. A separate type, *Kolomoki Plain*, has been set up to take care of these sherds. Rim forms on plain sherds serve, to a degree at least, to distinguish this from earlier and related types, the narrow fold, rim form I Ib, being a period characteristic. The type differs from Weeden Island Plain, however, only in a more frequent occurrence of the narrow fold rim—Weeden Island more often using heavier folds and thickened rims of various types—and in a tendency toward better surface finish. Nevertheless, consistent sorting is

impossible, and in a mixed situation perhaps eighty per cent of the body sherds cannot be classified into *Weeden Island Plain* and *Kolomoki Plain*.

Plain rim sherds number 240. Form distribution is:

IIb	177	74%
I	14	6%
III	4	2%
II	45	19%

Very probably the incidence of IIb rims reflects rather closely the actual importance of *Kolomoki Plain* in the complex.

Seventy-eight sherds were definitely from the bases of vessels. Six of these were convex, the remainder being flat. Forty-five of the flat bases were disc-shaped, while the other twenty-one were square.

My subjective opinion, after handling the mass of sherds over and over again, is that this sub-mound midden is one of the latest deposits classifiable in the Kolomoki period. The stamping seems heavier and simpler than that in other units. The simplicity is particularly apparent in the scrolls. Especially in the heavy type, these scrolls are the sole motif carved on a stamp rather than being parts of more elaborate designs. This is a characteristic of the stamps in the Savannah and Wilbanks periods elsewhere in Georgia (Caldwell & McCann, 1941, p. 45; Sears, 1950b, n.d.), and contrasts with the more elaborate usages in such units as 28 at this site (Sears, 1951a, p. 11—Plate 1).

The rather high percentage of the large stamps, 24% of the total number of complicated stamped sherds, probably indicates relative lateness, since increase in size goes along with increasing simplicity in complicated stamp development. The simple rim form V and the complete lack of the heavy folded rim, an old form, also fit this developmental picture. Form V appeared previously at Kolomoki only in unit 21 (Sears, 1951a, pp. 12-18), while form III, the broad fold, goes far back in time.

There are a very few sherds deserving special attention, the types involved being illustrated on Plate XXXV with one exception. On Plate XXXV, *a* is the first specimen we have found of *Kolomoki Complicated Stamp* with a lug handle. It is worth noting that this specimen as well as the two with notched rim strips, *b* and *c*, have the short vertical necks typical of the Mississippian type, *Mercier Red on Buff*. The specimen *b* is particularly important in indicating cultural contact and relationship, since it possesses the notched added rim strip and slight vertical lip on the inner edge of the lip, a trait occurring not only on the Mercier type but very commonly found on vessels from late manifestations, such as the Dallas focus, in the Tennessee-Central Mississippi valley area. Since all occurrences elsewhere are late, these few cases at Kolomoki of this rather intricate detail of rim manufacture indicate at least a slight overlap of late

Kolomoki with the late Mississippi horizons (Dallas). It hardly seems possible that the trick of combining a notched added rim strip with the short vertical lip extrusion on vertical rims set in erect fashion of globular bodied vessels was invented at Kolomoki, there to be used only on a few painted vessels and on rims from two stamped vessels out of the thousands we have excavated. It appears that in cases of detailed resemblance of this sort the influence must have come from the area where the feature is common, not the reverse.

d and *c* are representative specimens from a class of half a dozen sherds with incised lines, none of them fitting the variants of *Weeden Island Incised* as we know them at this site. Those not illustrated have only one or two lines crossing the sherd.

h is one sherd of five with a line block stamp. This decoration, in a smaller and neater variant, occurred in the area as *St. Andrews Complicated Stamp* (Willey, 1949, pp. 385-386) beginning with the Santa Rosa-Swift Creek horizon. In North Georgia, it is a major motif in Woodstock and Etowah Complicated Stamps (Sears, 1952c). These Kolomoki specimens are probably closer to the Woodstock variant. They serve to demonstrate that certain styles can continue as very minor elements, perhaps to re-emerge in a dominant position later.

The last sherd in the special category is negative painted. Unfortunately, the painting is very faded and cannot be photographed. One edge of one line is quite sharp, and there is a trace of another line with a rounded end which terminates in the middle of the sherd. The sherd exhibits a marked peculiarity in that it fades severely when exposed to light and restores itself after a period of darkness. Presumably, it is closest to *Crystal River Negative Painted* (Willey, 1949, p. 391).

Although precise documentation of the late position of this unit within the Kolomoki period is not possible, all the indications point this way. In all probability, the total time span covered by the Kolomoki period is relatively short, but the point of relative position may be of some importance in interpreting the ceremonial nature of Mound D.

SECTION II — MOUND FILL

The assortment of sherds in the mound fill do not need detailed documentation. That they resulted from scraping up the soil in the immediate area for mound fill is indicated by the presence—in just over four hundred sherds—of sixteen motifs in *Kolomoki Complicated Stamp*, seven rim form variants on the stamped type, twenty-three sherds of Weeden Island types such as are found here in the Weeden Island period refuse deposits, and seventy-one Swift Creek II period sherds, usually found associated with the Weeden Island series at this site. The soil must have

been scraped up in the immediate area, since soil from areas any distance to the south would have contained larger numbers of Weeden Island sherds, and from any distance farther north, no Weeden Island sherds at all.

SECTION III — MASS POTTERY DEPOSIT

The mass deposit of pottery, placed against the east edge of the core mound, is illustrated in place in Plates IIb, III and IV. As Plate IV makes particularly clear, the pottery formed an almost solid covering, varying in depth, about twenty feet long and ten feet wide. There were several areas of particular depth and concentration. Since the pots were piled several deep in a number of locations, none of the photographs show all of the vessels. Fig. 2, a diagram of the core mound and the area excavated, gives the location of each pot as closely as we can estimate original positions from masses of sherds. This diagram also illustrates the orientation of the deposit with respect to other features. It is perhaps particularly important that the center of the pottery deposit is due east of the center of the core mound.

These vessels were not deposited with care. It is clear that they were thrown onto the piles, perhaps dumped from large baskets. Several of the particularly thick areas contained, in a jumbled mass, the fragments of half a dozen complete vessels. Intermingled as if they had smashed when dumped were parts of other pots of which only the parts found in the piles ever reached the deposits, parts of vessels of which other parts are in other piles, and masses of sherds representing only one or two sherds each from a number of vessels. Further, some vessels were deliberately smashed after deposition. The head of the seated human effigy, No. 1, was found on top of another pile ten feet away, as if knocked there by a blow. There are other examples of this sort of thing.

Since there is a distinct possibility that many of these vessels were used as temple furnishings or cult objects, it is at least possible that the temple was cleaned out at some point in the ceremonies and the contents dumped here. Other vessels, with kill holes cut before firing, were almost certainly made specifically for the mortuary ceremonies, and a few others, confined largely to the class of partial vessels and sherds, were everyday utilitarian forms.

In the discussion which follows, vessels have been classified on the basis of form, although the specific types, in terms of Willey's classification (Willey, 1949) are also given. In analysis of this material, particularly in comparative studies in the Southwest Georgia-Northwest Florida area, form seems more useful than does decorative technique. At the end of this discussion, two tables will be found, one listing the vessels by form, the other by type. The correlation between the two is slight.

Effigies in the Round:

This class includes four, possibly five, vessels, which are illustrated on Plates I, II, and III.

Vessel No. 1, the seated human effigy, has been partially restored in the facial area, as indicated on the three-quarter view drawing. Except in the facial area, where some incising occurs around the eyes, the decorative technique is modeling, supplemented by an over-all coat of red paint which is almost completely gone. A pre-cut kill hole is located in the center of the base of the piece, in the approximate location of the anus. The seated cross-legged position of this figure is unique, this pose with the hand on the chest occurring with some frequency in Middle America but not in North America. The head, however, has some rather close relatives. The vessel Moore found at Burnt Mill Creek (Moore, 1902, pp. 148-149) has precisely this sort of modeling on the face, the back of the head, and the hair, but has an open top. Since the top on ours is closed, we left the mouth open in restoration as the most probable style. The hair style, seemingly a roach or central crest with a lock down over the forehead, and a knot, perhaps with pigtail in the back, is matched not only on the Florida Coast but in many of the Tennessee-Cumberland effigies. On the whole, the head of the effigy is apparently a type as common in Middle Mississippian human effigies as any other. This specimen then, indicating the totality of the style in the Florida Coast specimens because the top of the head is present, allies them with Middle Mississippian human effigies from other areas of the Southeast. This is a temporal allocation and cultural alignment in accord with other data presented and to be taken up in detail in the conclusions.

Vessel No. 2, a crested bird with bulging eyes, is unique in many respects. Even more definitely than the human effigy, this is a piece of sculpture in the round. No attempt has been made to provide it with a base; there is no kill hole, and there is no orifice, even in extreme stylized form, designed for entry or removal of liquids. All of the perforations are triangular, and are obviously parts of the decorative scheme, as evidenced by their relationship to each other and to the incising. Apparently, the vessel was ceremonially killed by having its head knocked off. Decorative technique combines modeling, incision, and excision or perforation, plus an over-all wash of red paint. Classification would be *Weeden Island Incised* (Free variant, Sears, 1950a, pp. 67-68). This piece is one of those almost certainly made originally for non-mortuary use, since it lacks any pre-cut kill holes and has no functional purpose. I suspect that it was designed as a piece of temple furniture, perhaps serving as a cult object in religious ceremonies.

This might also be the place to point out the relationships of the excised holes in such vessels to the incised lines. It will be noted that several of the triangular perforations in this bird develop directly out of the termini of incised lines. This in all probability indicates the origin of such perforations, a development from the partially excised pits, often triangular, which appear at the ends of lines in many Weeden Island vessels of the non-effigy class, vessels in contexts which are Early Weeden Island.

Vessel No. 3 (Plate VIII), a panther effigy, is related to the bird in several respects. The major decorative technique is modeling, supplemented by heavy incision, excision or perforation, and an over-all coat of red paint. Like the bird (No. 2) it is also a piece of sculpture in the round, the base being finished naturally without pedestal or other feature to aid in supporting the piece, and almost certainly without a functional orifice or even stylized derivation of such orifice. All of the perforations appear to be decorative, as indicated by their shapes, position, and relationships both to the total form and to the incised lines. Since we lack large parts of the head, there is a slight possibility that a functional orifice may have existed there. However, we have enough parts, including one ear and part of the top of the head (not shown in Plate VIII) to make this rather improbable.

Unfortunately, this piece was not well baked, so that some areas have disintegrated. Except for the precise position of the head, however, and the slight possibility of an orifice noted above, the artist's reconstruction is almost completely certain. No kill hole was present, and the shattering of the head, particularly the condition of the mouth area, makes it probable that the vessel was ceremonially killed by having its head knocked off.

The incised decoration on this vessel, a free variant of *Weeden Island Incised*, classifies the vessel in the standard types for the area. However, from the standpoint of the total vessel, it has no relatives at all in Eastern United States to the best of my knowledge, although the cat appears with some frequency in Middle Mississippian contexts in one form or another. The sabre-toothed feature and the "S" shaped incised lines give it amazing resemblance to cat representations in South and Middle American sculpture and ceramics. It seems at least probable that some ancient association of a cat deity with agricultural fertility rites may have preserved some very old features in this particular specimen.

Vessel No. 4, on Plate IX, is part of the effigy of a fish, the tail area. A few other sherds indicate that the treatment of the upper fin was uniform at least as far forward as the attached sherds on the sides of the body. The bird head shown alongside the fish tail section on Plate IX seems to be part of the

same vessel, the relationship being indicated by paste characteristics and by the markings on the sherd just in front of the bird head. How the two forms were associated in one vessel I am not at all certain.

Possibly this vessel should be classed with pedestaled effigies rather than here. Breakage along the bottom edges allows for either possibility.

The incised treatment on the body of this piece, indicating the scales, would presumably classify it as *Weeden Island Incised*. There are traces of red paint in many places, so that probably the entire vessel was painted when completed.

This vessel is another which, I am certain, was made for some purpose other than pure mortuary ceremonialism. This is indicated by the complete absence of any sherds which might form a head area in the deposit. Paste characteristics are idiosyncratic enough to make them completely recognizable, even in very small sherds. The vessel must then have been broken, and sherds lost, before it was ever brought to Mound D. The fact that the portion we found was saved and deposited in Mound D indicates that the piece did have some importance, that it was a piece of temple furniture.

I do not know of any comparable pieces in the Southeast. Fish effigies are present in the classic Middle Mississippi area (See Ford, Phillips and Griffin, 1951, pp. 162-163 and Fig. 109), but they are very different in concept and execution.

Most of the effigy pieces in this deposit can be classified as sculpture in the round or sculpture in the round with pedestal bases. Three pieces do not fall in either of these classes, the cat on Plate XI and the Deer and Human effigies on Plate XI. They, particularly the animal pieces, are probably best described as effigies partially derived from square vessel forms.

Vessel No. 5 is a deer effigy, similar in many respects to the cat just discussed. Unfortunately, baking had been even less complete in this specimen than in the cat, so that the reconstruction of some areas is in doubt. However, the artist's restoration given on Plate IX is probably very close to the original, being based on a number of large sherds from the opposite side of the figure and several odd fragments of limbs and feet in addition to those shown in our plate. Once more we seem to have an effigy modeled completely in the round, lacking a pedestal or other base, a kill hole, or an orifice other than decorative perforations. This specimen lacks any incision except that involved in incidental details in the facial area, but has an over-all wash of red paint. Since it is decorated by its modeling and red paint only, insofar as surface treatment is concerned, this vessel should be classified, in this context, as *Weeden Island Plain*, not a particularly useful classification for comparative work.

Only two comparable specimens have come to my

attention. One of them is the deer effigy, rather differently executed, found in this same deposit, and illustrated on Plate XI, vessel number 8. The other, actually more similar to vessel 8, was found by Moore at the Mound Field site (Moore, 1902, p. 315). The similarity is that they are all spike-horned deer with rather similar facial treatment, similar modeling of the entire head, tail, and, to a lesser degree, the limbs.

Effigies Derived from Square Vessel Forms:

Vessel No. 6 on Plate X is an effigy of a cat, presumably a specimen of the panther family as was vessel 3, judging by its long tail. Excluding the head for a moment, the figure is derived from a square vessel form, rounded off at the corners and pulled in to a round spout at the top. Decoration, with the derivation of the life form, employs two techniques: First, modeling in low relief, the shoulder areas and tail root being well worked out and the relief gradually flattening until it has disappeared at the base of the tail and the feet. This is supplemented by an alternate area painting technique, red paint being applied to the total body area, with the legs, tail, and the spout left in the natural buff color. These two techniques are supplemented by incision, which outlines and emphasizes the anatomical features. The head is attached almost as an afterthought. As the side view shows, the head is rather flat, and is attached directly to the body without intervening neck. The same techniques of modeling, alternate area painting, and incision are employed in the head.

The classification of this vessel would be *Weeden Island Zoned Red*, although I know of no other vessel so classifiable which is a naturalistic form. The only comparable vessel is the deer from Mound Field, to be discussed again below. A rather similar head, in concept at least, is on an owl effigy from Burnt Mill Creek (Moore, 1918, Plate XIV). This piece is also flat and is attached in a similar fashion.

This vessel was killed, with the kill hole broken through. Since many of the vessels in this cache had pre-cut kill holes, cut through before firing, a technique indicating specific intent for function in mortuary ceremonies only, I would take the lack of such pre-cut kill hole in this specimen to indicate original manufacture for non-mortuary purposes.

Vessel No. 7, (Plate XI), a kneeling human effigy, is a particularly interesting piece. The head is very well executed in the full round (an orifice is present on the top-rear of the head). Such details as a hair knot with a pin through it and ear ornaments are well shown. The bird head and shoulders, attached to the shoulders of the figure, and the fish in the mouths of the bird were also executed in the round. Other details are in partial relief, including the chest and shoulder areas, the arms and hands, and the legs

and feet. As shown in the drawing, the figure is slightly hump-backed.

Perforations through the vessel wall exist as parts of the decoration, as do traces of red paint which apparently covered the entire vessel. Incision was used only on the face and head, and on the lower rear parts of the pedestal, where it apparently indicates the lower portions of some sort of cape-like garment.

Actually, this piece might be classified as sculpture in the round, if the pedestal is viewed as part of the composition rather than as a basic vessel form or as a separate concept added to enable the figure to stand upright.

This vessel has no counterparts in Weeden Island ceramics, being completely different in style from any of the Weeden Island effigies recovered by C. B. Moore. There are Weeden Island tricks in the treatments, particularly in the use of perforations as additional decoration. Omitting this, and the birds on the shoulders, which are unique, we are left with a style of human effigy common in the Middle Mississippi area, adhering to that style in the modeling of the head, the style and position of the hair knot, the slightly hump-backed feature, and the modeling of the limbs in low relief. Even the indicated lock of hair in the center of the forehead is represented in Middle Mississippian effigies. There is not complete identity, naturally, of this specific effigy with any specific effigy found in Middle Mississippian context. However, in style it must be classified with them (See Holmes, 1898, Plates XXVI, XXVII, XLIV, XLV, and Griffin, 1951, Fig. 107, for comparable material).

Vessel No. 8, an effigy of another spike-horned buck deer, is similarly derived from a square form, in this case without the addition of a spout and with much better modeling of the head and neck. Limbs and tail are worked out from the basic square form in low relief, the front hoofs in full relief, supplemented by incision. A number of perforations are part of the decoration, differing in this from the cat, where the few decorative perforations were unrelated either to the general shape or the incision. In place of a spout, a roughly oval area in the center of the back was cut out. This piece does have a square kill hole, cut through before firing, similar in appearance to the hole in the lower side of the effigy. Red paint may have been applied as an over-all wash. Classification, then, would be *Weeden Island Incised*, although conceptually this piece is more closely related to the zoned red cat effigy than to any incised pieces.

Other than the deer already described as vessel 5, the only comparable specimen in the Southeast is the deer effigy from Mound Field (Moore, 1902, p. 315) which is also derived from a square form, although much more crudely, and has a very similar treatment

in the low relief of the limbs and in the modeling of the head. This specimen has been classified as *Weeden Island Plain* (Willey, 1949, p. 294).

Pedestaled Effigies:

Most of the effigies from Mound D, and most effigies from other Weeden Island mortuary deposits, may be grouped together in this class, unified by the possession of pedestals, although the style of execution otherwise is quite variable. Comparable specimens from other Weeden Island contexts will not be described except in specific cases, although they have been listed elsewhere (Sears, 1950a, pp. 69-72). Certain characteristics of the class other than pedestals will be discussed at the end of this section.

Vessel No. 9 (Plate XII) is an owl effigy, executed in a rather stylized fashion, although there is a high degree of realism in the head and ear sections, even carried to the delineation of the typical owl-rayed iris in the eye. Back of this, the representation of the wings is carried out in the free incised technique typical of all bird effigies with incision, which is very similar on all of them. The pedestal has its own incised decoration, unrelated to that of the body, executed in a combination of free incision, punctuation, and excised areas whose shapes and positions are intimately interrelated with the incision. The same interrelationship, indicative of development from earlier terminal pits, also exists in the excised segments on the sides of the body. Bare traces of red paint exist, probably indicative of an over-all coating. The kill hole is round, and was made before firing.

Two other owl effigies were found in this deposit, vessels 16 and 23. Others are quite common on the Florida northwest coast, some of them very similar. They have been listed elsewhere (Sears, 1950a, pp. 69-72).

Vessel No. 10 (Plate XII) is another bird effigy, very likely a crested woodpecker. Realism, obtained through modeling, is adhered to in the head only. The bulging eyes, similar to those on vessel 2, are of interest in the study of possible relationships, since they have some spread in space. The body is an approximately round bowl form, raised on the pedestal, and coated with a thick layer of red paint. Incised lines have disappeared completely in this derivation, although the excisions, in locations related to the normal incised wing symbol, remain.

Further discussion of the vessel might best be reserved for the end of this section, although the resemblance of this type of crested bird to those appearing with some frequency in Southern Cult shell carvings may be worth pointing out here. A pre-cut kill hole is present on the base of this piece, a base too rounded to allow the vessel to stand upright without support. Since the intention obviously was to produce a flat base on the pedestal, one wonders whether the

intention had any relationship to actuality. Were such mortuary vessels ever stood erect, or were they only cheap copies for burial purposes of the better made pieces in the temple? Classification is *Weeden Island Plain*.

Vessel No. 11 (Plate XIII) is similar to the owl vessel 9, in most respects, the treatment of the head, working out directly from the body, and the incision in the wing area being particularly comparable. Since it is a duck effigy, the head is of course only similar in concept. Presumably, the crest on a duck indicates that it is a wood duck. The back here is pulled up in a conical fashion to the orifice, with free incised, abstract incision combined with small punctated areas as decoration for this upper conical portion. Thus it is somewhat set apart from the body of the effigy. Only two small perforations appear in the body of the duck proper, one on each side of the breast. More perforations appear on the otherwise monotonously functional pedestal, however, unaccompanied by incision. There are no traces of paint on this specimen at all. The kill hole is round, pre-cut. Classification, of the body and spout area at least, would be *Weeden Island Incised*.

Vessel No. 12 (Plate XIII) is another duck very different from number 11. Its upturned beak and rotund body give it a particularly humorous appeal, probably not at all in keeping with aboriginal ideas about it. For theorists about weeping eyes, it may be pointed out that this duck is weeping, the one incised line on each side of the vessel being that running from the lower corner of the semi-lunar perforation indicating the eye to a round perforation some distance lower best interpreted as a teardrop.

Except for the teardrop track, all decoration of this piece is inherent in its modeling, which extends from such details as the beak and tail to the definite bulges of the wings, or in the excision, used for realistic detail only in the representation of the eye and the teardrop. The beak was left in natural buff color, the rest of the vessel bearing a wash of red paint. Orifice in this case is the open top of the duck's head. The disc-shaped pedestal base has a round pre-cut kill hole in its center.

Several other badly disintegrated ducks were found in this deposit and will be described as fully as possible at the end of this section.

Vessel No. 13 is another bird effigy, perhaps related to vessel 10 in view of its bulging eyes and slight crest development. In execution, it combines the free standing head and neck of vessel 10, modeled realistically in the round, with the body modeling in bulges accentuated by perforations of number 12. From one point of view, considering particularly the wide orifice with a wide folded rim, it is as much a jar with an effigy head as anything else. However, the bulges on

the two sides are clearly modeled representations of wings; a badly shattered bulge at the rear represents the tail area; and still another bulge at the front, a protruding breast. Each bulge is separated from the others by excision of the intervening vessel wall, and have further perforations within the bulges. For the benefit of students of symbolism, the one on the breast, not too clearly shown in the photo, is the precise shape of a key hole. The base has a small round pre-cut kill hole, and the entire vessel was covered with a red paint wash. In spite of the kill hole, it seems to have been deliberately and thoroughly smashed, large chips having been taken out of the heavy ware in many spots. A rather similar vessel is illustrated by Moore (1907, p. 436). Others, less directly comparable, all *Weeden Island Plain*, also occur on the Lower Chattahoochee.

Vessel No. 14 (Plate XIII) is another decorated with free incision, and indeterminate species of crested bird. The incision in the wing area is so free that sherds from the sides look more like Fort Walton than *Weeden Island Incised*. As with the Woodpecker, vessel 10, the entire back is open, the orifice modified into a rectangular shape at variance with the disc pedestal base and the generally ovoid body form. Several triangular perforations are part of the decoration, paint is lacking completely, and there is a round, pre-cut kill hole. Classification would be *Weeden Island Incised*, as noted above, if it were not found in the wing area of an effigy. The double scroll effect, combined with punctated areas, and the style of execution might throw it as close to *Fort Walton Incised*.

Vessel No. 15, (Plate XIV) another cat effigy, is quite different from either of the two cat effigies already discussed. Unfortunately, large segments of the pedestal base and of the back are missing, so that the precise restoration of these areas is in some doubt. However, the more important areas are present, as shown in the photographs, and the artist's reconstruction on the same plate is obviously valid insofar as the actual body and the head of the cat are concerned.

The major decorative treatment is modeling in the round, the body and head being worked out in this way, with the limbs, in very odd poses, in low relief. Perforations of the vessel wall supplement the modeling, incision being limited to the two incised lines which start at the corners of the beast's mouth and form a pendant arc on its chest, inclosing a circular perforation.

Since this figure has a very short tail, it seems to be a wildcat, the other two cat pots representing panthers. The odd treatment of the mouth area, however, with the protruding fangs, bears more similarity to the Middle Mississippian "monsters" of various sorts (Griffin, J. B., in Ford, Phillips and Griffin, 1951, Fig. 99a, 101, 102a; Holmes, 1898, Plate VI,

2nd row) than to any particular species of feline. There are no traces of paint on this specimen at all, the original paste color having been a rather bright and even cream.

I know of no really close relatives for this piece, except possibly, through the snout and tooth treatment, the Middle Mississippian monsters. Other than this, it is, as are many other Mound D pieces, rather idiosyncratic. It could be classified as *Weeden Island Plain*.

Vessel No. 16 (Plate XV) appears to be a rather elaborate pedestaled owl effigy. There are a number of unique treatments which may be of particular significance. Basically, it seems similar to other free incised effigies, with the face and ears modeled in some detail, detailed representation of features in the head area by incision, and the more or less standard treatment of the wings in free incision. The pedestal is unusual in that it is round based, and thus incapable of supporting the vessel in an upright position. It is further unique in the development of the excisions and incisions between the lower basal segment and the bird effigy itself. The treatment of free arches and short vertical segments, all well separated, gives an impression of two segments, a base and an effigy, united by these short columns and arches.

Unfortunately, the beak was not present. Even so, there is some question in my mind as to whether the specimen is an actual bird effigy, or an effigy of a human in bird costume. Contributing to this problem are the crest down the center of the head, more in place as a roach on a human headdress than on any species of owl; the modeling in the eye and cheek regions, more human than bird; the odd cross-barred triangles, rising up and out from around the face and down from the rear of the head, which would seem more reasonable as parts of a costume than as parts of a real bird; the odd treatment of the anal region; and the single barred triangle which drops perpendicularly from the barred anus.

I do not think that a definite identification as bird or as a human in bird costume can be made. Probably the odds favor the straight bird interpretation, but there is a real doubt as to the complete validity of such a position.

This vessel lacks any trace of paint, perhaps unnecessary because of the natural bright orange finish. It also lacks a kill hole, the base seemingly having been broken in the attempt to break one through. Since it was not "pre-killed", I would place this vessel out of the class of specialized mortuary ware too. Its elaboration and very decided non-functional quality, however, certainly indicate that it was a piece of particular importance. Once more the vote would be for temple furniture or cult piece.

Standard classification, of course, omitting vessel form, perforations, etc., would classify this vessel as

Weeden Island Incised. Rather than comparison to Weeden Island vessels *per se*, more useful information can probably be gained by comparing it to other owl effigies, particularly those outside the Weeden Island area.

Vessel No. 17 (Plate XVI) is a free incised effigy of an opossum, placed on top of a tall cylindrical pedestal which might very well be a stump. The decoration of this piece is rather varied, the opossum being modeled in the round with legs and tail in low relief. This is supplemented by rather involved incision, with many perforations developing from the incised design. This is another case of a vessel in which all of the perforations develop from the decoration, none of them shaped or placed so as to indicate derivation from a functional orifice. The cylindrical pedestal has its own free incised decoration, filled with punctations in some areas. Possibly it is a very abstract representation of tree limbs or leaves. The flat disc base on the pedestal has a round pre-cut kill hole.

As might be expected, the entire vessel seems to have had an all-over coat of red paint.

The classification of this vessel would be, of course, *Weeden Island Incised*. The functional interpretation is a bit more difficult, however. The lack of an orifice, making it from one point of view a piece of sculpture rather than an effigy vessel, might indicate temple furniture use. On the other hand, it does have a pre-cut kill hole, a characteristic logically best associated with specially made mortuary vessels. A third interpretation, probably as good as either of the foregoing, would be usage as an incense burner, the base to burn tobacco or something of the sort, with the smoke escaping through the many holes on the top. It does bear a vague resemblance in general style to some of the Middle American incense burners.

Comparable specimens are non-existent, the only effigy of a quadruped in Weeden Island assemblages, outside Mound D, being the deer from Mound Field cited above. At a less specific level, of course, it is a member of the class of pedestaled effigies decorated with free incision and perforations, hallmark of Late Weeden Island mortuary assemblages (Sears, 1952b, pp. 12-13).

Vessel No. 18 (Plate XVI) brings us back into bird effigies again. This specimen is invariably called a quail by South Georgians, although the resemblance escapes me. Perhaps it would be clearer if the head had not been so badly battered. Decoration is modeling in the round for the essential body shape, with the tail standing free. Presumably, the head was also modeled in the round, in realistic detail. In place of the usual free incision for the wing, a narrow curved band is raised in low relief, with incision, perhaps indicative of a feather pattern, placed on the band. Other incision, non-naturalistic, designed to relieve the monotony of blank areas, is on the back.

The lower part of the pedestal is missing, although it must have been a simple type, and almost certainly had a pre-cut kill hole. There are no traces of red paint, perhaps unnecessary because of a well smoothed, near burnished light cream finish. Classification would be *Weeden Island Incised*.

Vessel No. 19 (Plate XVI), another bird, resembles the owl effigy, number 9, in the foreshortened treatment of the body, although it is a different species of bird, probably a woodpecker, judging by the crest. Decoration in free incision is limited almost entirely to the wing symbol, eye details, and a few curved lines in other areas. A circular hole, a stylized functional orifice, is visible just behind the crest. The specimen undoubtedly had a pedestal, but matching sherds could not be found in the deposit. The entire portion on hand is covered with a rather thick coat of red paint. Classification again is *Weeden Island Incised*.

This may be the point to call attention to the incised arc, pendant from the lower corners of the beak, with a partially excised circular spot in its center. At first glance, this might be considered to represent some detail of woodpecker anatomy. However, very similar treatments may be found on the large owl effigy, vessel 16; the two lines and the hole all the way through on the wildcat, vessel 15; and the rather non-decorative and certainly non-functional hole in the chest of the large panther effigy, vessel 3. Another derivation of the same sort of thing, combining incision and the alternate area painting, also seems to be present on the spouted cat effigy, vessel 6.

Since the feature is shared by two species of birds and two species of cats, it is certainly not a stylized representation of any anatomical detail, although I confess I do not understand its significance.

The same treatment appears on owl effigies from the Florida northwest coast at Laughton's Bayou (Mound B), Mound near Point Washington, and Bird Hammock (Moore, 1902, p. 191; 1901, p. 463; 1918, p. 561). Since these sites are close to Kolomoki in other respects, and have been classified with the Kolomoki Mounds as Late Weeden Island burial manifestations (Sears, 1950b, pp. 98-107) this oddity at least reinforces the interpretation of temporal equivalence and cultural relationship between these various sites.

We have one more numerically minor class of effigies still to discuss. This may be the point, however, to pause and consider the classes just discussed, effigies in the round, effigy vessels derived from square forms, and effigy vessels with pedestal bases.

There are a number of characteristics which remain somewhat uniform, holding them together as a class which is variable in some details. First, of course, is the basic fact that they are effigies modeled in clay, disregarding the fact for a moment that their functions

seem to have varied. Secondly, they invariably have either a free incised decoration, the more important elements of which are used to delineate naturalistic details, or, they have only the perforations which develop out of the terminal pits associated with these incised lines in some cases. That is, we may have only the end product in the deterioration of the free incised technique. There are other features shared by some vessels and not by others, with overlapping of the several classes of features appearing. Many of them are painted with a solid coat of red paint; others have spouts. If they are bird effigies, the treatment of the wing in free incision follows a rather rigid stylistic formula, readily observable not only on those illustrated in this report but also on the many bird effigies in the round illustrated in C. B. Moore's various reports. Most of them are worked out from a roughly coiled basis, pinched, moulded and carved into place with details, heads, and other free standing features modeled separately and welded on in a not too secure fashion. Here, too, belongs another mention of the odd pendant arcs with central circle noted above as occurring on a number of bird effigies and possibly on all three of the cat effigies.

We seem to have, therefore, in Mound D and in other Weeden Island burial mounds, a definable class of specialized pottery, a class which cross-cuts the usual pottery types as defined from sherds in village occurrence. To a degree, this class in its temporal and spatial distribution has already been discussed elsewhere (Sears, 1950b, pp. 69-72). In this earlier report, the class was broken down into free incised effigies and effigies or other vessels with perforations. The appearance of this class in a mound, usually accompanied by *Kolomoki Complicated Stamp*, was considered to be an indication of late position within the Weeden Island period. The Mound D data reinforce this conclusion and make it possible to define the particular class of effigy ware more closely, as was done above.

Further discussion of the conclusions drawn from the time-space distribution of this class and its relatives will be found in the conclusions to this report, since it is best discussed as part of a total complex, moving separately from the main stream of Weeden Island cultural development.

Secondary Effigies:

Three specimens of a final class of effigy vessels are illustrated on Plate XVII, a class best described as standard vessel forms modified by the secondary addition of effigy features.

Vessel No. 20 is a simple bowl form, slightly triangular with the expansion at the end bearing the effigy head, and with a broad rounded rim. The basic form has been modified by the addition of an effigy animal head (species?) facing inward, vertical

applique strips at the head end, perhaps representing legs, and an elaborate applique at the opposite end from the head, presumably representative of a tail. Incisions, excision, and punctated areas, mostly at the head end, may bear some relationship to animal body features.

A rather unusual feature in this vessel is the total excision of very narrow linear areas, incised lines cutting completely through the vessel wall in actuality. These are most prominent in the rim immediately adjacent to the head, and in the supposed tail area.

Red paint covered at least the head, entire rim area, applique elements, and the space between the two vertical applique elements in the head section. Faint traces of paint elsewhere on the vessel indicate that the entire vessel may possibly have been covered. The kill hole is round and pre-cut.

Probably this vessel is best classified in the decorative classification as *Weeden Island Incised*. Other than this, I know of no close relatives, although simpler vessels with effigy heads facing inward, usually birds, were common enough both in Weeden Island contexts and in the Southeast generally during the Mississippian period.

Vessel No. 21 is a simpler development, an ovoid, almost rectangular bowl with a carefully molded rim strip. A very simple and stylized effigy head was worked up from the rim at one end, and two flat lugs were worked out at the two rear corners. At the head end two narrow strips, appliqued vertically from the rim to the base, perhaps represent forelegs, replaced at the rear end by incised designs. The entire vessel exterior is coated with red paint. The vessel was killed after firing, and the entire bottom smashed out. The incised leg designs probably indicate a classification such as *Weeden Island Incised*.

I do not know of any vessel very similar to this in Weeden Island or other contexts, although the comments under vessel 20 in respect to bowls with effigy heads in the Southeast generally are applicable. The flattened stylization of this head makes it resemble comparatively late specimens, such as those from Fort Walton sites (Moore, 1901, Fig. 113).

Vessel No. 22 is perhaps the simplest derivation of all, a flat-based beaker with a wide folded rim, modified by the erection of a semi-circular piece built up from the rim. Appliqued eyes, beak, and two curvilinear incised lines on the semi-circular piece convert the beaker to a duck effigy.

Major decoration other than the effigy features consist of an over-all wash of red paint, the rectangular and triangular excisions which remove almost half of the vessel wall, and a few short, straight, incised lines running vertically on the panels left between the excisions.

Classification in decorative categories, in view of the incised lines, would be *Weeden Island Incised*. The

vessel form occurs sporadically with other types of decoration in Weeden Island contexts, as with zoned incision at Pearl Bayou (Moore, 1902, p. 186) and as an example of the type *Basin Bayou Incised* at the Tucker Mound (Moore, 1902, p. 267). Both sites have been classified as Late Weeden Island, in the same time period as Kolomoki (Sears, 1950, p. 102). Other than Weeden Island, the beaker is one of the characteristic forms in the Coles Creek period in Louisiana (Ford, 1951, pp. 70-85).

On Plates XVIII and XIX are illustrated a number of effigy heads and parts of other effigies. These are from effigies of which we have only parts or which are unreconstructable for other reasons, as indicated below.

Vessel No. 23 was an owl effigy, best classified as an effigy in the round. Only the head and the feet seem to be present in the pottery cache. The lower portion, instead of being pedestaled, has the two legs worked out separately and the feet then merged in a flat disc. Eyes, ears, and beak are modeled in full relief, and given additional prominence by the use of an alternate area technique. These features were left in the natural buff color of the paste while the remainder of the vessel was coated with red paint. There is a large orifice in the back of the head, so that this particular effigy in the round is definitely an effigy vessel.

Use of the alternate area technique classifies the vessel as *Weeden Island Zoned Red*, although obviously the total vessel is so idiosyncratic in most respects as to make this classification of dubious comparative value. Comments about the distribution of owl effigies have already been made, and apply here, the only unusual features being the erect posture and the feet.

23a is a small effigy head in an orange paste. There are two of these, and fractures indicate that they must have been appliqued, beak down, at opposite ends of a small vessel. Numerous examples of this use of effigy heads may be found in Weeden Island context.

23b is a dog or cat effigy head in brown paste. Judging by the fracture, it protruded horizontally from a vessel wall. Several similar effigies are known from other Weeden Island style mounds. Examples are West Bay Post Office (Moore, 1902, p. 137) and Tucker (Moore, 1902, p. 261). Tucker has been classified in the Late Weeden Island period and West Bay Post Office in the Intermediate Weeden Island period (Sears, 1950a, p. 99). In other than Weeden Island context, recognizable animal effigy heads are rare in the Southeast, although vaguely similar forms, usually on bowls, occur in Mississippian ceramics occasionally, in most cases on relatively late specimens (See Ford, Phillips and Griffin, 1951, Figs. 101, 102).

The rattlesnake effigy, *a* on Plate XIX, is one of a fragmentary set of four which were originally

adornments plastered onto the walls of a red painted vessel. Unfortunately, I am completely certain that the vessel did not reach the pottery deposit. These figures are, of course, completely unique in North America, the only other representations in ceramics of which I am aware being the engraved Moundville serpents which are very different in style and execution.

XIXb, a duck effigy head decorated with incision, excision, and red paint in zones, is the largest restorable fragment of an apparently complete vessel. Fragments of the wings, bearing the usual free incised wing symbol, stubby duck tail, and possibly of a pedestal base, are all present, as well as many small body sherds. The paste, however, is so thin and soft that restoration is impossible. In general style the complete vessel was undoubtedly quite similar to other pedestaled bird effigies discussed and described in previous pages, and might be classified in the decorative style classification as either *Weeden Island Incised* or *Weeden Island Zoned Red*, depending on whether the zoning or the free style incision is considered most important.

XIXc was also deposited as a complete vessel, but is also unrestorable since it was somewhat less than half baked. It is another of the crested birds with bulging eyes, although I confess the inability to decide whether the complete perforated protuberance or the broken one is the beak. This vessel seems to have been pedestaled, with a stub tail, the entire back open as in vessel 10, and, like the latter vessel, otherwise decorated only by an over-all coat of red paint and perforations of several shapes. Except that *c* has traces of white paint, the same remarks would also apply to *XIXd* and *e*. All of the remarks made about pedestaled effigies in general would apply to these unrestorable specimens.

I might point out here the singular bulged eye style of these specimens, present in *e* too, and also present in the restored vessels. This style occurs, too, in connection with crested birds in other Weeden Island style burial mounds, all illustrated in C. B. Moore's report on the Florida northwest coast (Moore, 1902, pp. 140, 181, 182, 187, 278, 290, 302, 326, 328, 453, 477). Two of the sites, West Bay Post Office and Davis Point, have been classified in the intermediate period, the others as late in the development of the Weeden Island mortuary style (Sears, 1950a, pp. 98-107). Most of the vessels involved are representations of crested birds, although there are several ducks too. The crested birds may be buzzards, although this identification is doubtful, to say the least. Elsewhere this eye style, again usually with crested birds, appears on the bird head rim effigies, often quite flattened longitudinally, which appear quite late in the Central Mississippi Valley (Ford, Phillips and Griffin, Figs. 101 and 102).

Several other effigies were not even in shape for photography of important parts because of the paste which was little more than sun dried. This includes two pedestaled ducks, both with traces of incision in wing areas and some white and red paint, the white being in the area around the eyes. Two other large effigies may have been similar. The material we were able to salvage consists largely of slabs of brownish mud with red paint on one side, occasional traces of perforations, and traces of heads, pedestals, and tails.

Abstract Vessel Forms:

This class includes those vessels whose shapes are based neither in life forms nor in functional vessel forms of sorts used for everyday purposes, plus some rather odd derivations of simple forms.

Vessel No. 24 (Plate XX) is perhaps the oddest of the lot. I am not sure whether to call it a Japanese lantern or a pregnant bottle. Probably, in view of the narrow orifice, a bottle was the basic form, but the neck area is concealed by the elaborate collar development. Close inspection of the illustration will indicate that a large portion of this collar has been broken off and lost. Fractures indicate that it was originally a symmetrical four-lobed affair, all four lobes being identical to the one remaining. Decoration consists of short incised lines on the body, and incised lines on the collar used to outline the upper parts of the lobe development and to circumscribe punctated areas. Perforations, mostly triangular with their shape and size adjusted to the shape and size of the vessel, complete the decoration. The vessel has a round kill hole, cut through the flat disc base before firing. I know of no vessels in the Southeast which might be related on the basis of shape. The decoration, of course, is normal for this type of late Weeden Island mortuary assemblage, and might classify the vessel as *Weeden Island Incised*.

Vessel No. 25, shaped like a flower vase, would not be a particularly unusual form in our culture, but it is certainly out of place in this context. Decoration consists of the encircling incised lines which set a central undecorated portion of the vessel aside from a lower segment decorated with rectangular perforation and short curvilinear incised lines, and an upper area decorated with two sets of triangular perforations and an applique curvilinear strip. This vessel also had a four-pointed collar, one stub appearing in the illustration. The base bears a kill hole carefully made through the fairly thick paste before firing.

The collection also includes three other vessel bases almost identical to the lower portion of this vessel, except in that they lack any traces of excision and do have traces of red paint, lacking in vessel 25.

This total flower vase shape is completely lacking in Eastern United States to the best of my knowledge,

although the "inverted mushroom" base has at least one counterpart in Weeden Island context, a small incised cup from Davis Point (Moore, 1902, Fig. 92), classified by Willey as *Keith Incised* (Willey, 1949, p. 235).

Vessel No. 26. This partial vessel is not of much use to anyone. It is irregular and contorted in all directions. It may be the remains of a quadrangular effigy, a very crude one, similar to the cat (vessel 6) or the deer (vessel 8). There is one small area with a few incised lines at one end, and a number of oddly shaped and located perforations are present. We do have other sherds which seem to pertain to this vessel, but their location in the missing area is conjectural, predictability being at its lowest in this creation. If we have the base properly located, it has a round, pre-cut kill hole. Classification is *Weeden Island Plain*.

Vessels No. 27 and 28 on Plate XXI might be egg effigies, one end of the egg having been flattened to permit it to stand up. However, I suspect that their actual derivation may have been somewhat more esoteric. I am also not sure which end should really be up. Both apparently had disc-shaped bases. The base has been broken out in 27, leaving a large, functional-appearing orifice. The opposite end in 27, and both ends in 28, bear small carefully-made kill (?) holes, cut through before firing. There are in the pottery deposit large numbers of sherds from another vessel of this sort, one which was probably broken and had parts lost before it reached this cache.

I know of no comparable vessels in the Eastern United States, in Weeden Island or other contexts. Since the vessel could be classified as *Weeden Island Plain*, perhaps we had better so classify it, giving it lots of relatives.

Vessel No. 29. The general shape is illustrated by the photograph. It is a pedestaled, abstract form with a fishtail or fin at each end and a spout—a completely idiosyncratic vessel, except for the pedestal and spout which are normal in this context in other combinations. This vessel is also unusual in finish. It seems to have been completely covered with a wash of black paint, similar to the type used elsewhere in the Southeast for negative painting. A kill hole is present, cut through before firing.

In view of the wash of black paint, this might be set up all by itself as a new pottery type. This hardly seems worthwhile, however, and we had best leave it as a vessel which is idiosyncratic in most respects.

Vessel No. 30 is also idiosyncratic in form, its only distinguishing feature since it is undecorated. It is completely spherical and has perforations, carefully made before firing, in each end of about equal size. There are other roughly-globular vessels known in Weeden Island context, most of them decorated with incision and perforation, such as the specimen from the

Hall Mound (Moore, 1902, p. 255), classified by Willey as *Crystal River Incised*. It seems possible that they may have been used as rattles, mounted perhaps like the South American rattles made from gourds which often bear decoration that would not be out of place in Weeden Island.

Vessel No. 31 (Plate XXII) is an extremely unusual variation from a basically simple square bowl form. The lower portion of the vessel, the squared bowl, first had added to it eight lugs. Four of these are rather heavy semi-lunar affairs, attached to the sides. At each corner, a large comma-shaped lug, its point out, was also added. These lugs were themselves modified by heavy excision on their upper surfaces, penetrating almost completely through the appendages. With this as a sub-structure, a round rim or neck was added, bearing a neatly molded rim strip, rectangular in cross section. Four more lugs, again horizontal and semi-lunar, were added to this rim. These were completely perforated, so that they resemble horizontal loop handles. Further decoration was accomplished by perforation of this upper rim, removal of about half the wall resulting in a lace-like appearance. Finally, the entire vessel was coated with red paint. It has a pre-cut kill hole.

I do not know of any vessel which resembles this to any real extent in eastern United States, although the basic forms, including the lug appendages, are at home in this or other contexts. The lugs may be of some importance as indicators of cultural contact, but since they occur in great exuberance with pot forms, discussion will be reserved until after these forms have been described in the next section.

Vessel No. 32 (Plate XXII) is a combination of two simple forms, a double pot composed of a lower simple compressed globular bowl and an upper slightly rectanguloid compressed globular bowl. Over-all decoration is very fine zoned punctation in non-naturalistic designs. Due to the fragmentary condition of the specimen, the design is uncertain, and that on the artist's reconstruction indicates only the general style, although it is accurate at several key points.

Double vessels without this precise decorative style are relatively common in Late Weeden Island contexts. They occur too frequently to give specific references to all of them here. They occur in Mississippian contexts elsewhere in the Southeast sporadically. It may be classified as *Weeden Island Incised*.

Vessel No. 33 (Plate XXII) is also an odd piece. The combination of globular base, almost vertical neck (?) area, inslanting collar set at an angle to the neck, and double folded rim, with decoration consisting of punctation covering the exterior and perforations, makes the piece completely idiosyncratic to the best of my knowledge. The decorative techniques all occur on other Weeden Island vessels, but not

in this combination on this unusual vessel form. A further unusual note is struck by the pre-cut kill hole, which is square. Classification is *Carabelle Punctate*.

Vessel No. 34 on Plate XXIII is perhaps the most unusual vessel from this pottery cache, although the lack of certain key sherds makes totally reliable reconstruction impossible. It was either a hollow pottery doughnut, with a spout on one side, or a nearly similar affair which did not quite complete the circle. Incised on it are parts of the head and bodies of two rattlesnakes and at least one rattlesnake tail (see upper photo). The spout, on an undecorated portion of the body, is rather small. As might be expected in this context, a few perforations, triangular in shape, may be found on the lower portions of the body, and the entire vessel was coated with red paint. This vessel, like some of the others, is completely unique in shape and in decorative motif, although a spout, perforations, red paint, and incised decoration, as individual elements, are at home in this area and in this context.

Vessel No. 35 on the same plate (XXIII) might best be described as a three-lobed bottle. A few sherds indicate that the neck was about twice as high as shown in the photograph and had a simple folded rim. Decoration consists of incision, punctation, perforation, and red paint covering the entire vessel exterior. In spite of the lobes, I suspect that a bottle is the basic form here, which relates this vessel to the widespread use of this form in Middle Mississippian culture. Except for this specimen, and possibly vessel 24, I know of only one other possible bottle in Weeden Island context, a different but equally odd vessel from Tarpon Springs (Holmes, 1898, Plate, LXX, XVIII). Classification is *Weeden Island Incised*.

Pot and Bowl Forms:

The remainder of the vessels from this pottery cache are basically simple in form, pots or bowls, but are of course modified in various ways by the specialized techniques whose use seems to have been largely restricted to vessels employed in ceremonial context, particularly perforation or excision of portions of the vessel wall.

Pots: In this Mound D cache, as was the case in Mound E (Sears, 1951b), a number of vessels adhere to the normal Mississippian jar form and fall well within the permissible range of variation for that shape. Conversely, they do not fit into any other form class. Most of the vessels in Mound E also possessed a particular decorative style, and were classified as *Mercier Red on Buff* (Sears, 1952b, pp. 11-12, Fig. 1, Plate III-VI). This type, as defined, is also present in Mound E, mostly in unreconstructable vessels, which will be described at the end of this section. The same vessel form, a globular-bodied jar with short vertical

rim set on the body at a distinct angle, also appears on several vessels which do not have the distinctive decoration in freehand red painting.

Vessel No. 36 (Plate XXIV) is perhaps the best example of this Mississippian vessel form, a form thus far confined, in Weeden Island context, to these Mounds at Kolomoki. The basic shape, as described above, is in this vessel unaltered, although the encircling perforated horizontal lugs around the rim add a distinctly non-Mississippian cast, a feature carried further by the slightly raised area of decoration running down from the rim onto the vessel wall, a decoration further supplemented by perforations. The entire vessel is coated with red paint. Without the Weeden Island additions, the vessel is a match for many shell tempered vessels from the North and West. Many examples are illustrated in reports on the archaeology of the lower Mississippi Valley (see Ford, Philips, and Griffin, 1951, Figs. 93-99) from comparatively late periods.

Vessel No. 37 (Plate XXIV) is the same vessel form, but much more heavily modified. An elaborate squared collar, with four points and four double lugs (see left side in photo for one remaining) has been inserted in the neck area, between the shoulder and the rim. Further major changes have been effected by the heavy excision, total removal of vessel wall segments as part of series of four triangular designs on the body. The incision—four triangular areas, point down—might have at base Mississippian affinities as opposed to the Weeden Island concept of allover decoration. However, the excision modifies this concept almost out of recognition. A further decorative treatment is effected by the use of red and white paint. The entire rim and collar were coated solidly with white paint. The body area has both red and white paint, seemingly applied in an interrelated freehand design with a curvilinear motif, unrelated to the angular incision. This use of red and white paint is of course a Mississippian hallmark, much more to be expected to the west than here. In most assemblages, two styles of decoration with unrelated motifs would be out of place. However, apparently anything goes in these mortuary assemblages, and each usage must be accepted for its own value.

Vessel No. 38. This third vessel on Plate XXIV is the simplest and, at the same time, the most Mississippian of the lot. Decoration consists entirely of four slightly curvilinear pendant triangles. The vessel shape is that already described, a globular body with an erect but short neck, and in this case, a simple rim. Other than the triangles, produced through a sliced incising technique, decoration is confined to a set of the ever-present perforations in each triangle. It would appear to the writer that it is at least possible that the use of pendant triangles on these jar forms is at least related to the arches commonly found on

more definitely Middle Mississippian types, such as *Pinellas Incised* of the Florida Coast (Willey, 1949, p. 482 and Plate 51) and Tennessee Cumberland forms such as those at Gordon-Fewkes (Myers, W., 1928).

Vessel No. 39, decorated with diamonds on the shoulder and rim area, produced by the same sliced incision, with central perforations, is again a very "Mississippian" form. The only really unusual feature in a Mississippian context is the use of perforations. The two small, functionless "sockets" on the rim also have Mississippian counterparts. They are particularly well shown on a vessel illustrated in the Norris Basin Report (Webb, W. S., 1938, Fig. 20). The kill hole is round and pre-cut, and paint is lacking.

Vessel No. 40 is quite similar to vessel thirty-six in the use of the encircling perforated lugs at the lip. This vessel lacks a distinct neck, the lugs, forming the main rim, working out directly from the crest of the shoulder. Decoration is pendant triangles again, this time without accompanying perforation, although a similar effect is produced through the use of a central portion of the triangle which is excised about half way through the vessel wall. A pre-cut kill hole is present, and the entire vessel is coated with red paint. I am not sure how vessels 39 and 40 would be classified in the classification based on type of decoration. *Weeden Island Incised* does not quite fit the bill, although it is perhaps the best choice in the available classification.

Vessel No. 41 is one of the most attractive vessels in this cache, and at the same time, perhaps the most unusual vessel in the jar class. Decoration is achieved by applique ovate pendants, attached at the top to a rather thick applique collar. Both collar and pendants, and space between pendants, are further decorated with an unusually attractive combination of short straight lines. Rising from the collar, which is at the top of the shoulder, is a fairly tall vertical neck, surmounted finally by a neatly modeled rim band, rectangular in cross section. The neck has been decorated with an unusually attractive combination of incision and excision. Excision of the vessel wall segments produces an effect of arches supporting the rim with the addition of more small pendant semi-lunar pieces from the rim, cutting down the amount of blank space between the upper surfaces of the arches. Incision on the neck serves merely to accentuate the curvilinear lines of the arches. This vessel lacks any painting, and has a round, pre-cut kill hole. The base is flat and disc-shaped.

The appliques on the vessel relate it to *Ocklawaha Plain*, a Florida St. Johns I period type (Goggin, 1952, pp. 48, 144, Plate 3). However, the total vessel shape, excluding decoration from consideration for the moment, is much closer to such vessels as 38 and 39 above, and to the *Mercier Red on Buff* series of

vessel forms. The vessel is perhaps regarded as a Mississippian vessel form more or less in place in this context. It bears extremely elaborate decoration, which in many forms is also a characteristic of mortuary ware in this area and period.

Vessel No. 42 might be classified as a small lobed jar, or as a small lobed bowl with short collar. Decoration consists only of the lobes, surmounted by a small rounded collar. Since the paste is extremely friable, the base has deteriorated, and the type of kill hole is uncertain. Similar vessels occur at Florida northwest coast mounds, such as Tucker (Moore, 1902, p. 261), Mound Field (Moore, 1902, p. 311), and Bristol (Moore, 1903, p. 478)—all closely related to the Mounds D-E complex at Kolomoki on other bases. The writer has also noted that this lobed form on rather squat jars or bowls is relatively common in Southern Middle America. Possibly it is an effigy form, with the pumpkin as the basis. Classification is *Weeden Island Plain*.

Vessel No. 43 is our only restorable specimen of *Mercier Red on Buff*. Vessel form is slightly unusual in that the base is ovoid and the neck and rim have been worked into an almost rectangular shape, accentuated by the ears at the four corners of the rim. Decoration, too obliterated for restoration, was composed of narrow strips in freehand painting, in a curvilinear design.

Except for the ovoid-rectilinear shape, the vessel is a normal representative of the red on buff type. Since fragments are missing, the shape and type of the kill hole are unknown.

Vessel No. 44 definitely is only the lower part of a vessel. Probably only a rim is missing, in which case it is similar to vessel 41 and to the incised and punctated vessel from the Tucker Mound (Moore, 1902, p. 265). The entire vessel exterior is coated with red paint, the base is flat and disc-shaped, and the kill hole is round and pre-cut.

Vessel No. 45 is an unusual shape, and probably does not belong here, since it might be classified as a bowl just as easily as a jar. However, it is a relatively simple vessel form, decorated only with ovoid appliques at the rim, quite similar to those on the shoulder of vessel 41. The kill hole was broken through after the vessel had been fired. No strictly comparable vessels have come to my attention, other than a vaguely similar specimen classified as *Mercier Red on Buff* on the basis of the decoration in the Mound E cache (Sears, 1951, Figs. 1, 12).

Vessel No. 46 is a rather common form in this time period and area, a tall-necked jar which, in the total range of specimens available, shades into forms which might be classified as wide-mouthed bottles. This specimen is decorated with a non-naturalistic design in free incising, supplemented by a few small per-

forations. There is no paint, and the pre-cut kill hole is round. Other specimens in this class are decorated in a wide range of techniques, incising in several varieties and complicated stamping being most common. The form appears in full Coles Creek times in the Louisiana sequence (Ford, 1951, Fig. 32a) and elsewhere in the Southeast in definitely Mississippian context. Classification is *Weeden Island Incised*.

Vessels No. 47 and 48 are fairly unusual jars decorated with complicated stamping. Although neither is readily restorable, they represent the only complete, or nearly complete, vessels placed in this Mound D cache which were decorated with complicated stamping.

Vessel No. 47 may be classified as an aberrant specimen of *Kolomoki Complicated Stamp*. It has a square flat base, stamping on the shoulder area, stamp motifs, land and groove size and proportions—characteristics of this stamped type (Sears, 1951a, pp. 9-10). The rim, however, is very unusual, having been worked up into four points with rounded protuberances on top of each point, a treatment reminiscent of the four pointed rims characteristic of the Dallas (Lewis and Kneberg, 1946, Plate 60g) and other Tennessee Cumberland area cultures. As a final modification, the entire vessel was coated with red paint. Again, in spite of the elaborate rim modification and painting, the vessel is a specimen of *Kolomoki Complicated Stamp*.

Vessel No. 48, large and globular-bodied with comparatively fine stamping, has counterparts in other mortuary assemblages classified as Late Weeden Island, such as Hall and Mound Field (Moore, 1902, p. 300, Fig. 271 and p. 319, Fig. 302). There was also a similar vessel in the Mound E cache at this site (Sears, 1951a, Fig. 41). These have been classified elsewhere as aberrant specimens of *Mound Field Complicated Stamp*, largely to distinguish them from *Kolomoki Stamp*. If there were more of them, a new type would be justifiable. They do seem, in the globular shape and neck area decoration, to reflect Mississippian concepts as opposed to the Coles Creek-Plaquemine influence which produced the *Kolomoki Stamp*.

Bowls: Bowls, in several variants, are perhaps the commonest of the vessel forms ascribable to Weeden Island. In this case, vessel form is not a useful marker for time or culture contact. Although bowls are particularly prominent in Gulf Coastal Plain complexes, they have a great depth in time in this area, and are of course common in most ceramic assemblages in Eastern United States.

Vessel No. 49 is an oval bowl, the one major departure from the basic vessel shape. A normal folded rim is attached, however, and the entire vessel exterior is coated with red paint. The vessel was killed after firing. Classification is *Weeden Island Plain*.

Vessel No. 50 is a normal compressed globular

bowl with direct rim, whose kill hole was produced after firing. It is unusual only in the exceptionally well smoothed, nearly polished, surface. Classification is *Weeden Island Plain*.

Vessel No. 51 is only half of a not too well fired vessel, the other portion having disintegrated. A normal folded rim has partially scaled off. The kill hole seems to have been broken through after firing. The exterior is red painted. Classification is *Weeden Island Plain*.

Vessel No. 52 has the wedge-shaped rim which may normally be an earlier concept in Weeden Island, and is coated with red paint. The basal portions are missing, probably as the result of killing the vessel. Classification is *Weeden Island Plain*.

Vessel No. 53 is an unusual bowl in many respects. First, it is extremely large, 16" in diameter and 17" high. Apparently the process of producing such a large vessel was not too well understood, since it slumped somewhat before firing. Secondly, the vessel is thin, averaging only 3/16 of an inch, which is unusually thin for any of this pottery. Finally, the surface is very well smoothed or burnished. Killing was post-firing. Since such large vessels were not made for use in everyday activities in the village, and since it was killed after firing, removing it from the class of specially made mortuary ware, we may suspect that this vessel was produced and used for some special ceremonial purpose. Classification is *Weeden Island Plain*.

Vessel No. 54, a simple open bowl with folded rim, is perhaps the commonest Weeden Island form. As such, we need not discuss it here, except to point out that it is totally undecorated, and seems not to have been killed at all. Another bowl, not illustrated, is precisely like it. It is an exact duplicate (no number). Both might be classified as *Weeden Island Plain*.

Vessel No. 55, differing only from No. 54 in being slightly deeper, is partially missing. It, too, is *Weeden Island Plain*.

Vessel No. 56 (Plate XXX) is an interesting and certainly the most unusual vessel from the Mound D cache. In shape it might be classified as a somewhat aberrant cazuela with a flat, disc-shaped base. The rim is direct, modified only by the encircling incised line just below the lip. Decoration, apparently a floral motif, is outlined in broad-line incision. Red and white paint, the usual red and white which seems to be almost white wash, was then applied inside the lines. Final decoration, then, is in three colors, the unmodified buff surface of the vessel in the incised lines plus the red and white paint. It might also be classified as a zoned red and white decoration.

This vessel is also unusual in that it is made from a nearly mica-free paste, in decided contrast to the Kolomoki norm, and is uniquely tempered with crushed limestone. The vessel then is not only aberrant

at Kolomoki, it was not even manufactured there. I must admit, however, that I do not know where it came from. Few instances of pottery decorated with red and white paint are known in Weeden Island context, other than those already cited from this cache. A beaker-shaped vessel with rim effigy from Mound near Point Washington (Moore, 1901, Fig. 74) has a band of white paint and is painted red over the remainder of the exterior.

The only place in eastern United States where Red and White painting is at all common is the Arkansas-Missouri region. However, this painting is very different in character, is usually applied to teapots and bottles, and, on the whole, seems somewhat later. Everything considered, this Kolomoki oddity remains, for the present, distinctly an oddity.

The vessel was killed after firing, and some fragments of the base were lost before deposition in the Mound D cache. The vessel was probably made and used for some non-mortuary function originally.

Vessel No. 57 (Plate XXX) is less novel, an ovoid, slightly compressed bowl with the corners somewhat squarer than usual. Applique decoration consists of an inverted bird's head at each corner and a row of scallops between these pendant from a rounded rim strip. The entire vessel is thickly coated with red paint. Since less than half the vessel is present—which necessitated an artist's reconstruction—the method of killing is unknown. The vessel shape is common in Weeden Island burial mound context, and quite similar decoration appears on a more rounded bowl at Mound A, Warrior River (Moore, 1902, p. 336). Classification is *Weeden Island Plain*.

Vessel No. 58 (Plate XXX) is a sherd from a compressed globular bowl decorated with zoned incision. The piece is unusually well finished, nearly polished. Design, in beautifully executed fine line incision and circular punctation, is completely geometric, a series of scrolls and arches. The technique is commoner at an earlier period in the Weeden Island tradition (Sears, 1950, p. 90) but usually is executed there in more naturalistic designs. Comparable vessels, all in distinctly Weeden Island context, are numerous. Perhaps most directly comparable in design is a vessel from the Fannings Bayou Mound (Moore, 1902, p. 158). Classification is *Weeden Island Incised*.

Vessels 59, 60, 61, and 62, all represented by sherds on Plate XXXI, are large Mississippian jars. These four and large fragments of others like them were the first vessels placed in the deposit. Because of their size, they were thoroughly crushed and the fragments mixed with sherds from many other vessels. Numbers 59, 60, and 61 were almost certainly placed in the mound as complete vessels, since we have most of their rims. Sixty-two is less certain.

Vessel No. 59 is the best specimen of *Mercier Red on Buff* from Mound D. In finish, shape, and decoration.

it conforms to the type as described from the Mound E vessels (Sears, 1951b, pp. 11-12). Vessel form was a large globular-bodied pot with an erect vertical rim set at a distinct angle to the body. Rectangular perforations were made through the neck. The rim is unusual in that it has a simulated double fold, since rim strips are commoner in this type. Decoration consists of red stripes in a curvilinear design in the neck area, plus large triangles and curvilinear elements on the body. Incised triangles, point down, also form part of the body decoration.

Vessel No. 60 may be a *Mercier Red on Buff* piece, since there are traces of red paint which seem to have been applied in stripes. Vessel form is globular, this time with lugs (or scalloped rim?) attached directly to the vessel without an intervening neck. The encircling row of lugs has been met before in vessels 36 and 40, where they were perforated.

Vessel No. 61 (Plate XXXI), represented by one rim sherd with a single lug, seems to have been another Mississippian pot, globular-bodied again with a short vertical neck, a molded rim strip, and four perforated lugs. It differs from vessel 38 chiefly in that it is coated solidly with red paint.

Vessel No. 62 is another of this general class of Mississippian pots with vertical necks, this time appearing with the added wedge-shaped rim strip and short vertical lip on the interior edge more commonly associated with *Mercier Red on Buff*. Decoration on this vessel consists of excised triangles in the neck and incised lines, supplemented with an over-all wash of red paint.

Vessel No. 63, actually represented in the deposit only by three sherds, about half the vessel, is our only specimen of *Carabelle Punctate*. Perhaps these sherds were added for good measure to increase the bulk of the deposit.

Vessel No. 64, a miniature, is a beautifully finished piece, almost polished, made of a particularly fine clay used with very little tempering material. The globular body has a flat base. Applique ovoid pendants with excised centers are attached at four points. The vertical neck is surmounted by a rather heavily molded rim strip, rectanguloid in cross section. Heavily incised lines are spaced around the rim. The appliques might class it as *Oklawaha Plain* (Goggin, 1952, p. 44).

The two sherds representing a group of a dozen sherds from vessel 65 probably do not represent a complete vessel. The applique pendant seems to have been applied to the neck area of a small jar, most of the body of which was decorated with the vertical incised lines appearing on sherd *b*. The entire piece was coated with red paint. *c* represents the rim of the vessel.

The last sherd illustrated, 66, is a fragment from a compressed globular bowl, perhaps half of which was present in the deposit. Seemingly the lower half was

undecorated, except for a red paint wash which covered the entire exterior.

In addition to the restorable vessels illustrated, sherd batches were matched for a large number of other vessels. Descriptions of the probable vessel forms and comments concerning them follow. There was also a residue of sherds which could not be assigned to any vessel or sherd batch. In a few cases, these sherd batches have been mentioned when similar restorable vessels were described. Since they were not assigned numbers earlier in this report, tabulation is completed through the following data without reference to earlier notations.

It should be pointed out here, perhaps, that the vast majority of these batches seem to represent vessels which did not reach the deposit as complete vessels. Some errors have been made, no doubt, but not in the majority of cases.

Sherd Batches:

Mushroom-shaped vessel base, similar to base of vessel 25. Three specimens.

Cylindrical lower portion vessel, disc base-pedestal?—1

Large sherds from small globular-bodied pot with square base, short vertical neck, traces of heavy incision at neck-body juncture.

Sherds from base large globular-bodied plain pot—25

Sherds from shoulder area large red painted pot—8

Sherds from vessel, indeterminate shape, heavy free incising—36

Sherds from large free incised bird effigy, open top head—4

Large sherd, almost one-half, small open bowls—5 (5 bowls, 1 sherd each.)

Cylindrical lower portion of vessel, flat disc base—pedestal?—1

Lower half small globular vessel, red paint over-all—1

Sherds from compound vessel, similar shape vessel 32, heavier punctation upper portion—6

Cylindrical lower portion of vessel, flat disc base, red paint over-all. Pedestal?—1

Globular lower portion wide-mouthed bottle form, possibly punctations neck area. Red paint—1

Large bird effigy, bulging eye, open top head, red paint over-all—15

Sherds from large *Mercier Red on Buff* jar. Rim strip, notched—10

Sherds, body only, *Mercier Red on Buff* jar—12

Sherds, from very stylized red painted effigy. Ovoid top orifice, stub head, multiple perforations in body—24

Sherds, owl effigy? Orange paste, hooked beak on sherd from head. Traces red paint, many

perforations—98

Sherd lot—Sandy brown black paste, definitely one plain vessel with square base included, some modeling of corners. Some sherds from a round perforation. One or two vessels—72

Sherd lot, soft buff paste. Probably pedestaled duck effigy. Traces red and white paint—79

Sherd lot, thick brown sandy ware. Apparently small globular bowl or pot bottom—12

Sherd lot, *Mercier Red on Buff*. Three sherds from neck, type at distinct angle to body, one rim sherd, molded strip, square cross section—4

Plain bowl, open, shallow, burnished—23 sherds. Egg-shaped vessel, similar to numbers 27 and 28. Burnished—27 sherds.

Sherd lot, one or more *Mercier Red on Buff* vessels. Disc-shaped flat base, incised lines on some sherds—27

Sherd lot—Number red painted vessels. Includes one disc base, one zoned red with modeling, three types of incision. Plain paste, and surfaces identical—95

Sherd batch, thin, sand tempered. Probably two vessels, plain jars or bowl, globular—95

Miscellaneous Sherds:

Plain, sand tempered—453

Sand tempered, incised—11

Sand tempered, red painted—116

Sand tempered, red painted, incised—48

In summary then, pottery from Mound D was found in three distinguishable and culturally significant contexts, a midden deposit preserved under the mound, sherds from the mound fill, and sherds as well as complete vessels from a ceremonial cache.

The ceramics in the midden, deposition of which necessarily pre-dated mound construction, are classified entirely in the Kolomoki series. Analysis, particularly of stamp design, indicates that this midden may represent a relatively late period in Kolomoki development. From this, the mound was also constructed during a late period, near the end of Kolomoki occupation.

Sherds from the mound fill are not particularly informative. They seem to have been carried in with loads of soil from the immediate vicinity, and represent a mixture of periods, Kolomoki and Weeden Island.

The pottery deposit, a cache under the east central portion of the mound, contained 64 restorable vessels, others which may have been deposited as complete vessels, and fragments of at least 36 more. These are classified in this report by form, as tabulated below. A following tabulation includes the same vessels by pottery types, following Willey.

Mound D Vessels: Classification by Form:

Effigies in the Round: 1-2-4-5-23

Effigies Derived from Square Forms: 6-7-8

Effigies in the Round, Pedestaled: 9-10-11-12-13
14-15-16-17-18-19

Secondary or Derived Effigies: 20 (simple bowl),
21 (oval bowl), 22 (beaker)

Abstract Vessel Forms: 24-25-26-27-28-29-30-31
32-34-35

Pot Forms: 36-37-38-39-40-41-42-43-44-45-46-47
48

Bowls: 49-50-51-52-53-54-55-56-57-58-59-60-61-62
63-64

Mound D Vessels: Classification by Type

1949 and Sears, 1951)

Weeden Island Plain: 1-5-10-12-13-15-26-27-28-29
30-31-36?-42-29-50-51-52-53-54-55

Weeden Island Incised: 2-3-4-7-8-9-11-14-16-17-18
30-31-36?-42-49-50-51-52-53-54-55

Weeden Island Zoned Red: 23-6

Carabelle Punctate: 33-63

Mercier Red on Buff: 43

Ocklawaha Plain: 45-64

Kolomoki Complicated Stamp: 47-48

Unclassified: 37-56-39-44-59-62

Some comments on the probable importance of these vessel shapes, decorative styles, and pottery types have been included in the descriptive sections. Since their significance in time and space is discussed later, I would point out here only that the assemblage is not as unusual as it seems at first glance. As an assemblage, it is comparable not only to that from Mound E at this site but to others in northwest Florida listed in some detail in an earlier discussion (Sears, 1950). And, as in the case of Mound E, Hall, Tucker, and Mound Field, the Mound was built during the Kolomoki period, the point being that the ceramic types used in this mound were obsolete insofar as daily usage was concerned. This is true only in gross interpretation of the *Weeden Island Incised* type, however, since in earlier Weeden Island villages a zoned type of incision applies, as opposed to the free variant form found in these burial mounds.

Mound D, then, produced two significant units of ceramics, the burial mound assemblage and the village assemblage from beneath the mound. As assemblages, neither of these is completely new. They do serve to reinforce the conclusion that Weeden Island pottery types were used only in burial mounds during the Kolomoki period. This period is undoubtedly the one in which they reached their artistic peak, probably because the vessels were made, on the whole, specially for sacred functions, and were no longer objects of practical utility.

6 SUMMARY AND CONCLUSION

Mound D, twenty feet high and about one hundred feet in diameter, was a large and complex burial mound, built in the Weeden Island tradition during the Kolomoki period. Its construction may be summarized as follows:

The location for the mound, about three hundred yards west of the temple mound, had been part of the village area. Because of this, under the lowest constructional level of the mound, or in part scraped up into this level, we found some twelve inches of unusually rich midden, yielding 4,410 sherds classified in the Kolomoki complex.

As the first step in the mortuary rites which were to produce Mound D, this midden was scraped aside, and seven burials were made, in the flexed position, in graves lined with logs. These graves, believed to be those of retainers, served as a foundation for a scaffolding consisting of eight large vertical logs six feet high, with lighter cross framing at the top. The vertical logs appear to have been supported in position while earth was piled around their bases. This produced a small primary mound, covered with rocks, over the first burials and under the main framing of the scaffold.

After completion of the scaffold, one male was buried in a rock slab and log tomb adjacent to the south edge of the primary mound, and two females were placed in similar graves on the eastern (front) edge of the primary mound. These graves were covered by the next stage in construction, a rectangular flat topped mound about 30 feet by 50 feet and six feet high, a miniature replica of the temple mound. At the south end of this, over the grave of the male, more of the special yellow clay was worked into a disc-shaped platform, about eighteen inches higher than the general surface of the miniature temple mound. It is believed that the male under this disc was the individual whose death initiated the mound building or mortuary ceremonies, that he was a powerful individual from the upper stratum of a strongly class-stratified society. The disc was built, possibly, to keep track of the location of his grave during subsequent ceremonies which involved further retainer sacrifice and inclusion in mound building stages. One grave, log lined and covered, was located adjacent to the northern edge of this disc. It contained the cremated remains of several individuals.

After the miniature temple mound was completed, a number of offerings were placed in position. Bundles of long bones and trophy skulls, as well as several baskets of quite thoroughly cremated remains, were placed around the edges of the mound. An im-

portant factor is that the pottery deposit was placed along the central east edge of the mound. This cache, containing 64 restorable vessels as well as sherds of a great many others, contained vessels specially made for mortuary purposes, as was indicated by the pre-cut kill holes in them; others in this cache served a non-utilitarian function elsewhere, possibly in the temple, and there were a few more or less utilitarian vessels. **Certain vessels seem to have been broken before being placed in Mound D, as indicated by missing sherds.** This probably indicates that at least a portion of the mortuary rites took place elsewhere, perhaps in the temple, and that the vessel fragments were carried to Mound D, probably by the basketload, along with baskets of cremated remains, bundles of long bones, and trophy skulls. This also implies a thorough house-cleaning in the ritual furnishings of the temple, attesting still further to the social importance of the individual whose death initiated the entire process.

The remains of at least eighty individuals, mostly in the form of cremations and trophy skulls, were found in the yellow clay of the next construction stage. Over the miniature temple mound, from which the scaffolding still protruded, two sorts of earth were piled, yellow clay over the southern half and brown earth over the northern. As the yellow clay was placed, several more individual bodies, extended in log outlines, were placed in position. In all cases, there was some attempt at cremation in place. Since the stratification, particularly interlensing of the brown and yellow earths at the point of juncture, indicates a nearly continuous process of deposition, it is probable that the placing of these other individuals in the mound as complete bodies also indicates a form of retainer sacrifice. Single skulls, cremated remains, and long bone bundles were placed in the mound at a number of points, although none of them were found in the brown earth. This stage of construction was completed as another flat topped pyramid. This time, however, the platform was only a few feet in diameter, and the ground plan was round. A mass cremation took place on top of this platform. Evidently, most of the remains were bundles of bones or trophy skulls, piled up with logs, the cremation fires being smothered with rocks and the clay of the next stage. Three large pits were dug back down into basic soil from the surface of this stage. Burials were placed on the bottom of each pit, and others were placed in their fills.

Mound D was then completed to its final dome shape with a last thick mantle of red clay. No burials or artifacts were placed intentionally in this layer, al-

though most of the sherds in the Mound Fill category are from it.

It may be well here to recapitulate our findings in artifacts, since they form the most important basis for consideration of the origins and relationships of the total culture complex found in Mound D.

Most remarkable in the non-ceramic artifacts are the large number of cymbal-shaped ornaments in copper and iron. Copper ones had been found previously, but this is the first occurrence in the area of such ornaments in meteoric iron. It may also be of some importance that most of them came from trophy skulls and long bone bundles, not with complete bodies and not at all with the remains of individuals who must have been socially most important. The large conch shell beads, also similar to those from Mound E, are not very helpful, having a long space-time distribution in eastern United States. Perhaps more useful is the one stone chisel, probably a form culturally related to the spud, found with one of the last single skulls placed in Mound D.

As noted in the descriptive sections, the assemblage of ceramics from Mound D is not particularly remarkable. Analysis by form and decorative style points out that similar assemblages were known from a number of northwest Florida coast sites as well as from Mound E here at Kolomoki. However, as individual vessels, the Mound D cache produced some surprising and interesting specimens.

Two classes of vessels stand out as particularly important and useful in unravelling the streams of cultural influences producing Mound D and the late Weeden Island mortuary cult. These are the effigy forms and the large Mississippian pots. Simple bowls are the other commonest class, but are not particularly helpful owing to their long space-time distribution on the Gulf Coastal Plain and elsewhere. Two vessels were typed as aberrant specimens of Kolomoki Complicated stamp, which serves to reinforce the almost obvious conclusion that Mound D was a product of Kolomoki, not Weeden Island, culture.

The effigy forms find their closest relatives in the immediate Northwest Florida-Southwest Georgia area. The Mound D effigies have been divided into three sub-types, *i.e.*, sculpture in the round, life forms with no attempt at placement of spouts or supports; sculpture in the round, life forms placed on pedestals; and life forms derived from square vessel forms. As a class, ignoring these and other minor distinctions, effigies in this area have the following characteristics:

First, they are all life form effigies, with the owl and the duck, in that order, as the predominant models. Secondly, if decorated, they bear either free incision, most often a stylized wing symbol, or the perforations which seem to develop from pits terminal to incised lines. Most of them are red painted, and most of them are pedestaled, usually a rather crude,

broad pedestal.

This does not apply, of course, to effigies as parts of the decoration on more standardized forms, or as bowls with infacing effigy heads. These latter are equally important, but form a different class entirely.

Just as important, although restricted almost wholly to Kolomoki, Mounds D and E, are the large Mississippian pots—large globular-bodied vessels, usually with round bases, vertical necks, and thickened rims, often with a notched or plain added rim strip. Horizontal lugs, most often four in number, occur with some frequency on these forms. Furthermore, the use of freehand red painted designs, a Mississippian trait, is almost totally confined to these vessel shapes, the combination characterizing the pottery type *Mercier Red on Buff*, which is not as common in Mound D as it was in E, although it is present. The same vessel forms, however, bear in several instances decoration of incised lines or arches forming triangles pendant from the rim, with the points down, also a Mississippian characteristic to the west and north.

Here it may be well to document again the point that Mound D is a Kolomoki period mound, although it is also a Weeden Island mound, admittedly a rather confusing situation. The first point is that there was a continuous occupation at Kolomoki, initially a classic Weeden Island with the standard assortment of ceramic types. Through time, with some adjustment in village plan and the building of a temple mound, this culture, through emphasis on and development of complicated stamping along with elimination in village ceramic assemblages of the incised and punctated types, develops into the Kolomoki culture. In this latter period, exemplified in Mound D by the sub-mound midden, ceramics in the village are confined almost entirely to *Kolomoki Complicated Stamp* and a plain ware. By definition, then, this latter period cannot be classified as Weeden Island. However, Mound D and Mound E (Sears, 1951) were built during this Kolomoki period. This matter has been gone into at some length, using the evidence from Mound E, in another publication (Sears, 1950). The reader is referred to that source for detailed discussion and documentation. It may be well to point out here that the relationship between the burial mounds and the Kolomoki rather than Weeden Island periods rests on several points. First, *Kolomoki Complicated Stamp* was of some importance in the Mound E cache. Secondly, certain vessels in that cache—Mississippian form pots with red painting, the *Mercier Red on Buff* type—indicated relationships with rather late Mississippian cultures, too late for the relationships worked out by Willey and others for Weeden Island I (Willey, 1949). *Kolomoki Complicated Stamp* falls late, stylistically, in Georgia stamp development (Sears, 1952c) and is the diagnostic type for a village arranged

around a formal plaza with a large temple mound, which may be regarded as a late trait.

Mound D also relates to the Kolomoki period on several grounds; in fact it is probably later than Mound E, since the pottery of the stamped type in the sub-mound midden seems later than that in Mound E and since the mortuary ware in the cache seems best derived, stylistically, from simpler forms appearing in Mound E. Two Mound D vessels are classified as *Kolomoki Complicated Stamp*, although aberrant. The cultural assignment afforded by this classification is reinforced by the presence of the same Mississippian jar forms as those from D, including some of the same red-on-buff type. Thus D relates to E directly. Considering Mound D only, the Mississippian vessel forms from the cache are susceptible, independently, of the same interpretation as that derived from the Mound E vessels. Still other points are the appearance in both mounds of free incised decoration, of pedestaled effigies, and of the copper cymbal-shaped ornaments. Further, both were built following, or as a result of, similar ceremonies, initiated at the death of one individual, accompanied by retainer sacrifice, and using a mass cache of similar pottery types on the same side of a core mound.

It seems safe then to conclude that Mound D does pertain to the Kolomoki period, both on the basis of internal evidence relating it directly to village assemblages and on the basis of its relationship to Mound E, which was more obviously a Kolomoki period mound.

One conclusion to be drawn is that Weeden Island mounds need not be related to Weeden Island villages, almost a horrible thought. However, the evidence at Kolomoki certainly indicates that the Weeden Island ceramic tradition continued to be used in mounds after the end of its use in the village. The Weeden Island mortuary tradition, then, as I have taken some pains to document elsewhere (Sears, 1952b), may certainly move in time independently of Weeden Island culture as defined ceramically. While I cannot prove the point, I also suspect that it may also move independently in space, that quite possibly some of the mounds on the Florida northwest coast may have been built, even during the Weeden Island I period, by cultures using only the *Swift Creek II Complicated Stamp* or *Wakulla Check Stamp* in their everyday affairs.

I have recently had the opportunity of inspecting Willey's collection from the Mound Field site (Willey, 1949, pp. 55-64) and a collection made recently at the Hall site. In both cases, the midden materials were predominantly Kolomoki Complicated Stamp. Since Kolomoki stamped materials appear in the burial mounds at both sites, and since the burial mound collections are closely related to those from Kolomoki mounds, it is clear that the phenomenon of separate

ceramic assemblages for sacred and secular usage is not confined to Kolomoki.

This is also the place to point out that Kolomoki is not a unique phenomenon. I have given elsewhere a long list of sites in the area in which the burial mound assemblages appeared to be closely related to the Kolomoki Mound E assemblage (Sears, 1951, pp. 101-107). Excavation of Mound D, an exotic E actually, simply strengthens the relationships adduced there. Adding to this the two-way, mound to mound and village to village relationships noted above, it becomes completely certain that Kolomoki is one site which is representative of a period in the development of what has been called Weeden Island. Certainly there is enough evidence for classification of Kolomoki, Mound Field, and the Hall site together in a Kolomoki focus. In all probability, the other sites listed in 1950 also belong to this focus, although only burial mounds are compared.

The point was made in the section on burials that another group of mounds, in the Tampa Bay area—Weeden Island, Thomas, and Prine—were probably in the same time period as Kolomoki. This was based largely on similar mortuary customs, reinforced by an apparent separation of church and state in pottery, most evident at the Prine Mound. The differences are sufficiently great between the two sets of sites, Tampa Bay and the northwest Florida coast, including Kolomoki, so that the more southerly sites should in all probability be classified together as another focus in the same time period as the Kolomoki focus.

A problem for consideration at this point is the position, in the usual relative chronological scales, of the Kolomoki period and focus. This may be attacked from several points of view—such as the internal evidence for sequence at Kolomoki itself, the evidence for position of the complex in the South Appalachian Stamped development, the evidence for seriation in Weeden Island as defined by Willey (1949) and, finally, relationships outside the Georgia-Florida area. It may be best to recapitulate all of these, although most points have been made in previous publications, or require extensive and detailed documentation which will be more at home in the final report on Kolomoki.

The sequence at Kolomoki was noted at the beginning of this section, a Weeden Island period followed by the Kolomoki period. This has been documented in several different ways (Sears, 1950a, 1951a and b), although no physical stratigraphy has been found thus far. It is completely certain that Weeden Island pottery types, as defined by Willey (1949), are the major types of the earlier, Weeden Island period. Other types are a Swift Creek II period Complicated Stamp and *Napier Complicated Stamp*. It is just as certain that types in the village deposits of the Kolomoki period are solely *Kolomoki Complicated*

Stamp and a plain ware. Since the sequence is clear, it is almost obvious that the Kolomoki period ceramic assemblages derive from that of the Weeden Island period through elimination of the Weeden Island types and emphasis on the stamped ware. I should point out again, though, that this applies only in village assemblages. Specialized types classifiable in the Weeden Island series are found in burial mounds, in some cases associated with Kolomoki stamped. This is further documented by excavations made by Larson in the village area in 1951. These have not been completely analyzed thus far, but it is quite clear that they represent the transitional Weeden Island to Kolomoki period. The stamped ware is obviously intermediate in motifs, style, and form. It may be worth noting here, although full documentation is reserved for the final report, that a few sherds of *Wakulla Check Stamped*, the first from Kolomoki, were found in these deposits.

From all of this, it is apparent that the Kolomoki period represents the terminal phase in development of Weeden Island, a phase in which Weeden Island ceramics were used only in mortuary or other sacred contexts and had there assumed exotic forms. Since conservatism is most often apparent in the mortuary practices of any culture, this is not a particularly unique case.

The writer fully realizes that this is in direct contradiction to the views of Gordon Willey as expressed in his *magnum opus* on the Northwest Coast. In Willey's development, the presence of *Wakulla Check Stamped* is the only indicator for the latest period in Weeden Island. When it appears, complicated stamping is believed to disappear. Thus the midden at Mound Field was classified as Weeden Island I, whereas in the development presented here it is terminal Weeden Island. I have gone to some pains to discuss this situation elsewhere (Sears, 1950a, 1951b). It does not seem necessary here to go into the argument in detail once more. Essentially, proof seems to be lacking that the small check stamp is a reliable marker. It seems probable that it has a much wider distribution in time and space than was supposed by Willey, and is untrustworthy in this area. Possibly its appearance, although in statistically insignificant quantities, in the mid-period midden at Kolomoki is significant. Actually, it may at some sites be a mid or late period marker, but other ceramic types must prove the point.

Kolomoki Complicated Stamped, considering only the stamped type, is a relatively late type in the South Appalachian province. This matter has been considered at some length in several papers (Sears, 1950a, 1952c, n.d.) and need only be recapitulated here. In brief, the existence of a developmental sequence in complicated stamping can be demonstrated to exist. The sequence is based in part on typological seriation, with complexity of motifs, use of fill motifs,

size, and width of lands and grooves as diagnostic characteristics. The seriation thus achieved is bolstered stratigraphically at several points.

The series begins with Early Swift Creek, fine-lined complex stamps using many elements, on jar forms with notched or serrated lips. This develops into the many variants of the Swift Creek II period, which are somewhat simpler and coarser, with fewer main elements and less important fill units. Jars usually have folded rims of one type or another. This is the type represented in the Weeden Island period at Kolomoki. This in turn gives way to Kolomoki stamped, still simpler and larger stamping, occasionally lacking completely in fill units. Rims may be folded, but just as often are plain with a narrow lip extrusion. The stage following this is represented by Savannah and Wilbanks Complicated Stamps (Caldwell and McCann, 1941, p. 45; and Sears, n.d.). The final stage is represented by some of the variants classed together currently as *Lamar Complicated Stamp* (Jennings and Fairbanks, 1939).

Lamar is known to be immediately protohistoric and early historic. At the Irene site (Caldwell and McCann, 1941) and at CK-5 (Sears, n.d.) the Wilbanks and Savannah types fall just under Lamar variants stratigraphically as well as typologically. *Wilbanks Complicated Stamp* in the CK-5 stratigraphic column is successive to *Etowah Complicated Stamp*, the Etowah Valley ceramic co-efficient for the full Mississippian period, the period of the Southern cult at Etowah and of the Dallas culture in Tennessee.

This seriation then places *Kolomoki Complicated Stamped* in a phase of the Mississippian period which I have characterized elsewhere as mature Mississippian (Sears, 1951a, 1950a, n.d.), a stage including the latter part of Early Mississippi as the period is generally defined (Griffin, 1946) and the beginning of late Mississippi in the same usage.

In any event, the period is one well past the decline of Middle Woodland culture and before late Mississippi as exemplified by such protohistoric manifestations as Lamar.

This position is supported by other evidence, ceramic and otherwise. *Mercier Red on Buff*, commonest in Mound E, is decidedly a type with Mississippian affinities, both in the painting itself and in the vessel forms. The general decorative style and vessel form have their most frequent occurrence to the north and west in relatively late periods, usually classified as late Mississippian. Examples are the Late Mississippi of the Central Valley, for which several vessels directly comparable in shape are illustrated (Ford, Phillips, and Griffin, 1951) and the Dallas culture of Tennessee. The red and white painting, appearing at Kolomoki in Mound D, may also be a Mississippian time marker. Certainly it is very different from the late bottles with red and white paint which were located farther west,

but its appearance here at Kolomoki may indicate equivalent time periods for the two styles.

The vessel forms of the utility type—for example *Kolomoki Complicated Stamp*—find their relationships, especially in the small flat bottomed jars, in the lower Mississippi Valley, in the Coles Creek, and perhaps in early Plaquemine periods. Striking an average between this evidence, and the late indications afforded by the painted types with Mississippian rather than lower valley affiliations, we may conclude that late Coles Creek-early Plaquemine may be indicated as a period. Further evidence in support of this general chronological position is afforded by other items. The four rim points on one of the stamped jars from Mound D have parallels only in Middle Mississippian cultures, all considered to be post early Mississippi to the best of my knowledge. The same is true of the notched added rim strip on *Mercier Red on Buff* vessels from Mound E and on several sherds from Kolomoki stamped vessels found in the midden under Mound D. Although several vessels from Mound D have many horizontal lugs, it seems probable that these lugs, on large round based jars, were inspired by Mississippian vessels, where four lugs are found on many jars in this shape and size class (Ford, Phillips, and Griffin, 1952). Single instances of Mississippian traits in Mound D are the small “sockets” on vessel 39, paralleled to the north on a vessel which falls in the Mississippian form class (Webb, 1938, Fig. 20); the arches or pendant triangles on the same pot form on such vessels as 37 and 38; and the lug handle on one Kolomoki stamped sherd from the midden.

On the whole, it seems that many of these ceremonial vessels were over-elaborated derivations of ceramic traits characteristic of a “mature” Mississippian horizon. Since they appear on only one or two vessels each in this late Weeden Island context, it is hardly probable that they are the prototypes of the thousands of definitely Mississippian vessels.

As was indicated on page 23, the single stone chisel finds its closest relatives in the Gahagan-Alto-Grant, or St. Johns IIa horizon, just pre-Southern cult. Ceramics reinforce the relationship to Grant. The general distribution of the cymbal-shaped copper ornaments indicates relationship in this general chronological period.

Perhaps also relevant here are the three stone slab graves. Although not very good specimens of the type, they would seem to be generically related to the Etowah graves and the many presumably late graves in the Tennessee area.

None of these items by themselves are too indicative. All together, they indicate that this period of Weeden Island falls at the very end of that culture complex. I do not believe that the Kolomoki type of culture is immediately ancestral to either Fort Walton, which is probably in part intrusive from the North;

or to Safety Harbor, which probably develops from the Tampa Bay Weeden Island variant. It does seem probable that very little time separates the terminal phases of Kolomoki, which probably continued its ceramic tradition completely in the stamped tradition, from the beginnings of either of these two complexes, both of which continue into the 16th century.

As a guess, I have offered the thirteenth century as the terminal period for Kolomoki development, the Southern cult falling, in its peak development at Etowah and Spiro, in the next century. Generally, this is in accord with other estimates. Further discussion and documentation must be reserved for the final analytical and interpretative report on Kolomoki.

I have referred several times to the probable ceremonialism involved in Mound D construction. Because of unusually clear stratigraphy, a large number of burials, elaboration in mortuary or temple furniture pottery types, all allowing for good documentation, it is possible to reconstruct some features of the ceremonialism involved through analogies with the Natchez-Taensa 17th century funerary rites. A separate paper has been published on this (Sears, 1952a) which may be recapitulated as follows:

The social organization of the Natchez, as described by Du Pratz and others (Swanton, 1911), has been considered unique in eastern North America because of a strong bias toward class rather than kin as a basis for the organization. Probably the Natchez and Taensa were not unique even then, since there are indications that similar situations obtained in some of the groups contacted by De Soto, particularly the Timucua who are better known from the descriptions and drawings of Le Moyne.

The Natchez society was organized into three major groupings, more or less hereditary, although there were comparatively odd permutations. The smallest class was of course the upper, that of the “Suns”. The rulers of the society were of this class, or perhaps more accurately, this was the ruling class. A not too readily distinguishable class of “nobles” ranked below the Suns, followed finally by the mass of the people, the “stinkards”.

It is quite clear that this social organization would have physical representation in mortuary practices. Such elements are involved as retainer sacrifice and burial at the death of a Sun, sacrifice and burial of wives, movement of the body of a Sun on a litter, burial of the Sun and retainers through the floor of a temple or in set relationships in the temple mound. We might also find indications of the conspicuous consumption of costly articles, elaborate ornaments, and perhaps interment of temple furniture, including skulls and bones which would either be trophies or remains of past Suns and nobles retained in the temple.

The burial practices in Mound D and those in Mound E appear indicative of very similar mortuary

ceremonies. As outlined below, such elaboration is obviously a reflection, to some degree, of the social order which produced the ceremonies.

The first step in Mound D, after cleaning the ground surface, was the interment of six individuals and one basket of partially cremated bones in log-lined tombs. All bodies were slightly flexed in the knee area, and were placed with heads to the east. Over this area, a large scaffolding was erected. Since the upright logs in at least one case butt on the horizontal logs of these first graves, and in no case penetrate deeply into the sub soil, it seems probable that the first mound structure, a low dome-shaped affair covered loosely with rocks, resulted mainly from the placing of earth around the butts of these logs and over the graves. The implications for simultaneous interment of these first six individuals make it highly probable that they represent a case of mass retainer sacrifice. The scaffold, perhaps similar to those involved in the mortuary ceremonies of spotted serpent, seems to have been used in pre-interment rites for the next three individuals buried. One male was placed alongside the scaffold in a log and rock tomb, his head to the east, and a litter was placed over the grave. Two females were then interred in similar graves at the eastern edge of the scaffold, on the front surface of the primary mound. The analogy with the sacrifice of wives on a scaffold at the death of Spotted Serpent is striking. Following this interpretation, the male in the special grave, apparently buried after ceremonies on the scaffold, can only have been the paramount individual whose death initiated the ceremonial-mound building cycle. The females, related through near simultaneous interment after scaffold based ceremonies and through use of the only two other rock slab graves in the mound, must have stood in a near relationship, socially at least, to the male.

After the interment of these individuals, a miniature of the temple mound was constructed, with a dish-shaped superstructure over the main grave. The mass pottery deposit was placed against the front of this. Although most of the pottery seems to have been made especially for these ceremonies, there is some reason to believe that some pieces were originally designed for other ceremonial usage, pieces with no practical function and no kill holes, as the bird, deer, and panther vessels. It seems highly probable that these items, as well as the single skulls and long bones, must have been temple furniture. The skulls seem to have been preserved with the flesh on, as trophy heads rather than skulls, since ornaments were in place—beads as well as iron and copper ear ornaments.

Over the miniature temple mound, other persons were buried in the flesh. The evidence indicates continuous deposition of bodies and earth, which I interpret as indicative of further retainer sacrifice.

At various times and places, still other long bone bundles and trophy skulls, plus baskets of cremated ashes, were placed and covered with earth. Many, if not most, of these complete bodies or parts were partially cremated in place, a practice rather similar to that obtaining in the slightly later Parrish Mound 2, classified in the Safety Harbor period (Willey, 1949, pp. 146-152).

The cycle of retainer sacrifice and mound building reached an end point in the completion of a flat-topped circular mound. On the top of this, a great many miscellaneous items were cremated in place. Also at this stage three large pits were excavated all the way back down to original ground surface. A complete body was placed at the base of each, with a number of single skulls. Other skulls and long bones were added as the earth was replaced, particularly skulls placed on a hand and forearm. Except for the possibility of further retainer sacrifice, this has no Natchez parallels. As a burial method, however, it is strikingly similar to that obtaining in such western mounds as Gahagan and Mayes.

Finally, the entire mound was covered with a thick mantle of red clay, assuming its final dome shape and dimensions.

Points of similarity to the Natchez ceremonies are:

Initiation of elaborate, rather bloody, and costly ceremonies at the death of one individual. Reasoning in an obviously circular fashion, an individual of great social importance.

Retainer sacrifice and burial at several points in ceremonies.

Sacrifice of females, retainers or wives.

Use of a litter for carrying body of dominant individual.

Use of a scaffolding in the ceremonies.

Possibly a rather precise pattern of spatial alignment for graves.

Possibly the erection of a miniature temple mound over the grave bears some relationship to the later Natchez custom of interment in the temple mound.

On the whole, it is clear that there are similarities between the mortuary customs of the 17th century Natchez and the 13th century inhabitants of Kolomoki, similarities too great, when they include such details as litters and scaffolds, to be explained as coincidence or convergent development. From this, with the internal evidence at Kolomoki for dominance of a single individual, retainer sacrifice implying strong social control, conspicuous waste of costly objects in funeral ceremonies, and of course the high degree of social organization implied by the elaborate construction of a large burial mound, it would appear almost certain that a strongly class-stratified social system obtained in the society which built Mound D.

a society for which we know the social organization in some detail, there can be little doubt that the two societies were socially organized in a similar fashion. As pointed out several times earlier in this report, Kolomoki and the Lower Mississippi Valley are in the same culture area, an area quite uniform in the Middle Woodland through mature Mississippi levels, characterized by ceramic traits localized in the Gulf Coastal Plain, with the incised wares such as *Weeden Island Incised*, *French Fork Incised*, and *Crockett Curvilinear Incised* being the best known types in the most uniform style.

Taking everything into account, I rather suspect that such sites as Gahagan, Kolomoki, and Grant represent the societies at or near their ceremonial peak, a peak from which they declined in later years under the influence of specifically Middle Mississippian cultures from inland.

In summary, Mound D at Kolomoki is a burial mound in the Weeden Island tradition, built in the

Kolomoki period, a period in which the Weeden Island tradition in ceramics applies, in the Kolomoki and Central N.W. Florida coast areas, only to mortuary wares. Although unusually elaborate even for this tradition, it is a more or less normal representative of its class, and is in essential details not very different from the Hall, Tucker, and Mound Field sites in Florida.

Because of unusually clear stratigraphy, it has been possible to work out the relationships of the various levels of mound building to the several types of burials and mortuary deposits. From this, it seems probable that the Mound represents the mortuary customs of a society similar to that of the 17th century Natchez, organized on class rather than kin lines. Since Kolomoki and other sites of the period are so large and elaborate, they probably represent the mortuary customs and the social system at their peak, the Natchez having preserved but a remnant of the original traditions.

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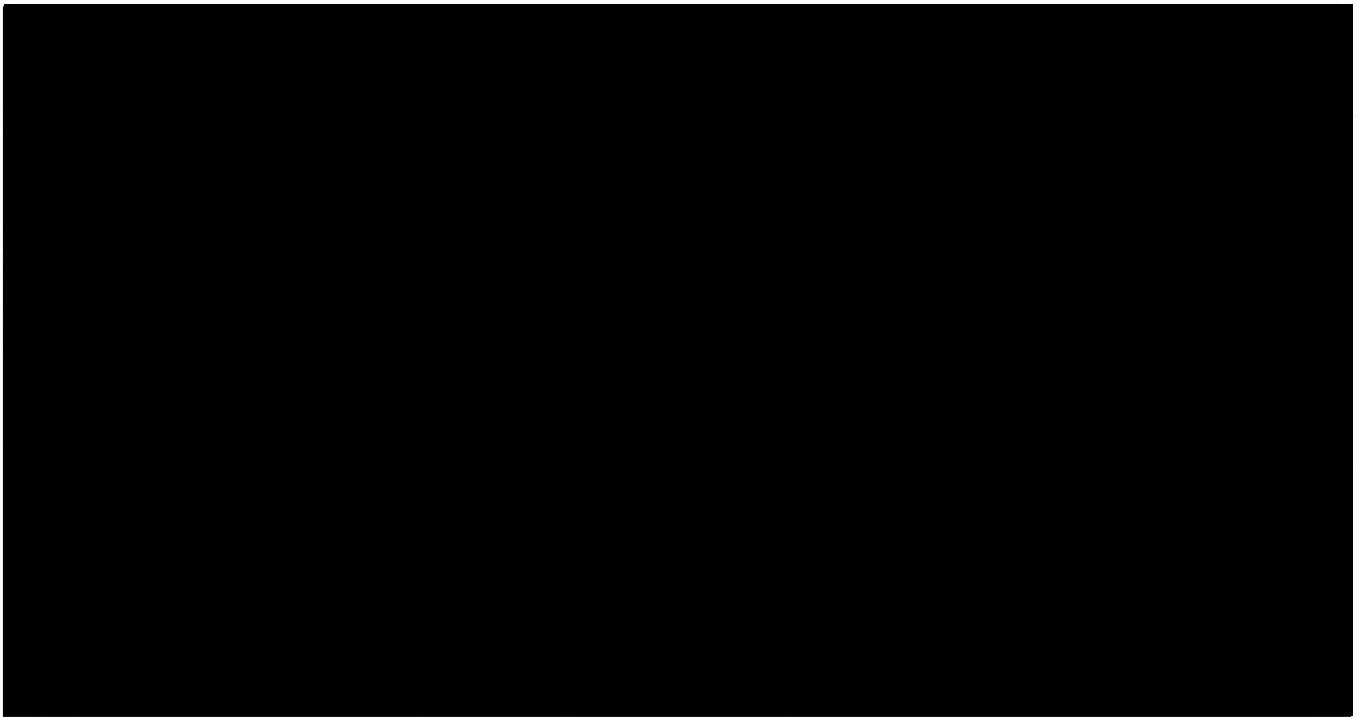


(a) Approach Cut. Mound D unexcavated. The three cuts in center are ten feet in width.

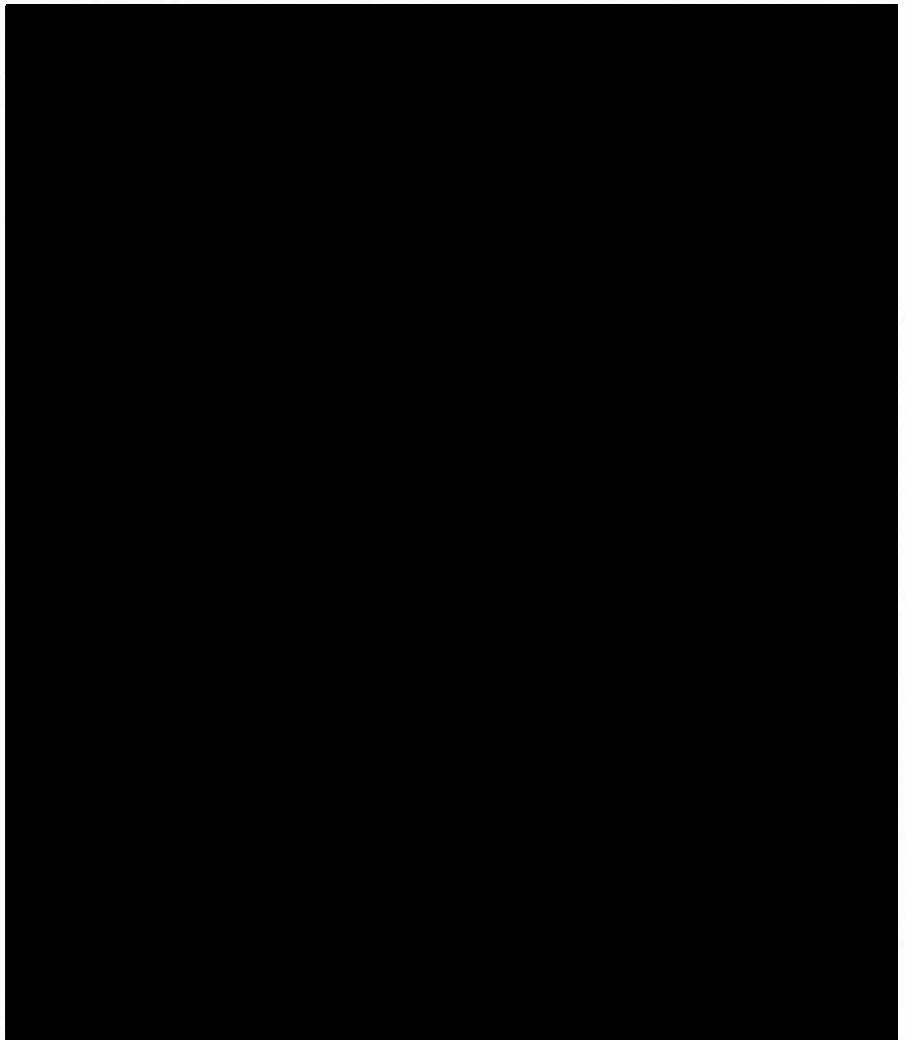


(b) Approach cut of edge of the mass pottery deposit. Main cut started down from top of mound.

Plate II



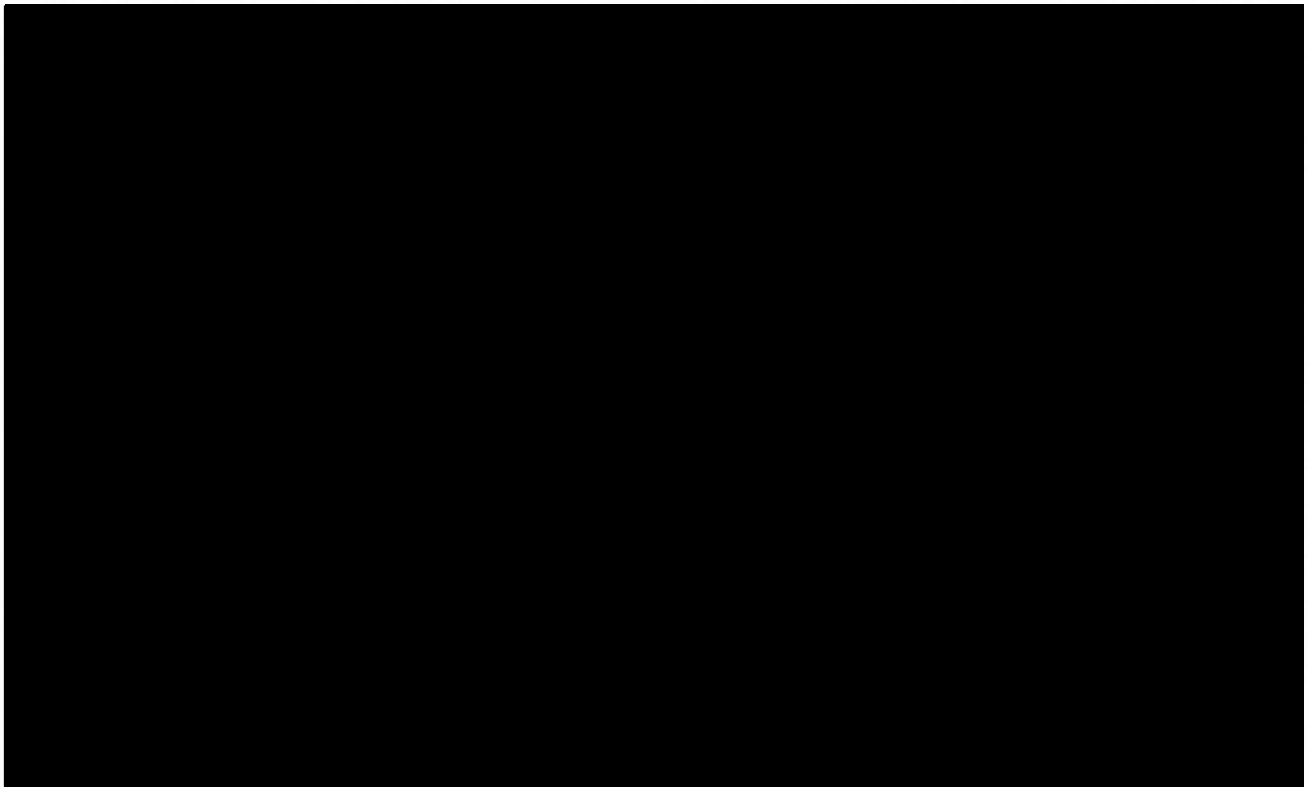
(a) Main cut carried down to level just over mass pottery deposit. Disc-shaped cap on core mound isolated left rear.



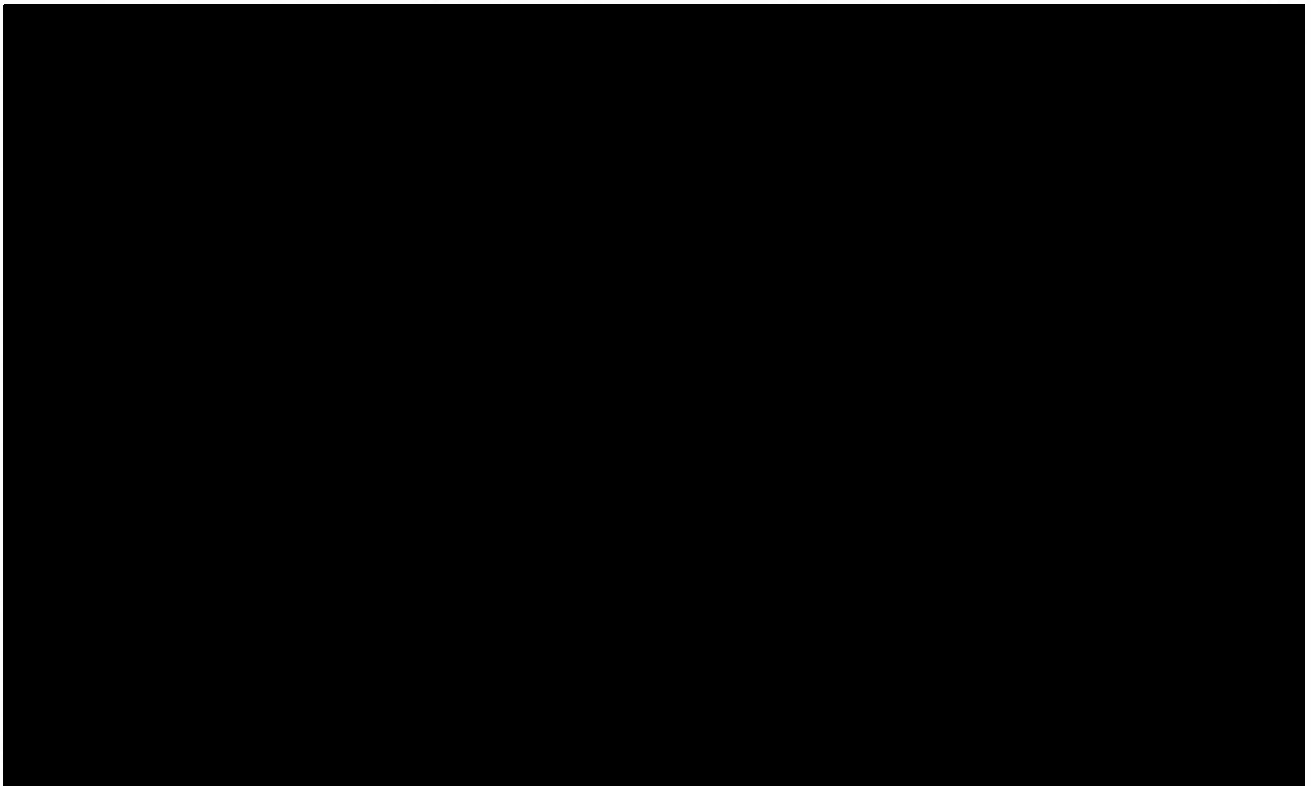
(b) Work in pottery deposit (See Plate IV for complete excavation). Rocks at upper left are those surrounding Burial 8

Plate III

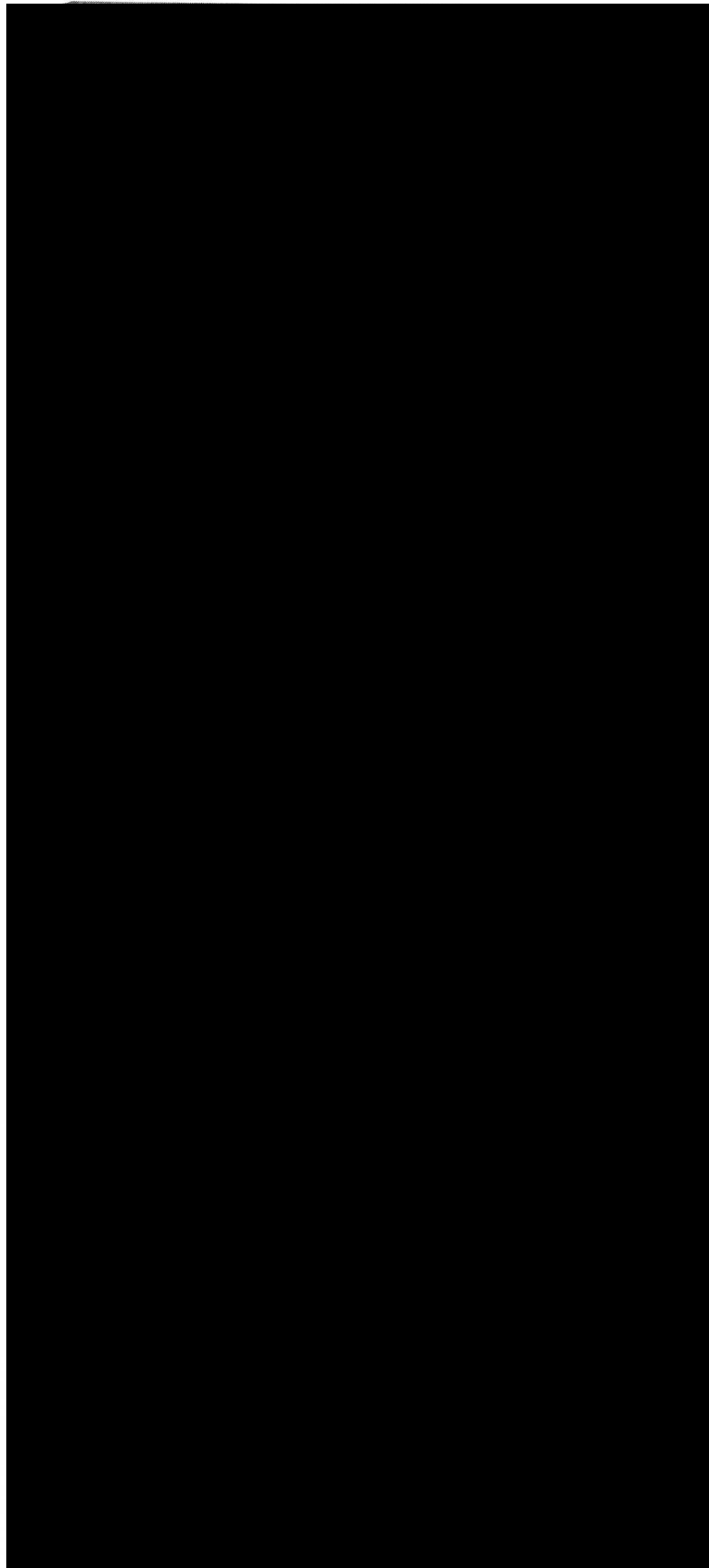
(a)



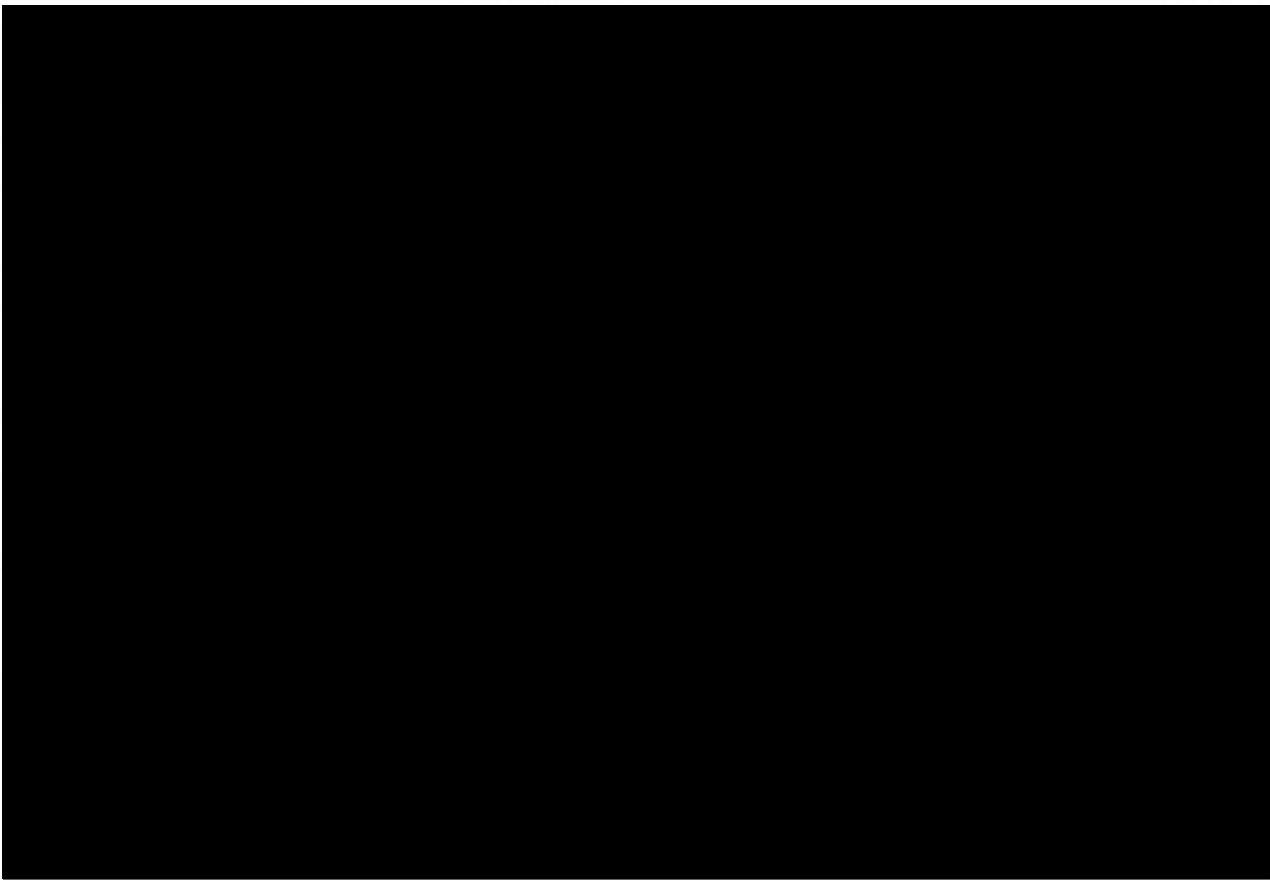
(b)



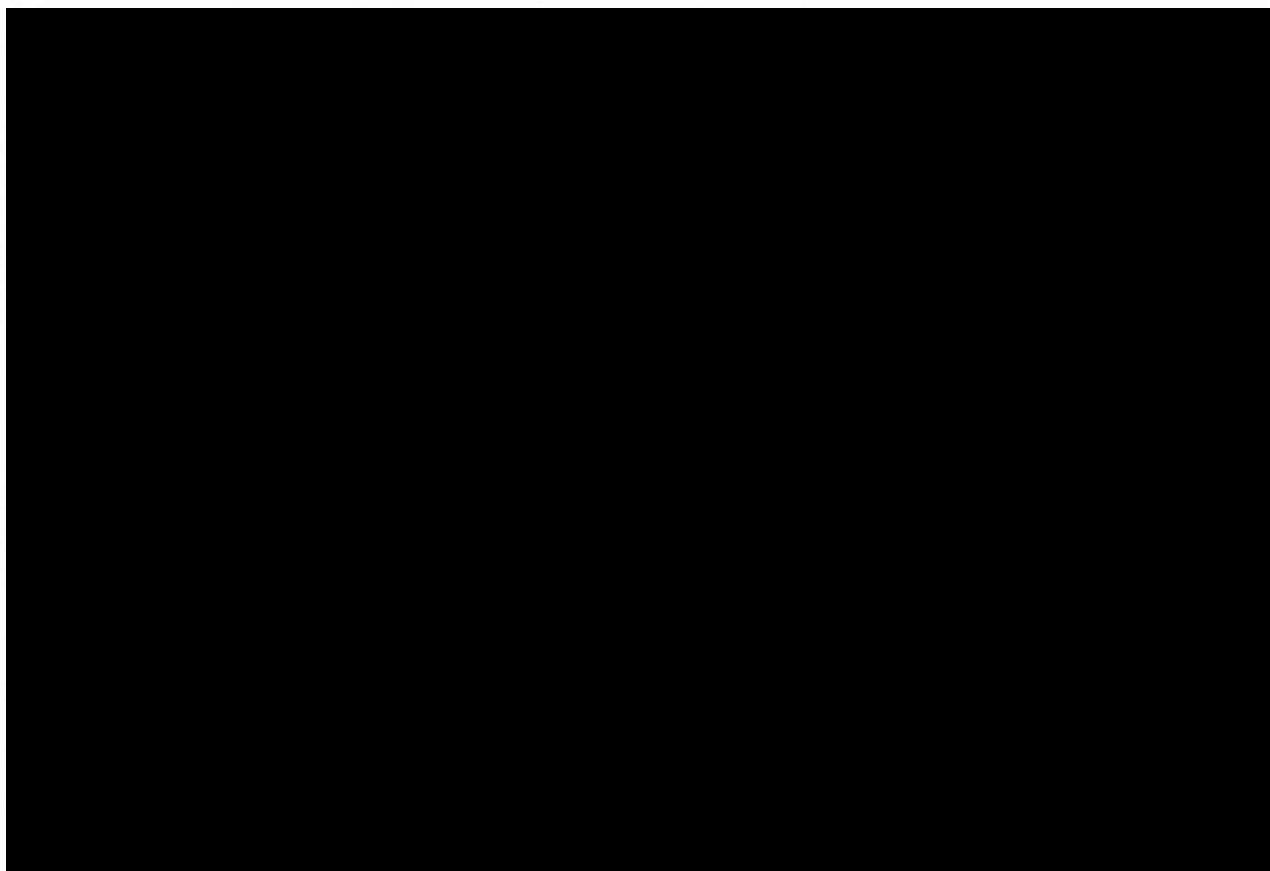
(a) and (b) Main Cut. Completed as at end of 1950 season except for removal of pottery and initial vertical slice into core mound. Upper layers of vessels in pottery deposit in place. Core Mound superstructure isolated. Postholes with stakes in them are the four southernmost posts from the scaffolding. Rocks in left (south) wall in (a) are involved in extended burials cremated in place over core mound. Burial 2 in rock slab tomb has had collapsed covering rocks (see Plate V, b) removed.



Mass pottery deposit. Some vessels still buried under those appearing here. Grid is five feet on each side, one inch black and white graduations. Some distortion in matching due to photographs taken at slight angle. Distortion at mid line amounts to no more than four inches. See Fig. 12 for vessel identification and location. See plates for illustration of all complete vessels.

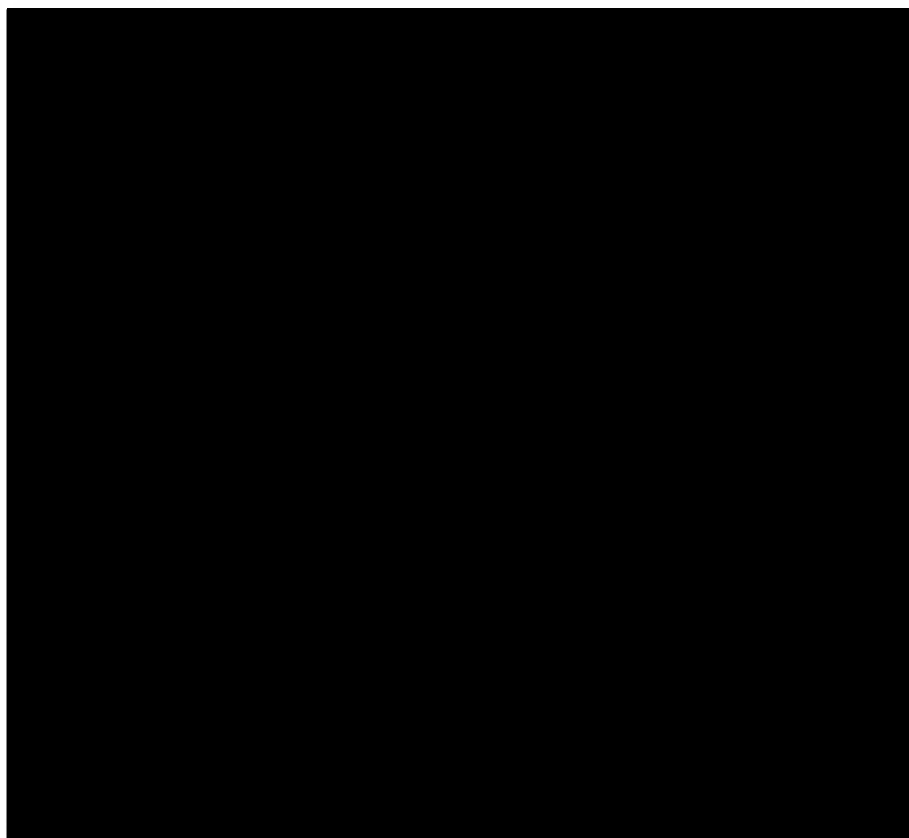


(b) Burial 8 in place in rock slab tomb. Rocks on remains of covering were originally supported in place by logs.

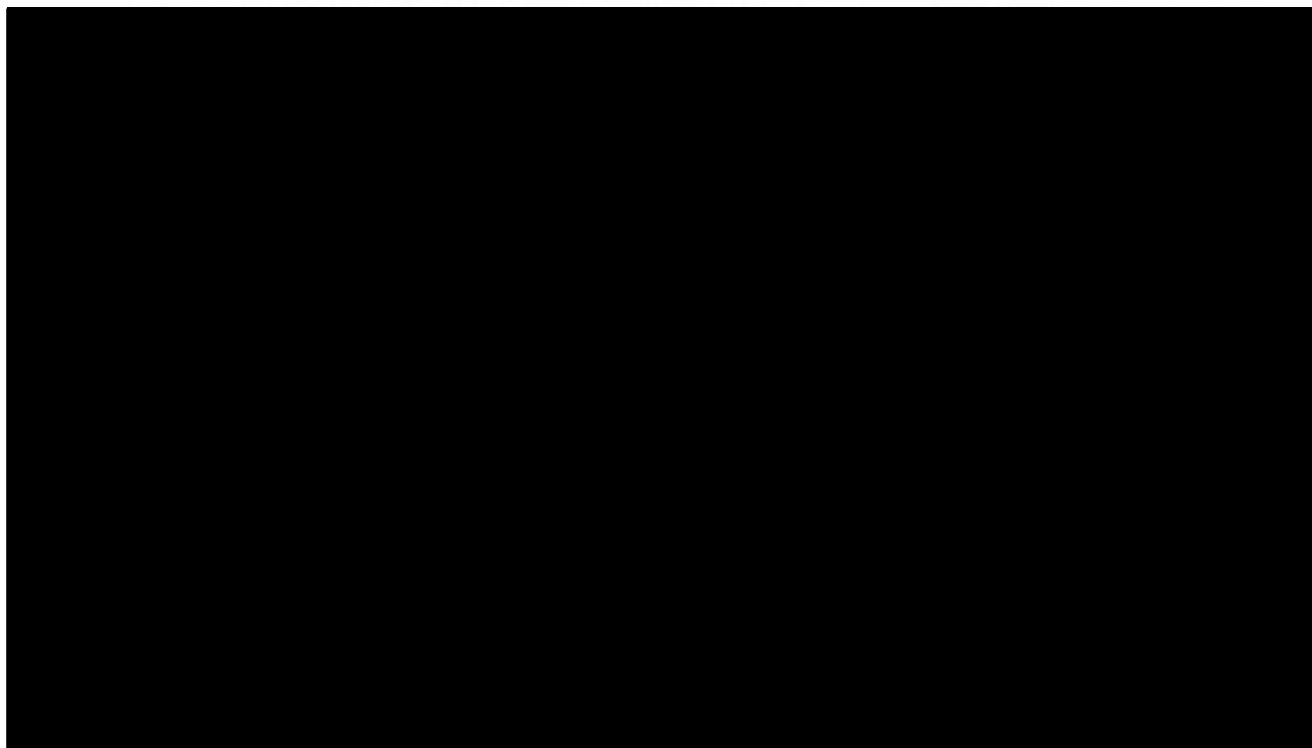


(a) Burials in place. Two collapsed skulls and sheet of mica in place on yellow clay surface, west edge of top of yellow-brown stage.

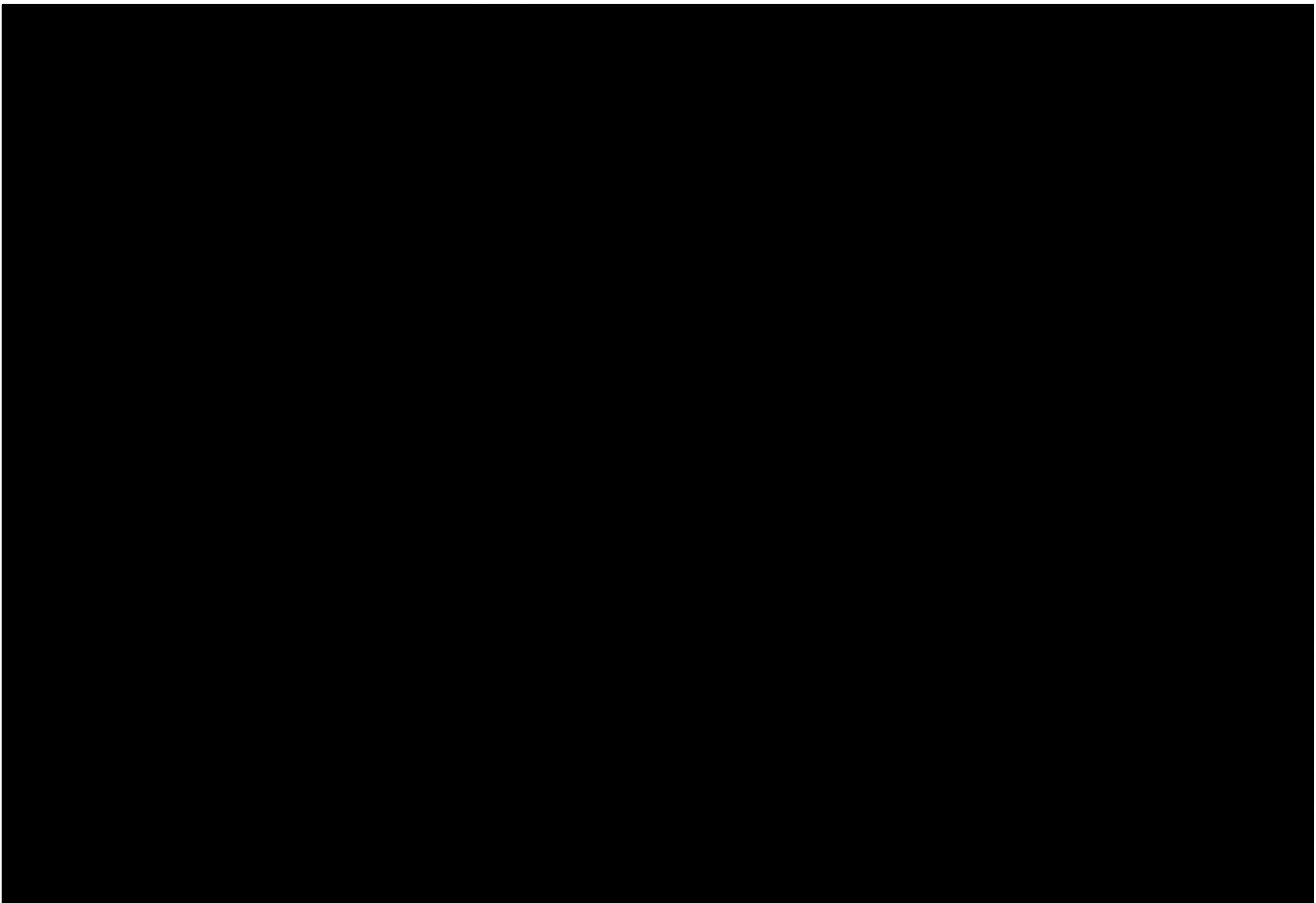
Plate VI



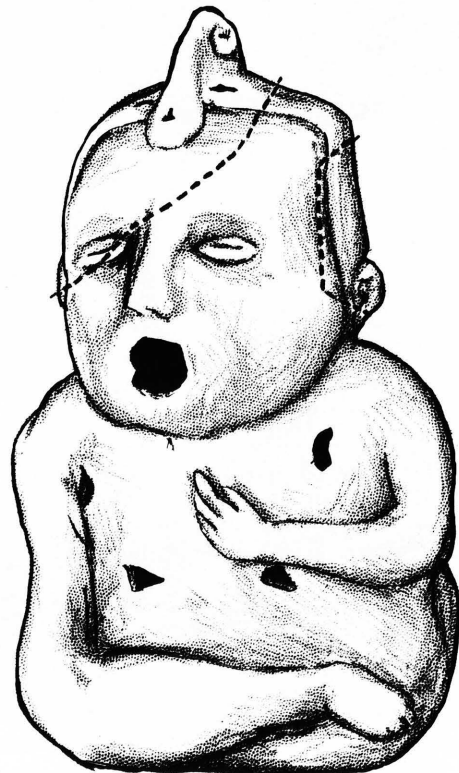
Feature 3 partially excavated. Profile on far wall about two feet into the feature. Pit as shown, with skeletal remains in place, intrudes into old ground surface, the plane surface in front and at the left.

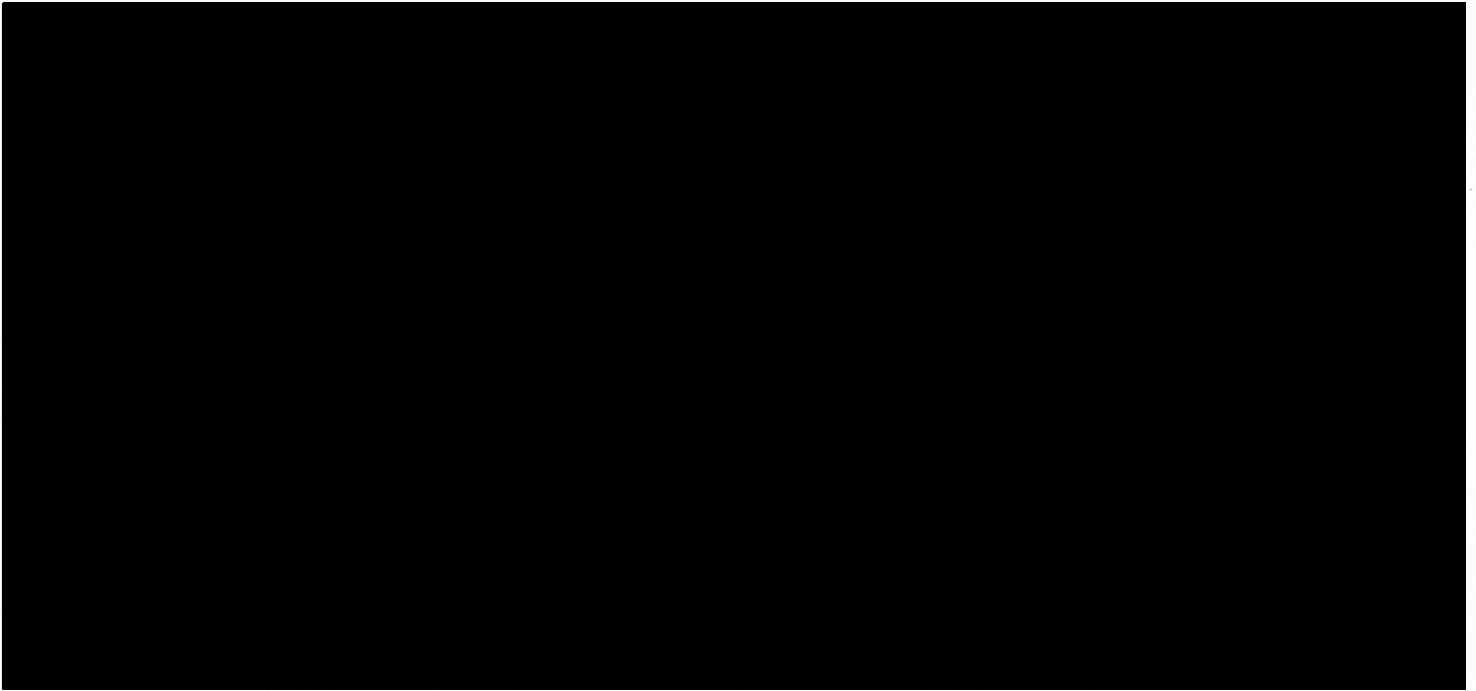


Burials beneath the primary mound. These are the four to the north. Two others are beneath remaining wall at rear of main burial, No. 77, on other side of wall.

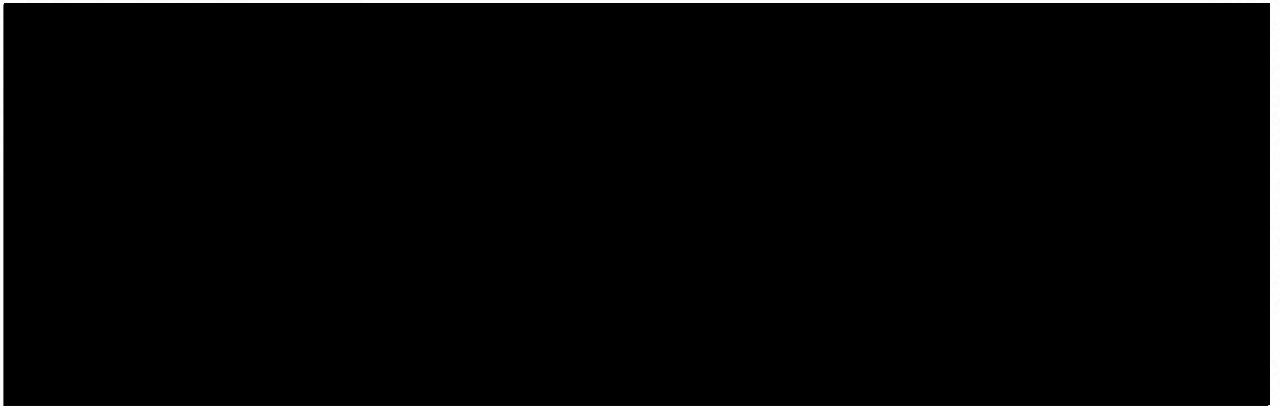


Vessel 1. Seated human effigy. Mouth, nose, part of figure's left eye; other area between dotted lines on drawing restored in plaster. Complete vessel originally coated solidly with red paint. Height 10 inches.





Vessel 2. Bird Effigy, sculpture in round. No pedestal or orifice, killed by knocking head off. Part of crest missing (front view). Completely coated with red paint. Length 9 inches.



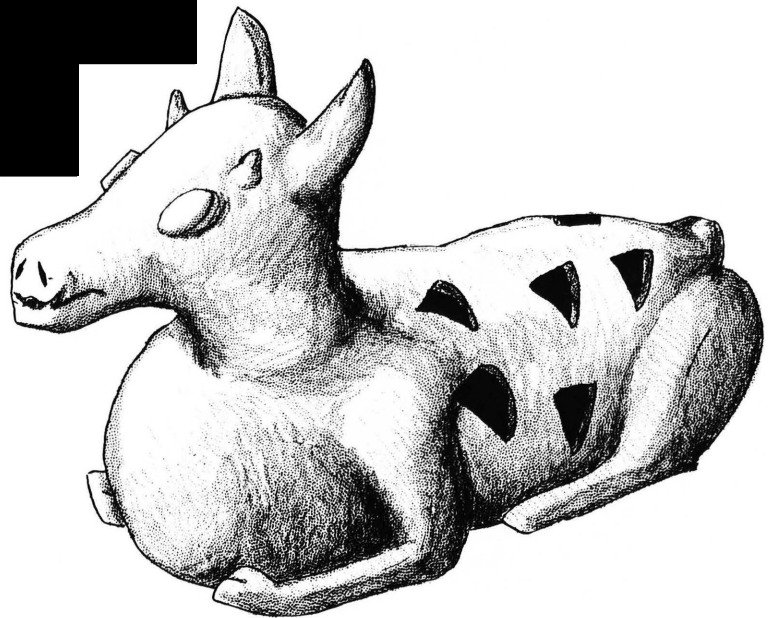
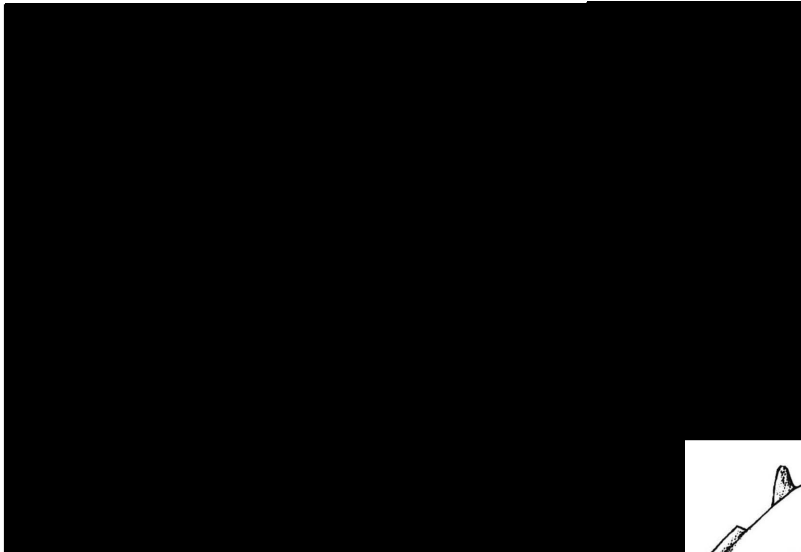
Vessel 3. Panther effigy. Soft paste ware, sherds missing in some areas. Sculpture in round, no pedestal or orifice. Artist's restoration based on body; face sherds photographed, plus one ear. Improbable that spout or other functional orifice existed in head area, definitely not present elsewhere. Completely coated with red paint. Length 11 inches.



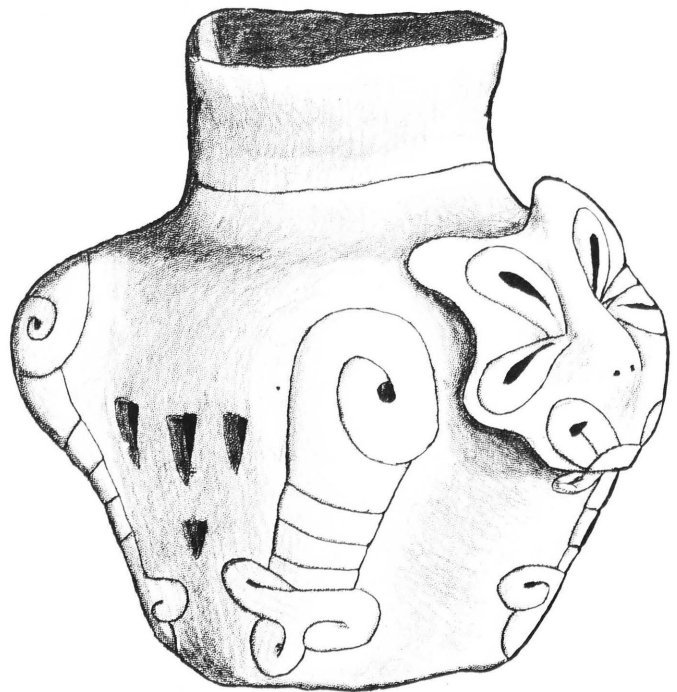
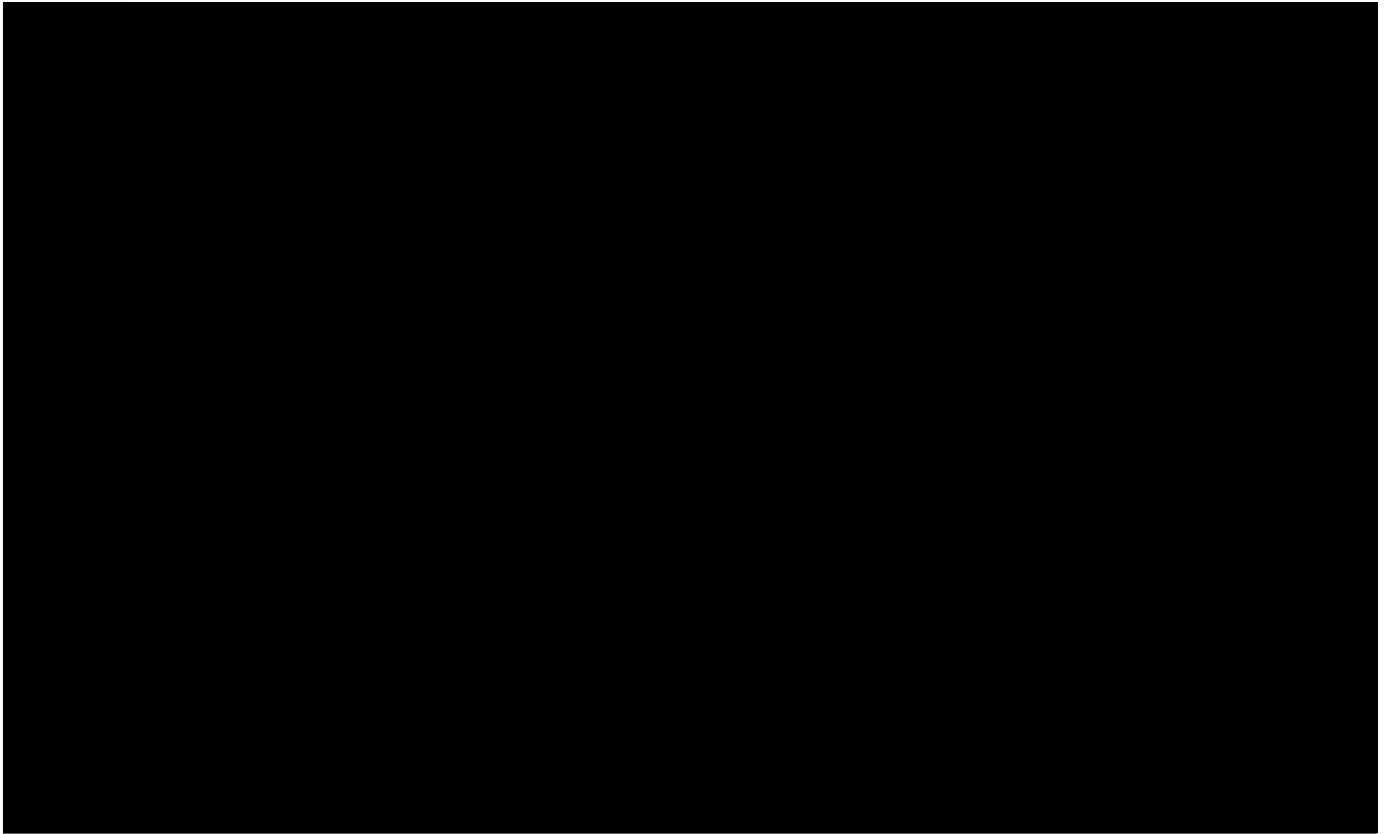
Plate IX



Vessel 4. Partial fish effigy. Bird head associated on basis of bright orange paste and similar incising. Probably sculpture in round, may have been pedestaled. May have had over-all red wash. Maximum length of segment illustrated 6 inches.

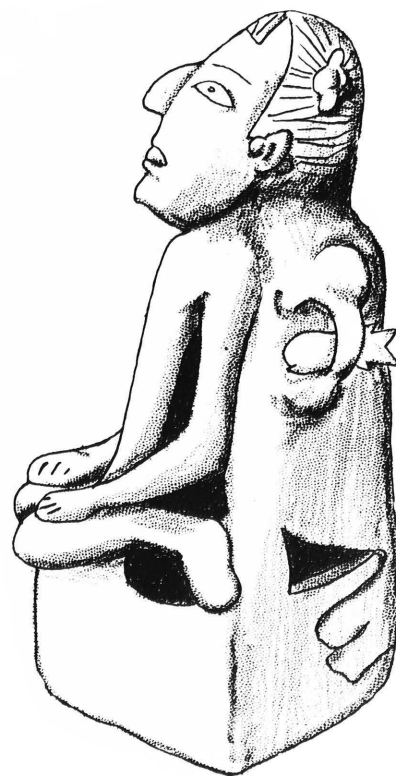
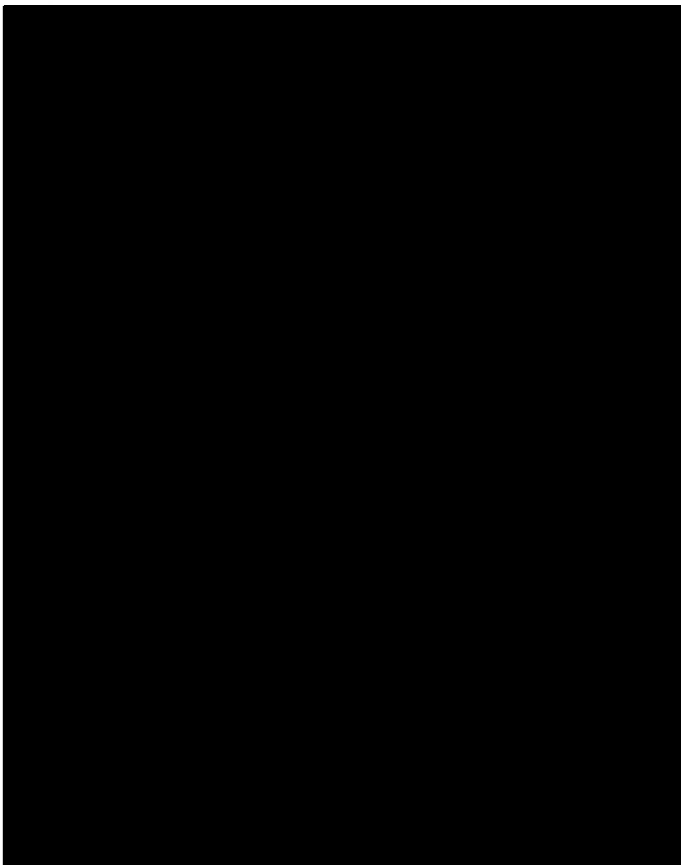


Vessel 5. Deer effigy. Soft paste ware. Artist's restoration based on two segments shown plus portions of other side. Sculpture in the round, no trace of pedestal or functional orifice. Over-all red wash. Apparent length 12 inches.



Vessel 6. Panther effigy, derived from square form. Red paint in zones. Light areas natural buff on surface of the vessel. Buff areas, limbs, and tail also are raised in slight relief. Height 7 inches.

Plate XI



Vessel 7. Kneeling human effigy. Restoration only in cracks and minor areas. An upper projection is missing from representation of hair knot with pin through it; one ear with indication of ear spool is absent. Front halves of both fish lost. Probable over-all red wash. Height 9 inches.

Vessel 3. Deer effigy, derived from square form, low relief modelling supplemented by incision. Over-all wash of red paint. Maximum height 5 inches.

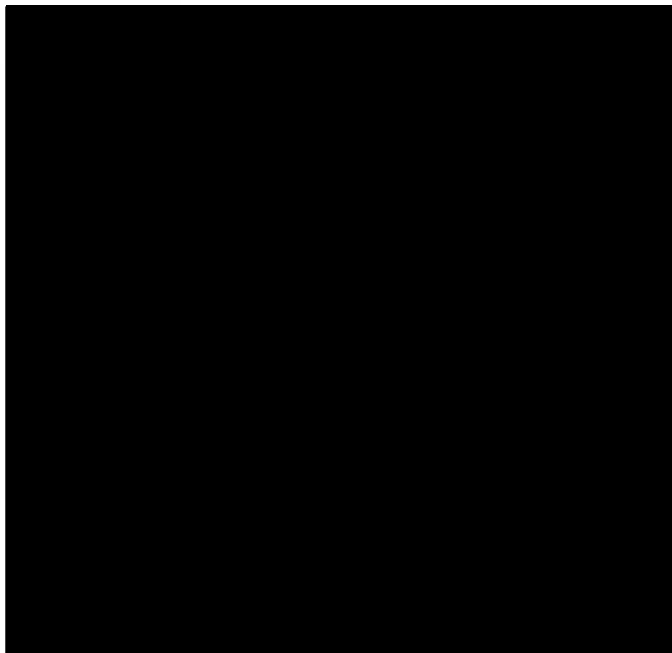
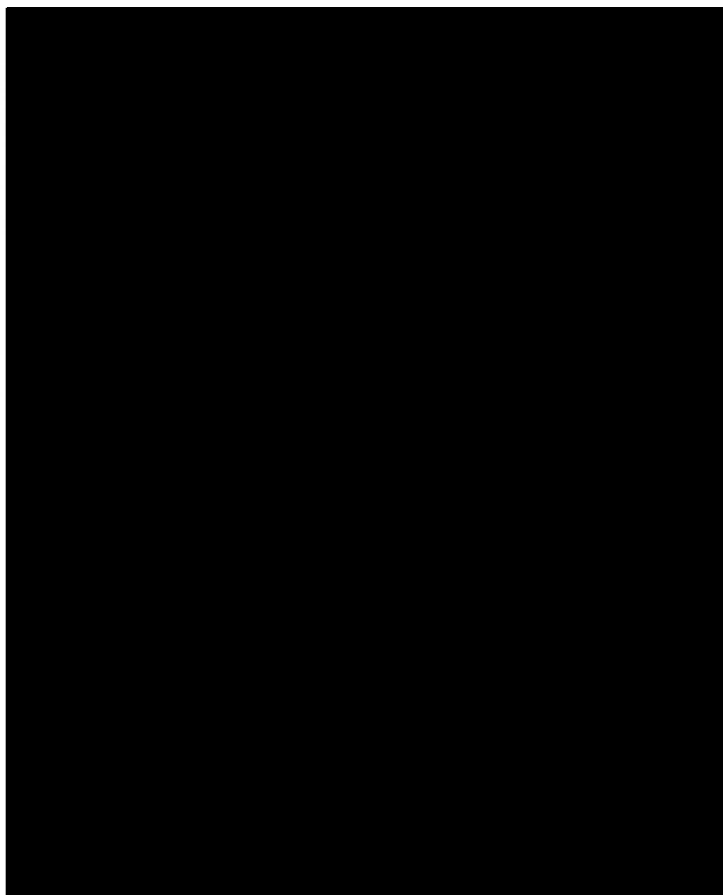
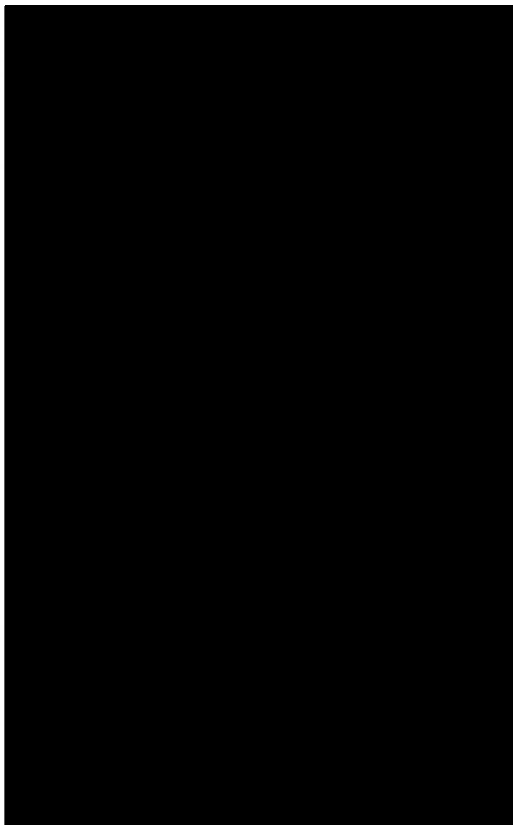


Plate XII



Vessel 9. Pedestaled owl effigy, free incised decoration. Restoration limited to small areas less than one-fourth inch. Over-all red paint wash. Maximum height 5½ inches.

Vessel 10. Pedestaled bird effigy, probably crested woodpecker. Decoration confined to red paint and perforations. Tail indicated only by slight prolongation oval on rear of the vessel. Height 9 inches.

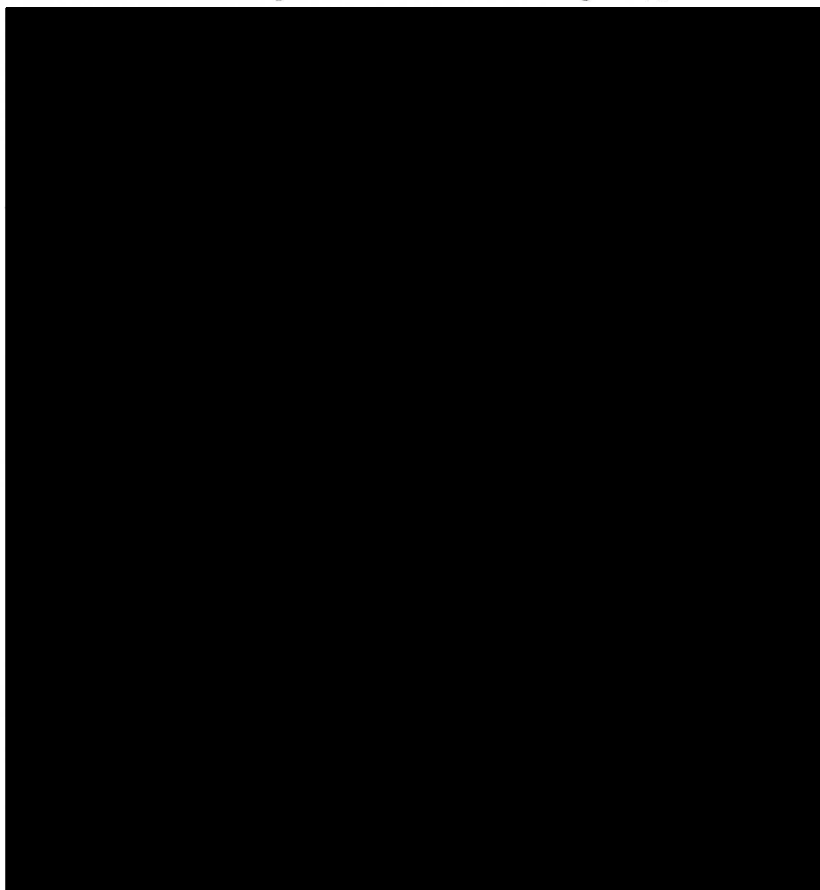
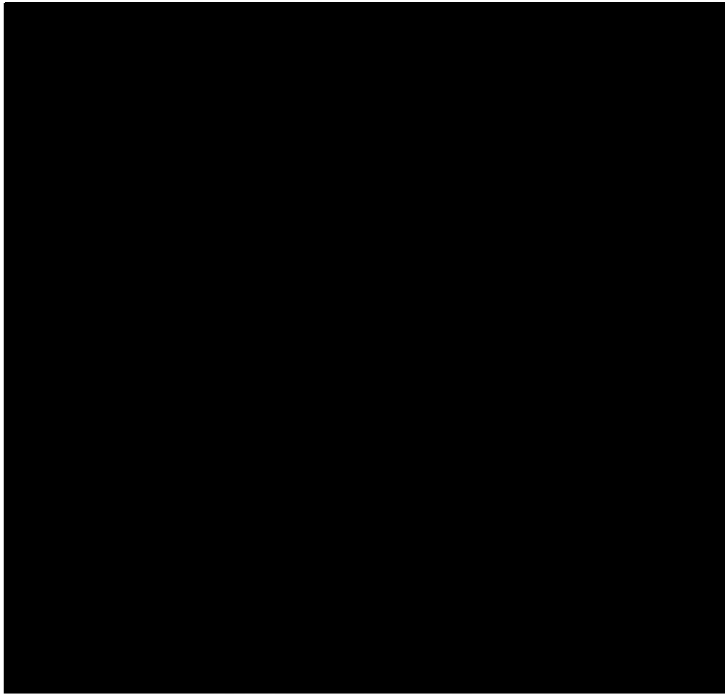
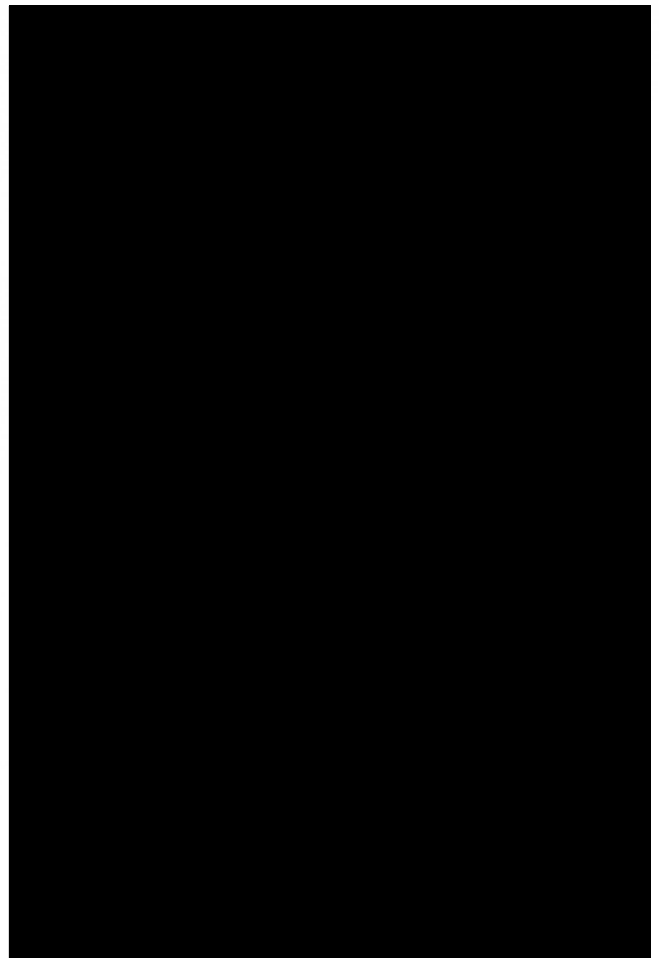


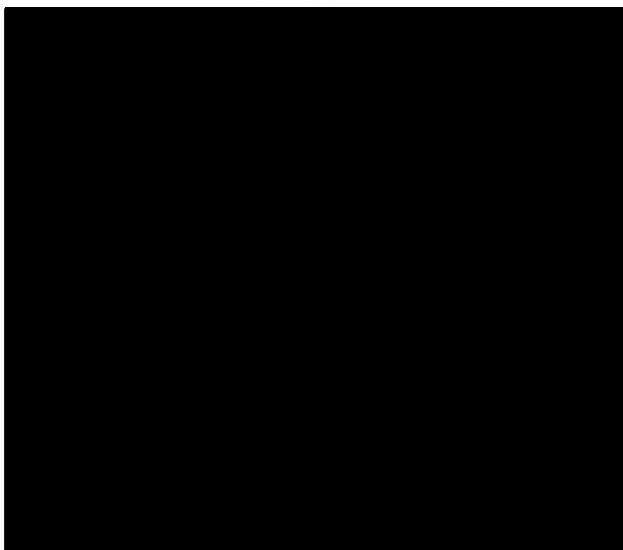
Plate XIII



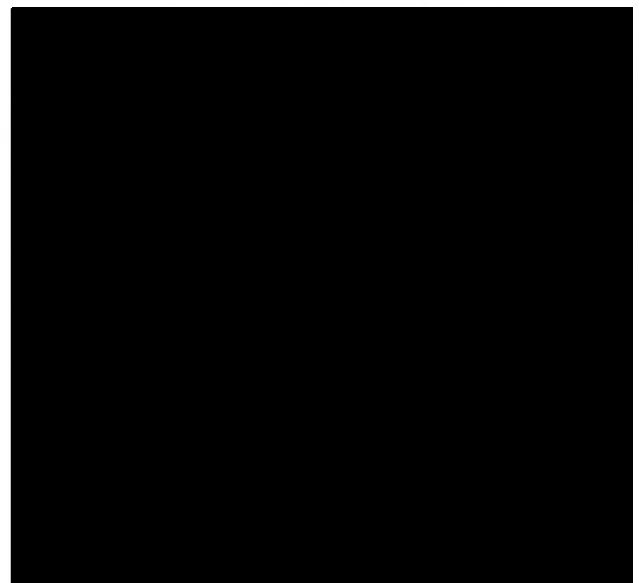
Vessel 11. Pedestaled duck effigy, duck with crest. Incised decoration in spout region; perforations only on pedestal. Height 6 inches.



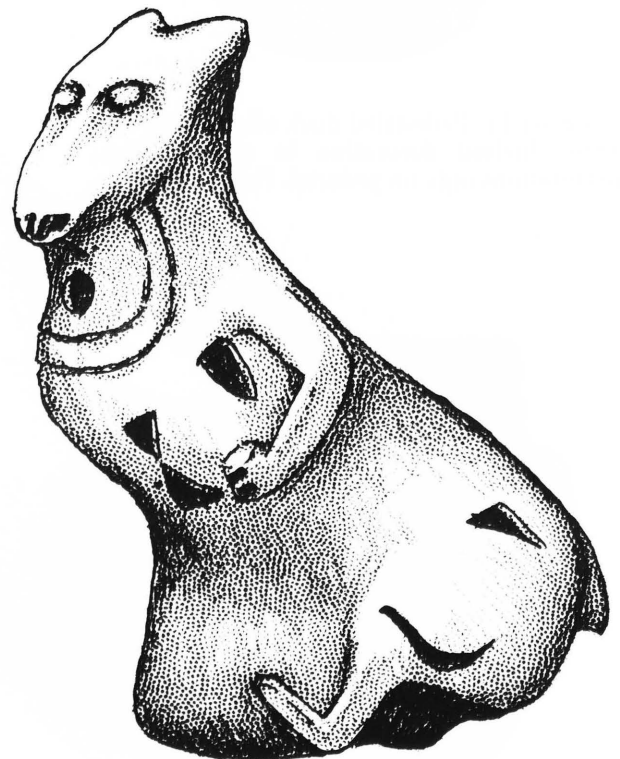
Vessel 12. Tall pedestaled weeping duck. Over-all red paint except for beak. Incision supplements perforation only in tear track from eye. Height 13½ inches.



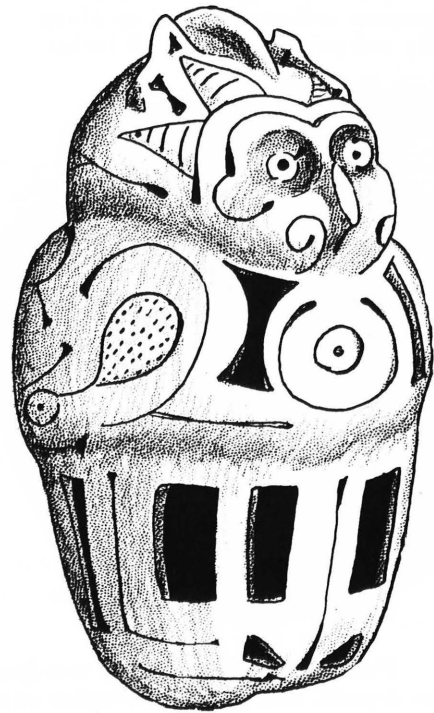
Vessel 13. Bird effigy, pedestaled, Base perforated pedestal form with applique head and shape of incision as only bird features. A late type. Some red paint, possibly over-all. Height 8 inches to rim.



Vessel 14. Bird effigy, pedestaled. Tail absent. Crested bird woodpecker? Incision in wing area by itself very Fort Walton in appearance. Height 5 inches to rim.

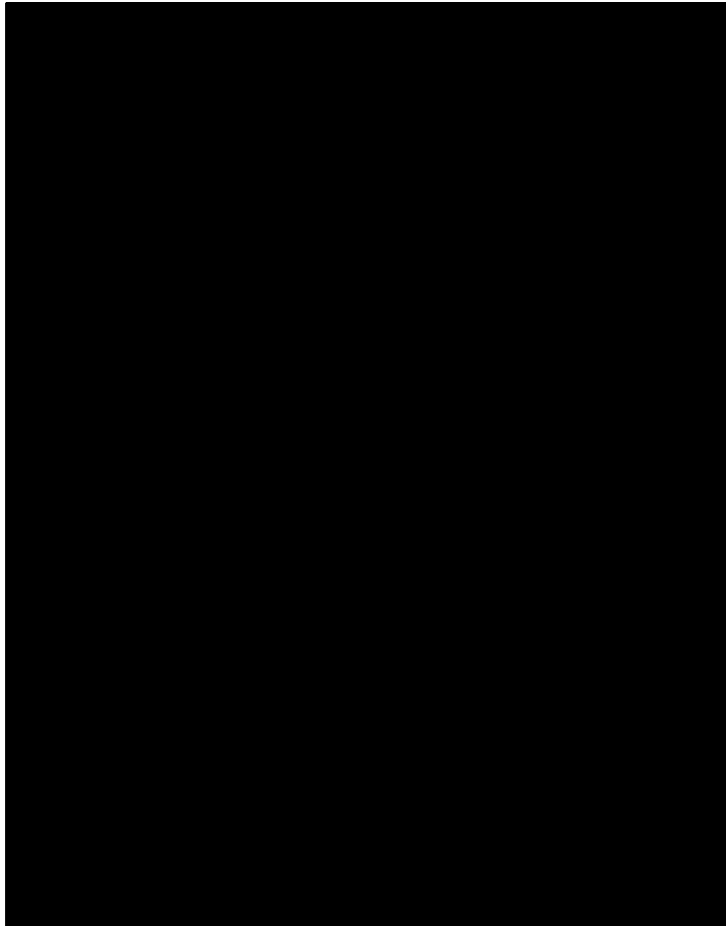


Vessel 15. Pedestaled bobcat effigy. Large portions of back and pedestal missing. Artist's restoration based on segments shown in photographs. Angle of pedestal base on one large sherd indicates semi-seated position. Nasal area unrestorable except by uninformed guess; projecting fangs on snout lend specimen a Middle Mississippian "Monster" appearance. Specimen had large opening, simulated functional orifice, behind head. No paint. Face 4 inches long.

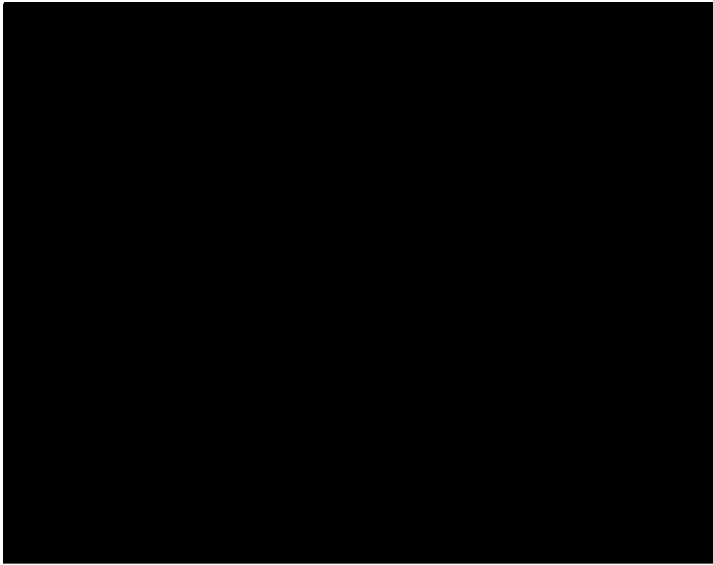


Vessel 16. Pedestaled owl effigy, or human in bird costume. Owl indicated by ears, wing symbols. Facial structure human, although nose or beak missing. Crest or roach a non-owl feature. Height 10½ inches.

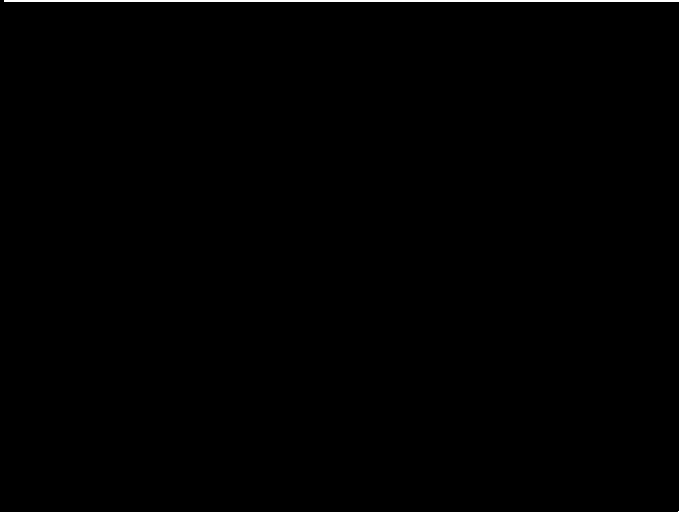
Plate XVI



Vessel 17. Opossum effigy, pedestaled (on stump?). Opossum indicated by tail up along back. Possibly red painted. Height 10 inches.



Vessel 19. Bird (crested woodpecker) effigy, pedestal indicated but not found in deposit. Red paint over entire exterior. Note resemblance of eye form to that of panther effigy, vessel 3. Rays from lower edge identical. Early forms of the weeping eye? Slightly excised circle under beak surrounded by incised line pendant from lower corners of beak similar to decoration appearing on owl, vessel 16; cat, vessel 15; and to a lesser degree circles without line or with variant lines, on panther, vessel 3; panther, vessel 6; and owl, vessel 9.



Vessel 18. Pedestaled bird effigy (quail?). Pedestal base and head absent. Extreme stylization in wing area on band in slight relief is unusual. Length 8½ inches.

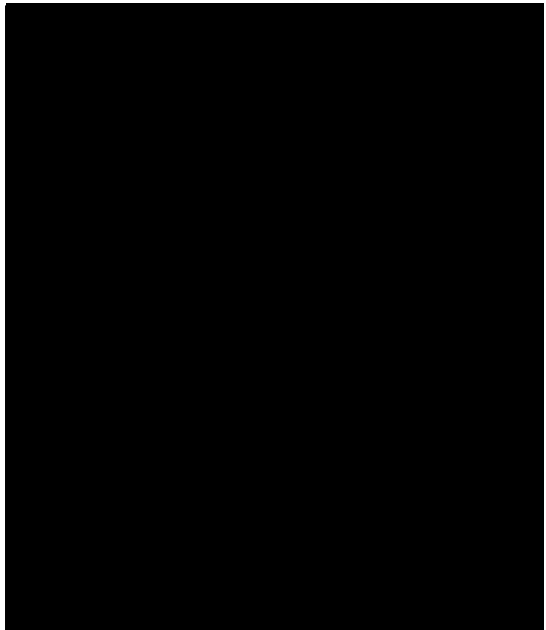
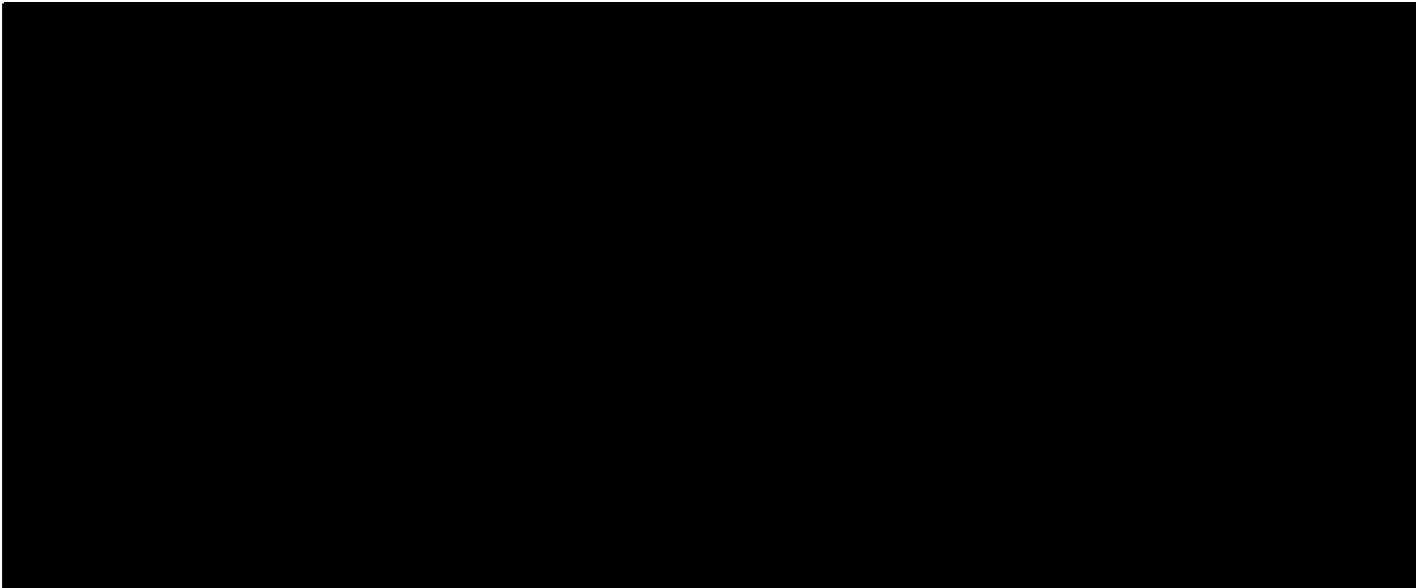
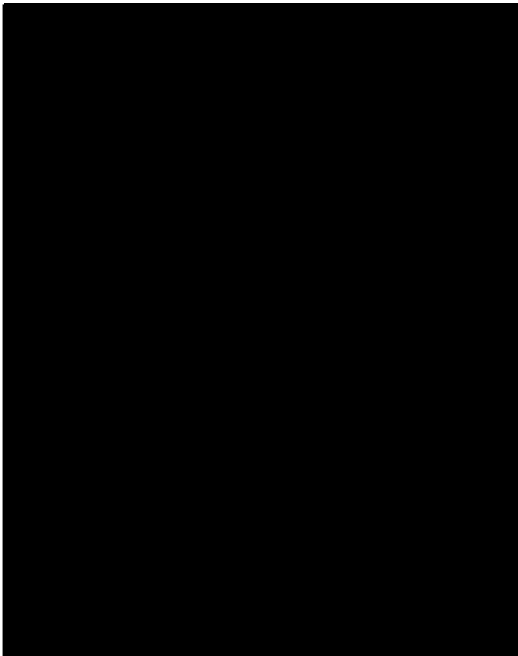


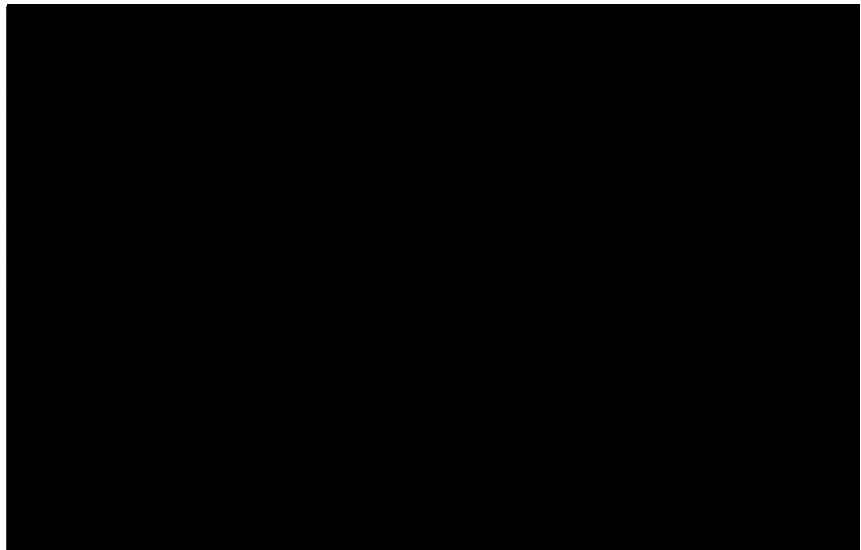
Plate XVII



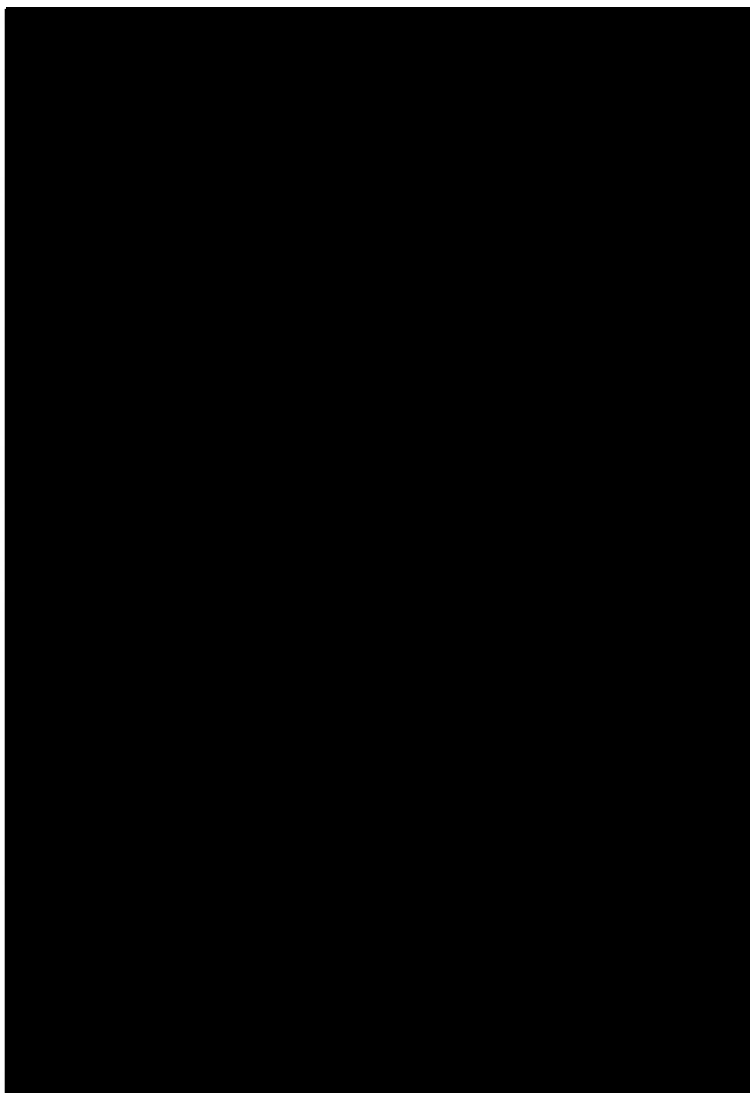
Vessel 20. Bowl with effigy features, derived effigy (quadruped?). Red paint over entire exterior. Diameter 8 inches.



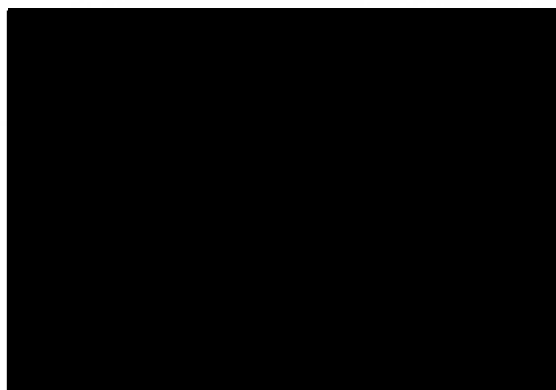
Vessel 22. Beaker, derived duck effigy form. Red paint over entire exterior. Height 5½ inches.



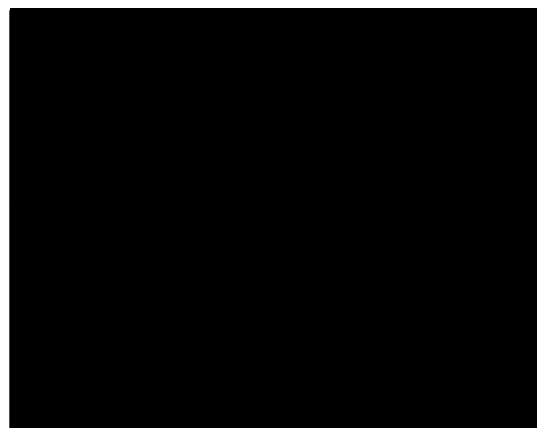
Vessel 21. Oval bowl, derived effigy form. Red paint over all. Simple head a late type. Length 6 inches.



Vessel 23. Pedestaled owl effigy, unusual treatment with two legs present. Head fragments, with eyes, ears, and large orifice at rear, related to pedestal through identical paste color and texture. No other sherds can be matched. Red paint over-all except eyes, natural buff color. Approximate height 12 inches.

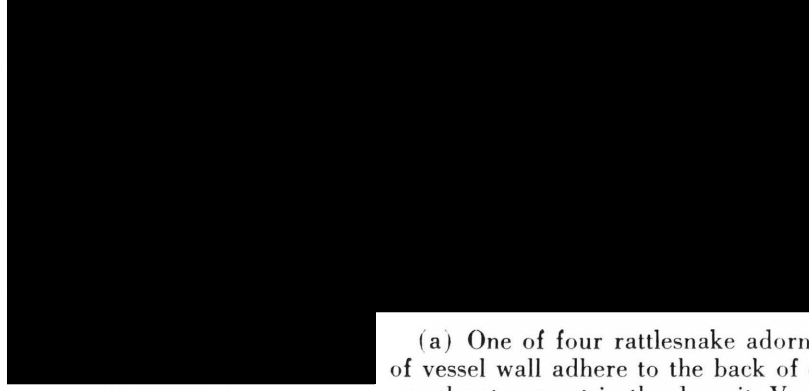


(a) One of pair of effigy heads, crested bird. Vessel not present in deposit. Height (or length) $2\frac{1}{2}$ inches.



(b) Animal (dog or bear) head, probably projected in front of vessel. Realistic protruding fangs. Vessel not present in deposit. Length 2 inches.

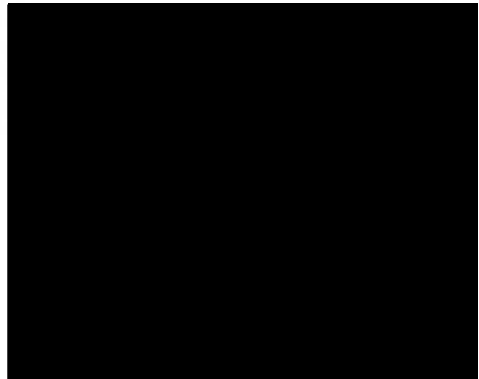
Plate XIX



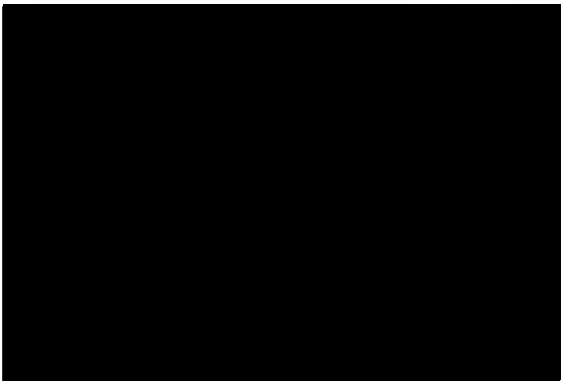
(a) One of four rattlesnake adornos. Parts of vessel wall adhere to the back of each, but vessel not present in the deposit. Vessel seems to have been red painted, snakes probably plain. Height or length $3\frac{1}{2}$ inches maximum.



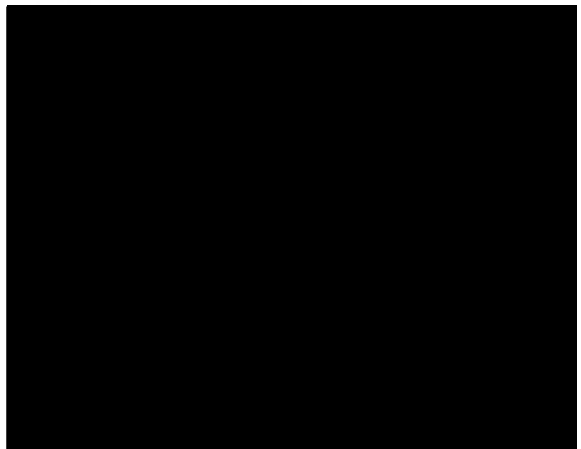
(b) Head of large duck effigy. Very thin ware. Sherds from wing and tail areas definitely in collection, but vessel had collapsed into very small sherds. Red painted except for beak. Probably pedestaled. Height (or length) $4\frac{1}{2}$ inches maximum.



(c) Head, bird effigy, crested. Soft paste ware, pedestaled effigy. Over-all red paint wash. Height 3 inches maximum.

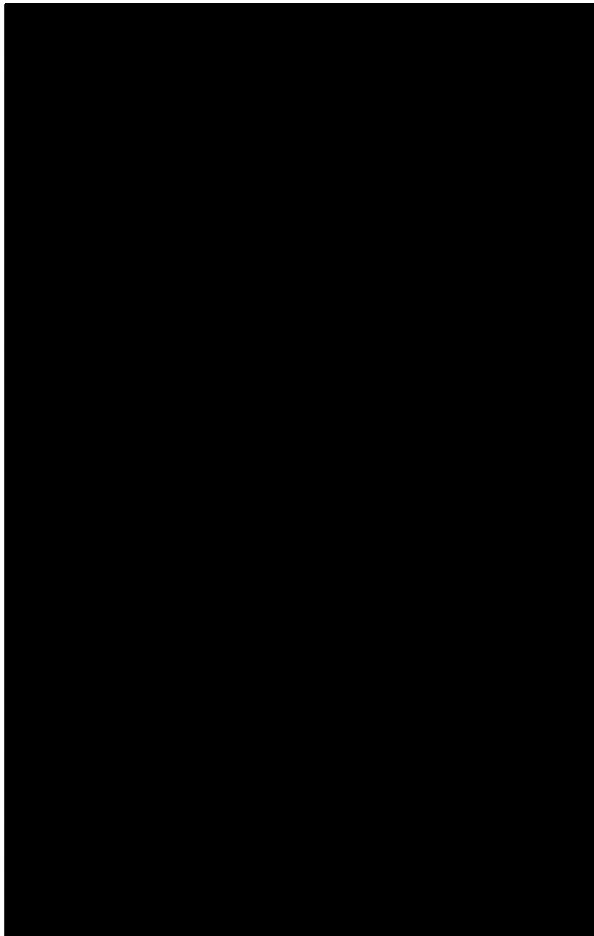


(d) Head, crested bird effigy. Soft paste ware, probably pedestaled. Height $2\frac{1}{2}$ inches maximum.

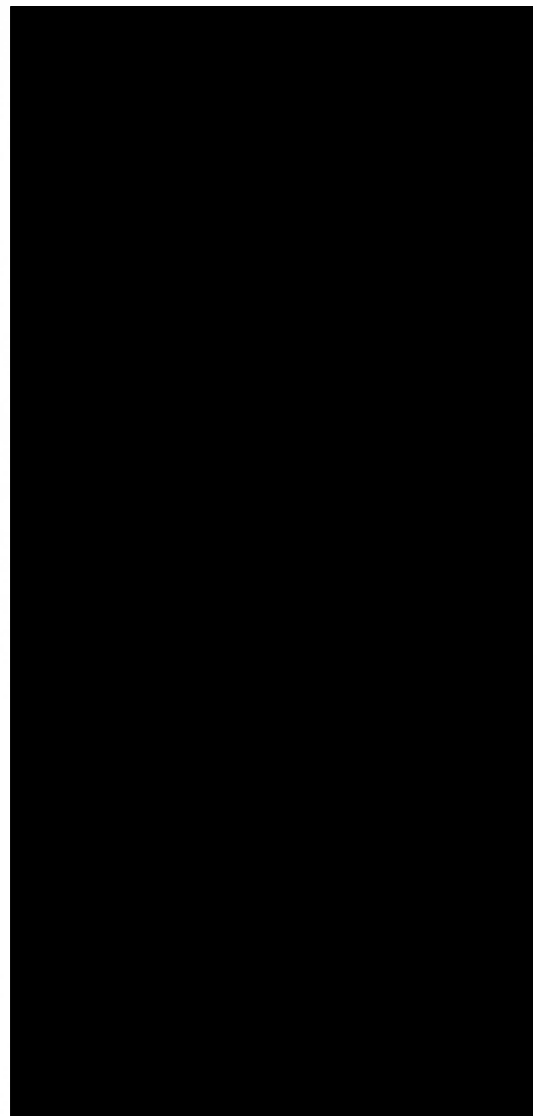


(e) Partial head from bird effigy. Soft paste unpainted ware. Height $3\frac{1}{2}$ inches maximum.

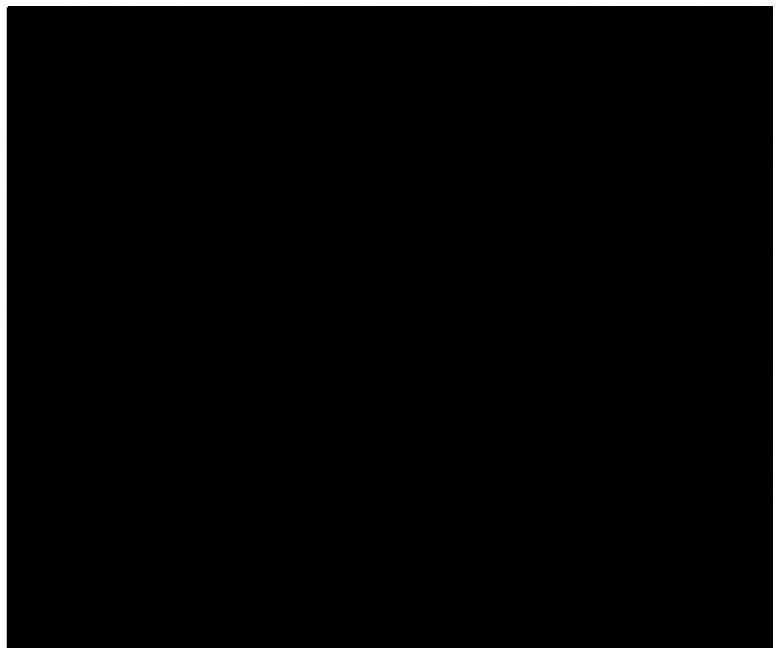
Plate XX



Vessel 24. Abstract vessel form. Pregnant bottle? Considerable breakage at collar. Point at left originally duplicated four times around collar; punctated areas between each lobe. Height 6 inches.

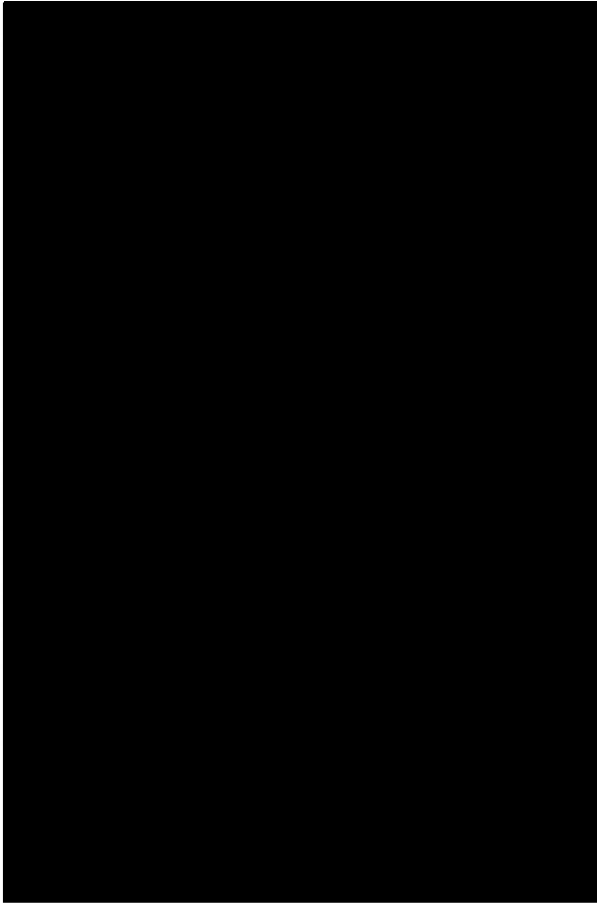


Vessel 25. Abstract vessel form. Breakage in collar area. Stubs, as at right of collar and just left of center, remain from four equally spaced projections around collar. Breakage confined to these. Height 9 inches.

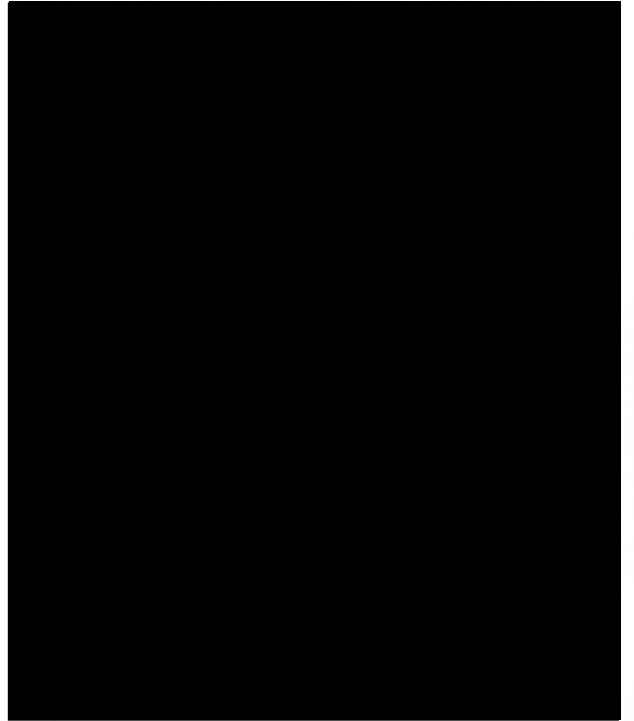


Vessel 26. Abstract form. Great deal of breakage. Traces of incision around one perforation at end to right. Complete form un-reconstructable. Height 4 inches.

Plate XXI



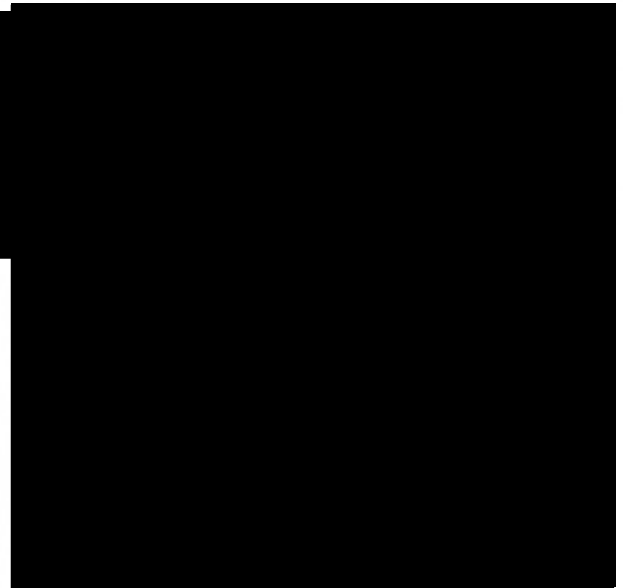
Vessel 27. Abstract vessel form. No decoration. Small round perforation cut before firing through lower, ovoid end; circular area broken out on upper end. Height 7 inches.



Vessel 28. As vessel 27, except that base disc-shaped; has small circular perforation cut through before firing. Height 6 inches.



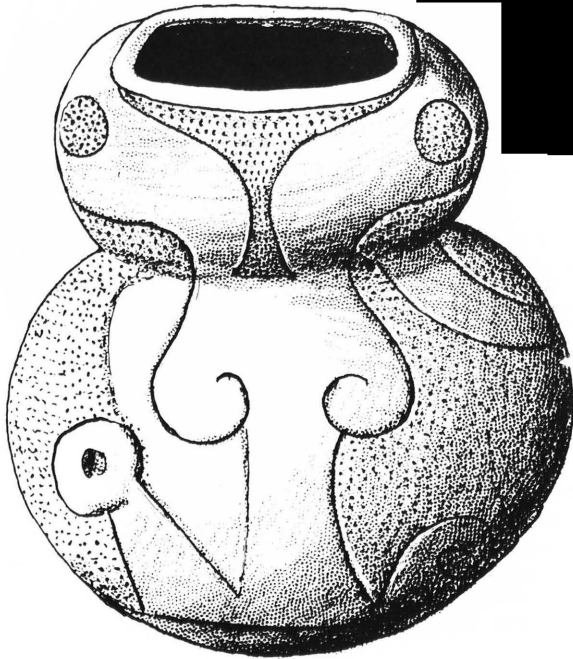
Vessel 29. Abstract vessel form. Great deal of breakage. Sherds available indicate that end to left had same sort of "fish tail" as end to right, also small knob below tail. Highest segment is spout. Vessel completely coated with black dye similar to that used in negative painting.



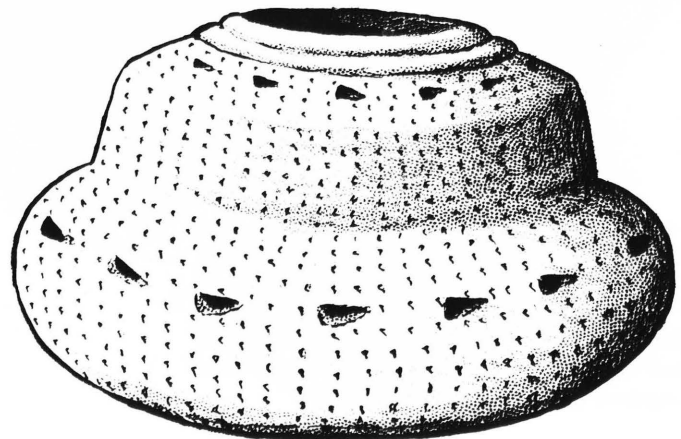
Vessel 30. Abstract vessel form. Complete sphere. Smaller hole cut through lower end before firing. No decoration.

Plate XXII

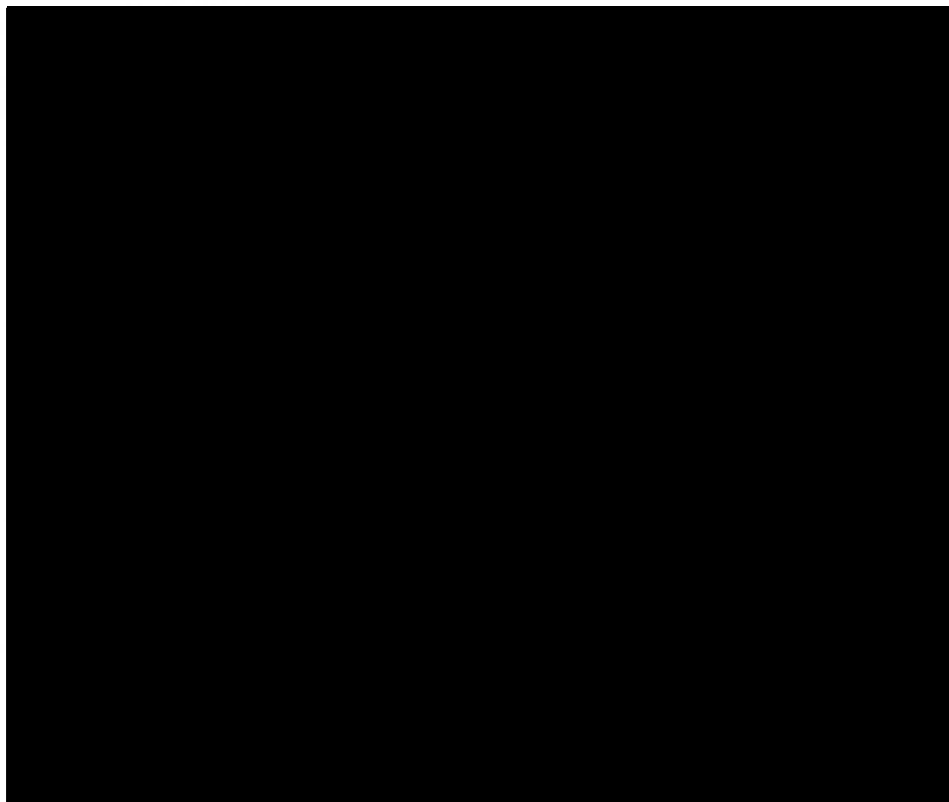
Vessel 31. Collared bowl with lugs. Lower squared section has four comma-shaped lugs, perforated at corners; four imperforate semi lunar lugs between these. Upper circular neck or collar has four semi-lunar perforated lugs. Covered with an over-all red paint wash. Diameter 10 inches.



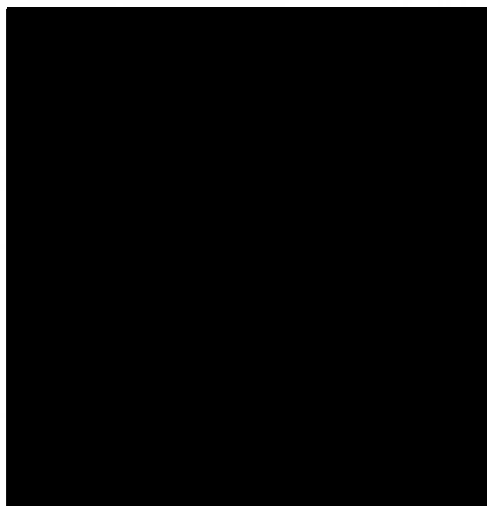
Vessel 32. Compound bowl form, ovoid, almost rectanguloid bowl on round bowl. Erratic design could not be accurately reconstructed. Artist's reconstruction gives general style only. Diameter 4 inches.



Vessel 33. abstract form. Plain base, with square pre-cut hole, set off by two incised lines just below area shown in picture. Decoration limited to punctations and perforations shown. Diameter 8½ inches.



Vessel 34. Complete vessel doughnut-shaped. Rattlesnake motif, incised, seems to have been repeated twice around vessel. Upper photograph shows part of head motif at left, tail point at right. Spout, protruded vertically, appears as highest segment in lower photograph. Base to spout lower photograph three and one half inches. Complete red paint wash.

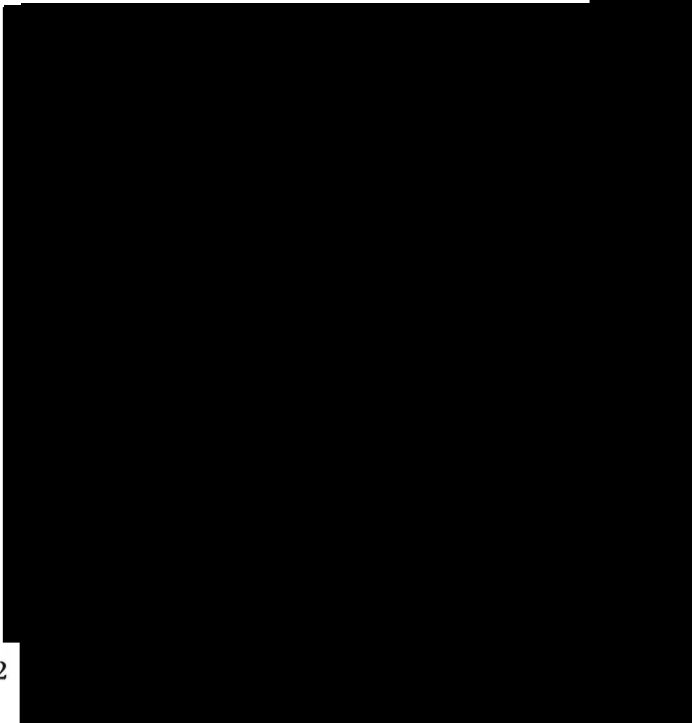
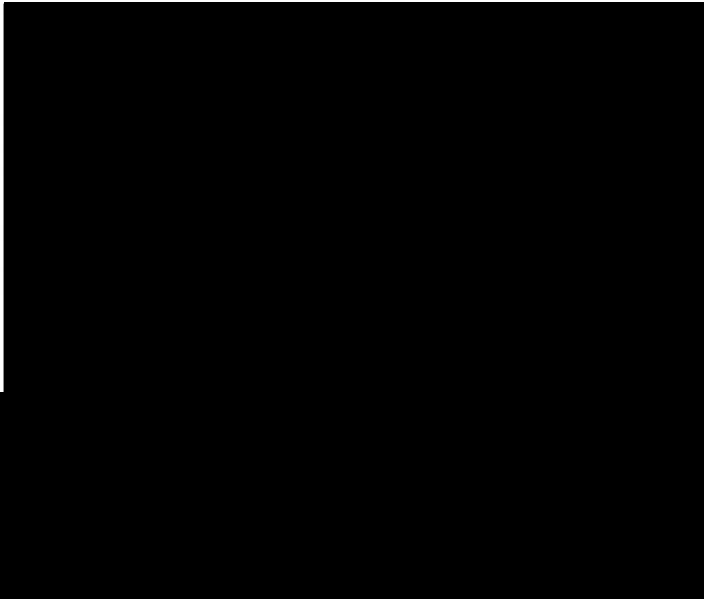


Vessel 35. Lobed bottle form. Three lobes, as shown, form lower portion of bottle. Neck decorated with angular incised design, may have been about twice as high as shown; rim folded. Diameter 4 inches.



Vessel 36. Large round-bottomed vessel, Mississippian form. Design, produced by sliced incision, repeated four times around vessel. Perforations through lugs encircling rim. Over-all red paint wash. Maximum diameter 14 inches.

Vessel 37, Round-bottomed jar. Circular rim, squared collar with four points, four "eared" projections between these. Entire rim and collar coated with white paint; white paint between lines of incised and excised triangles on body. Some red paint in same area as well as between triangles. May be in stripes in area between triangles. Maximum diameter 12 inches.



Vessel 38. Round-bottomed jar. Pendant triangles produced through sliced incision. No other decoration. Maximum diameter 8 inches.

Plate XXV

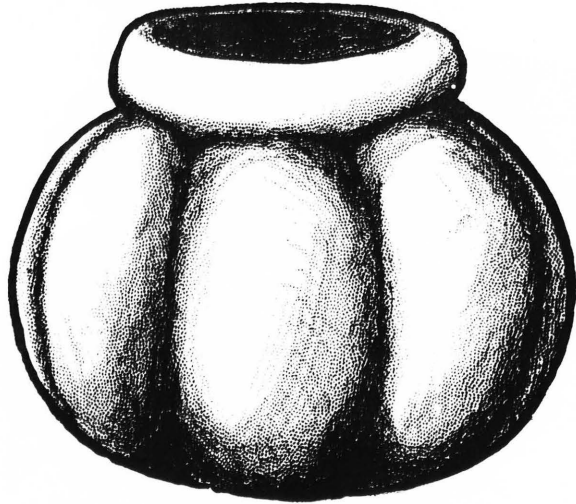
Vessel 39. Round-based Mississippian jar. Diamonds at neck produced through sliced incision. Note small sockets on rim, as at extreme left. No paint. Maximum diameter 8 inches.

Vessel 40. Round-based Mississippian jar. Some perforated lugs lost, originally encircled rim. Completely coated with red paint. Maximum diameter 8 inches.

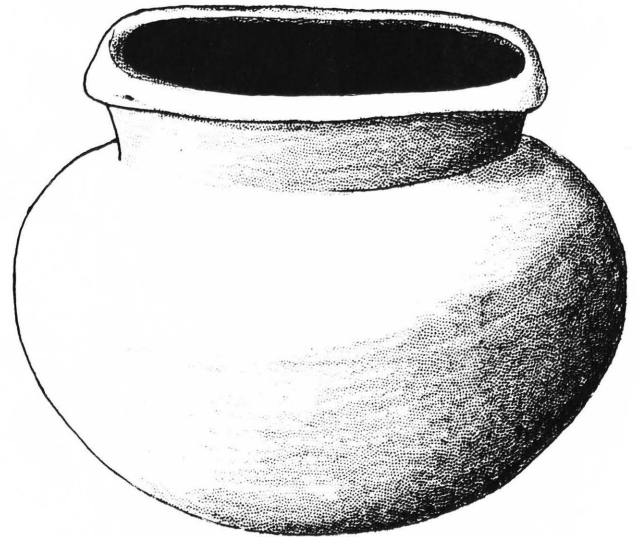


Vessel 41. Jar form, disc base. Pendant ovoid elements at junction of neck and body applied, as raised strip from which they depend. No paint. Maximum diameter 7 inches.

Plate XXVI

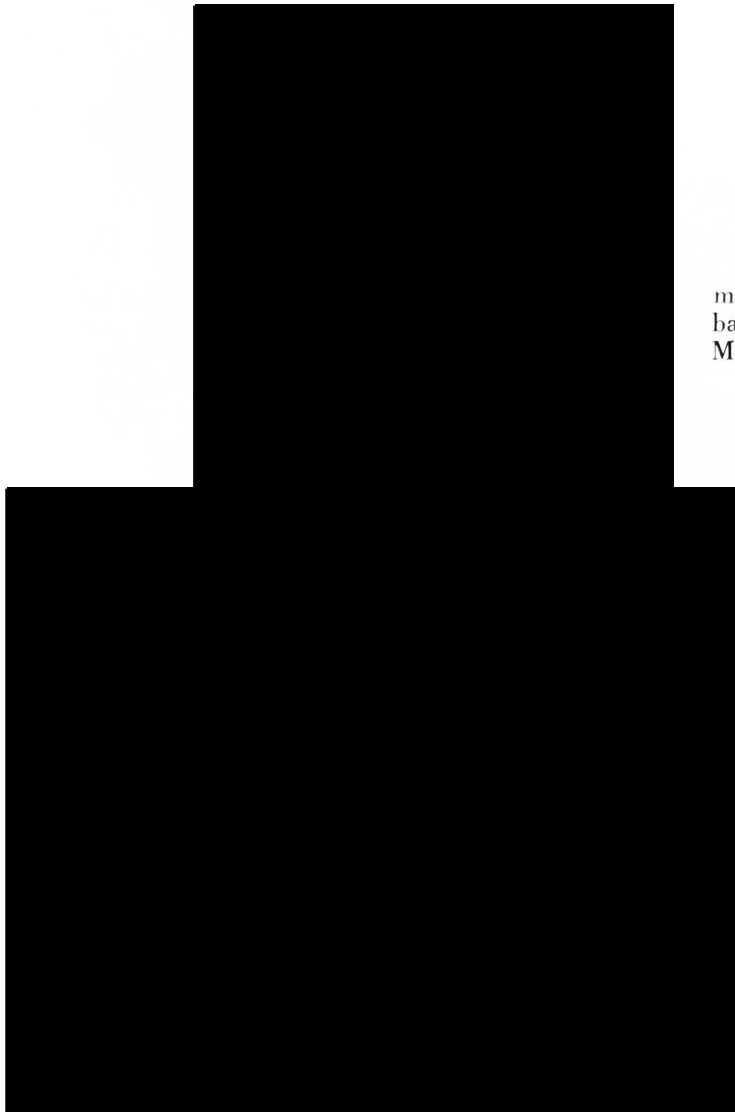


Vessel 42. Miniature lobed jar, undecorated except for shape. Diameter $4\frac{1}{2}$ inches.

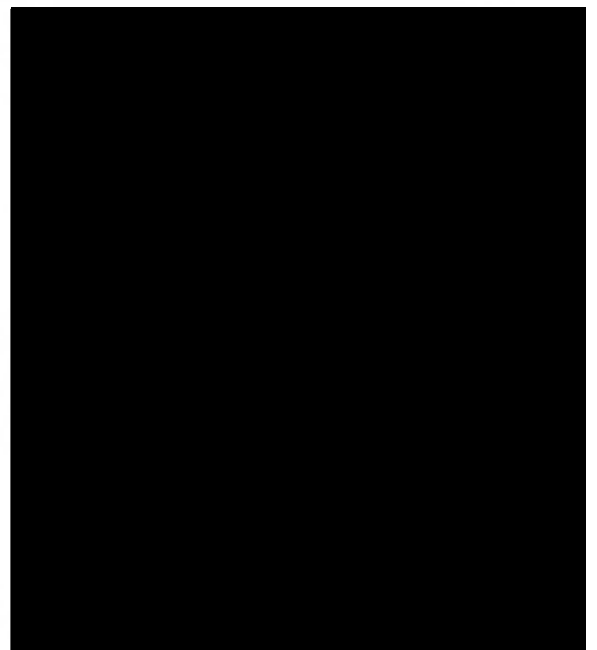


Vessel 43. Mercier Red on Buff jar. Oval base, rectanguloid rim and neck. Rim solid red paint; red paint stripes on body. Design unreconstructable. Maximum diameter 7 inches.

Vessel 44. Narrow-mouthed jar, or wide-mouthed bottle. Upper portion missing, probably elaborate rim. Solid red paint wash. Maximum diameter 5 inches.



Vessel 45. Elongated bowl? Applique decoration at neck. No paint. Maximum diameter 5 inches.



Vessel 46. Tall-necked jar. Incised decoration, no paint. Height 8 inches.


Plate XXVII

Vessel 47. Kolomoki Complicated Stamp vessel, red painted. Unusual rim treatment, four equidistant points around rim. Base was square, stamping confined to shoulder. Height about 7 inches.

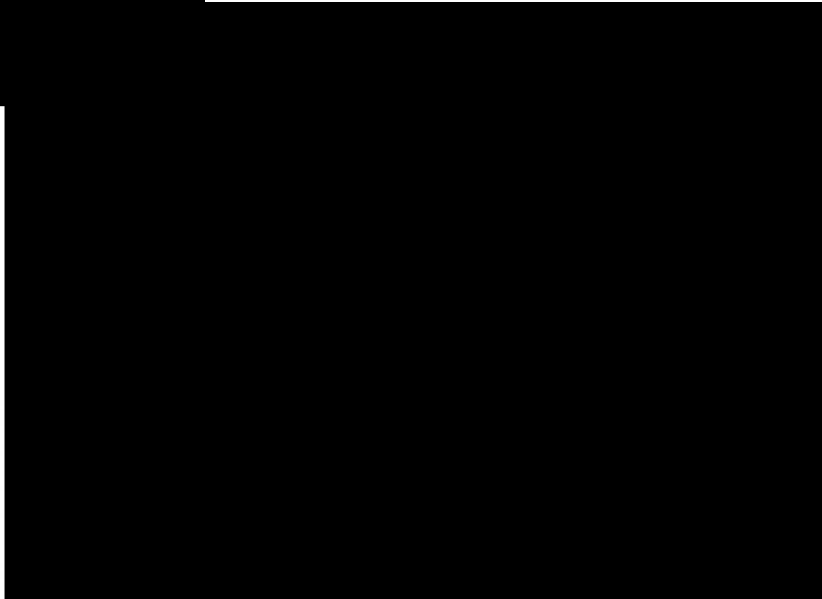


Vessel 48. Unique stamped vessel. May be classified as aberrant Mound Field Complicated Stamp. Height 12 inches.


Plate XXVIII



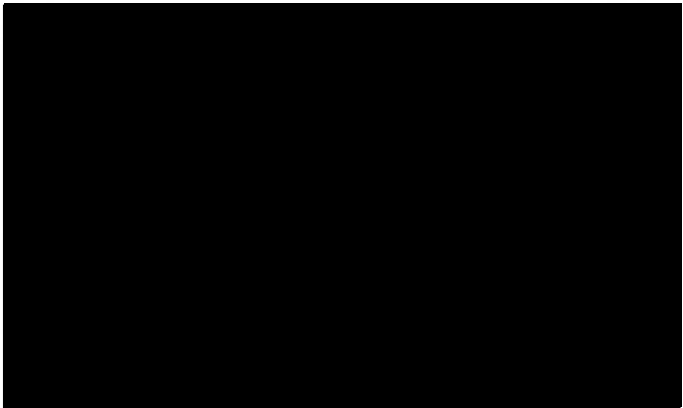
Vessel 49. Oval bowl. Complete red paint wash. Length 8 inches.



Vessel 50. Compressed globular bowl, undecorated. Unusually well-finished, near-burnished surface. Diameter 7 inches.

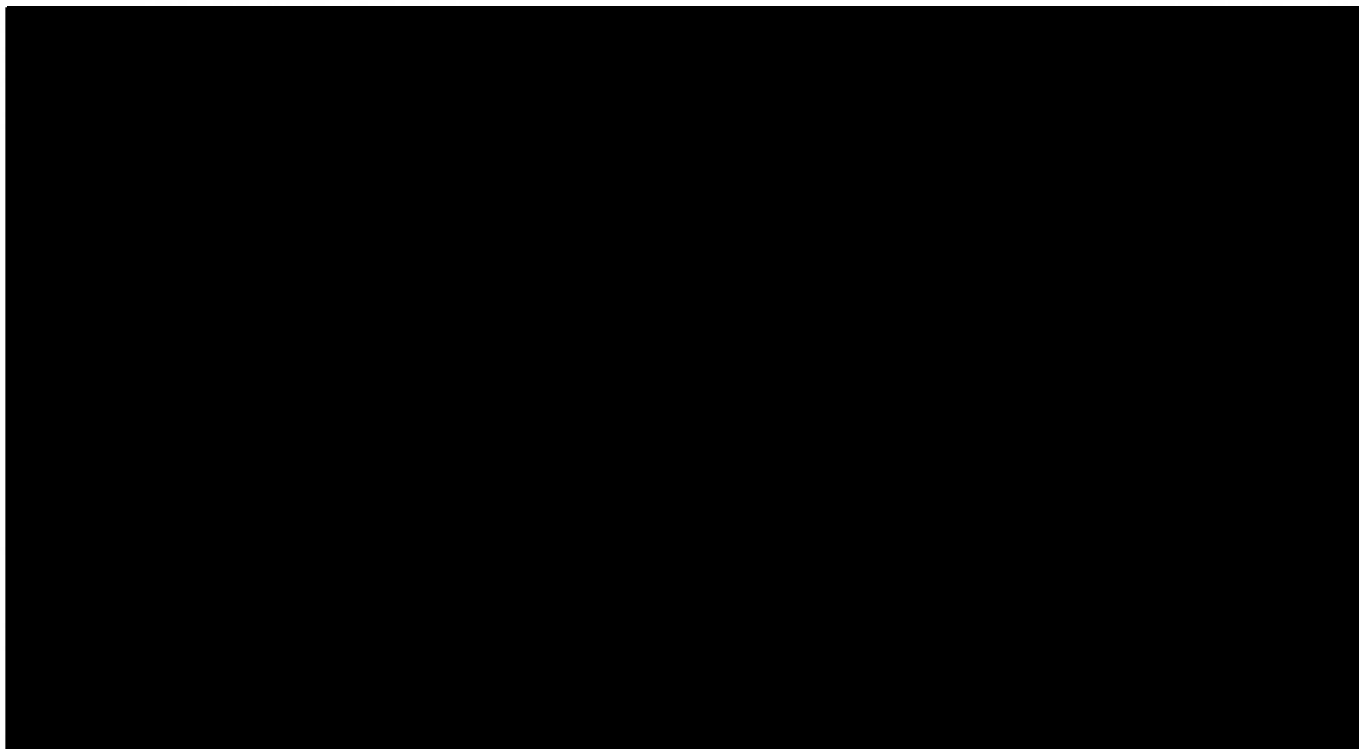


Vessel 51. Partial open bowl, folded rim disintegrated. Solid red paint wash. Diameter 8 inches.

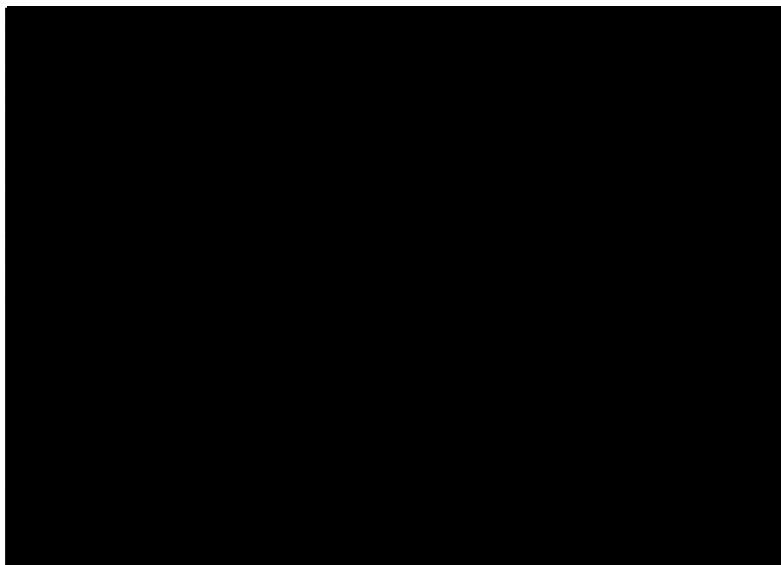


Vessel 52. Open bowl, wedge-shaped rim. Complete red paint wash. Diameter 5 inches.

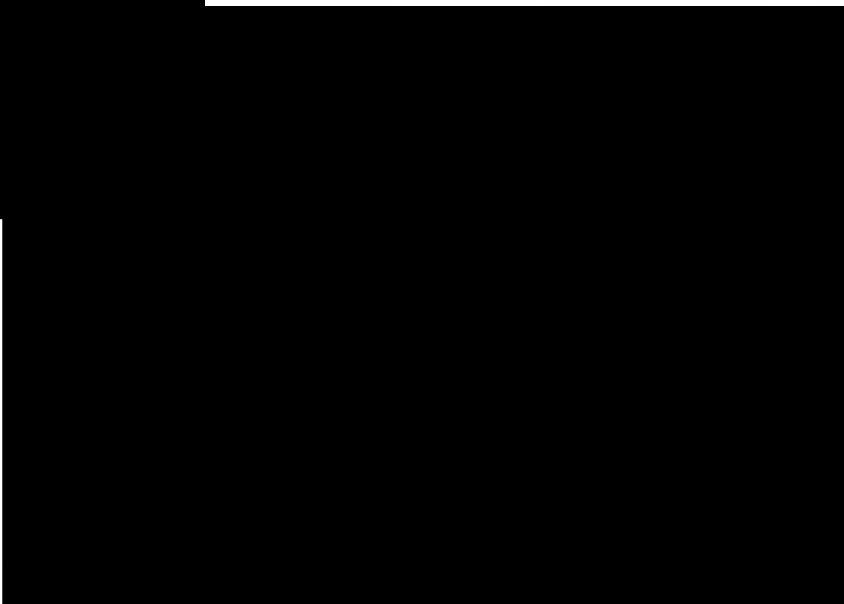
Plate XXIX



Vessel 53. Plain open bowl. Near-burnished surface, vessel wall only one-eighth inch thick. Diameter 15 inches.



Vessel 54. Open bowl, plain, folded rim. Diameter 5 inches.

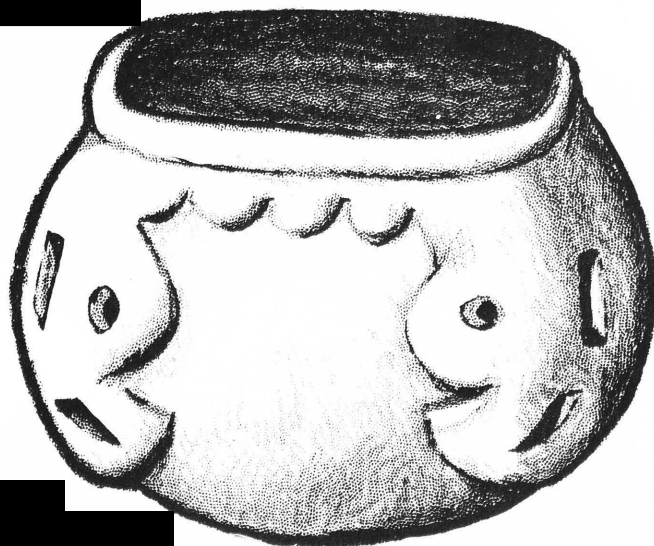


Vessel 55. As 54.

Plate XXX

Vessel 56. Compressed globular bowl, near cazuela form. Zoned red and white painting (photograph of restored side). Darker color red paint, white is white paint, lines in natural buff color. Major diamond motif with enclosed four flowers repeated on opposite side, space between bears motifs as shown. Vessel limestone tempered, not made at Kolomoki. Diameter 8 inches.

Vessel 57. Oval bowl, pendant applique bird head motif at each corner, applique scallops from rim between heads. Over-all red paint wash. Length 5 inches.



Vessel 58. Partial vessel, compressed globular bowl with zoned incised and circular punctated decoration. Design unrolled as in drawing. Remainder of vessel exceptionally well finished, hard fired, not in deposit. Apparent diameter 6 inches.

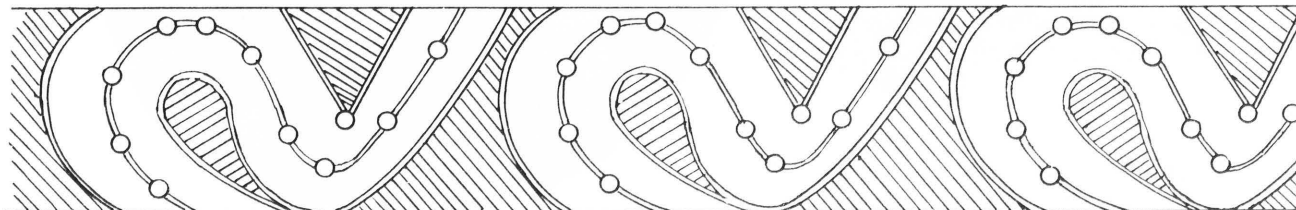
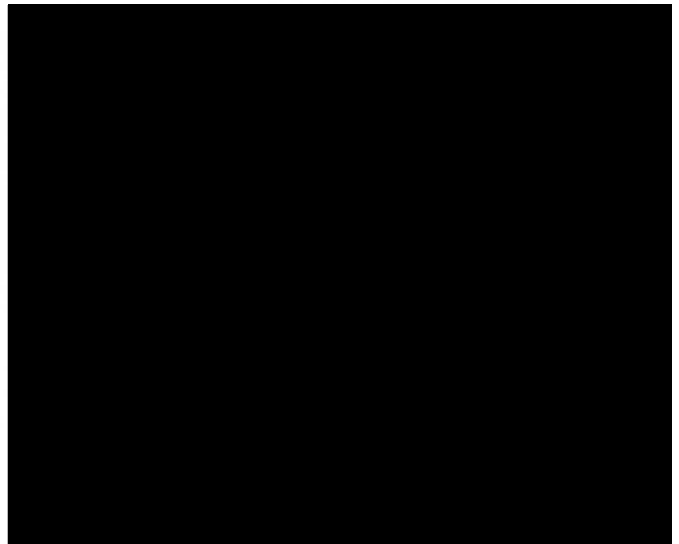


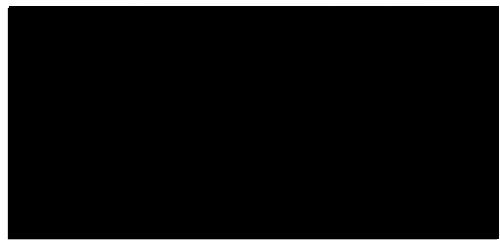
Plate XXXI



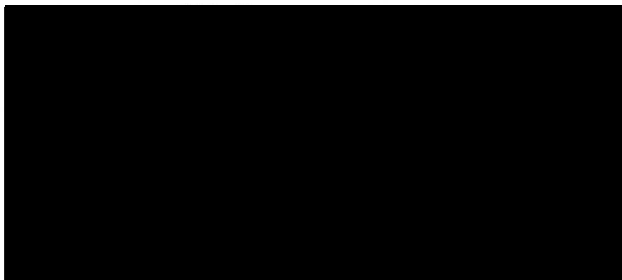
Vessel 59. Rim and body sherds from unrestorable Mercier Red on Buff vessel. Complete vessel apparently 14 inches in diameter.



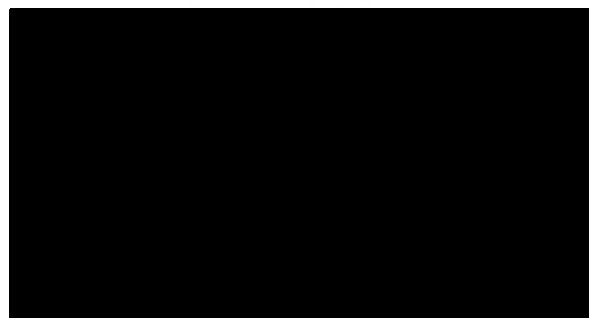
Vessel 60. Rim sherd, encircling lugs, from large plain vessel, no paint. Apparent diameter 14 inches.



Vessel 61. Rim sherd, erect rim with perforated lug, from small jar. Complete red paint wash. Apparent diameter 7 inches.

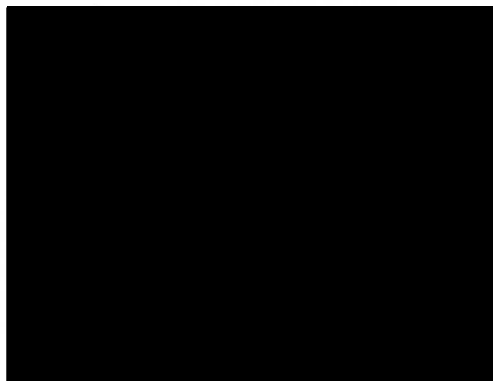


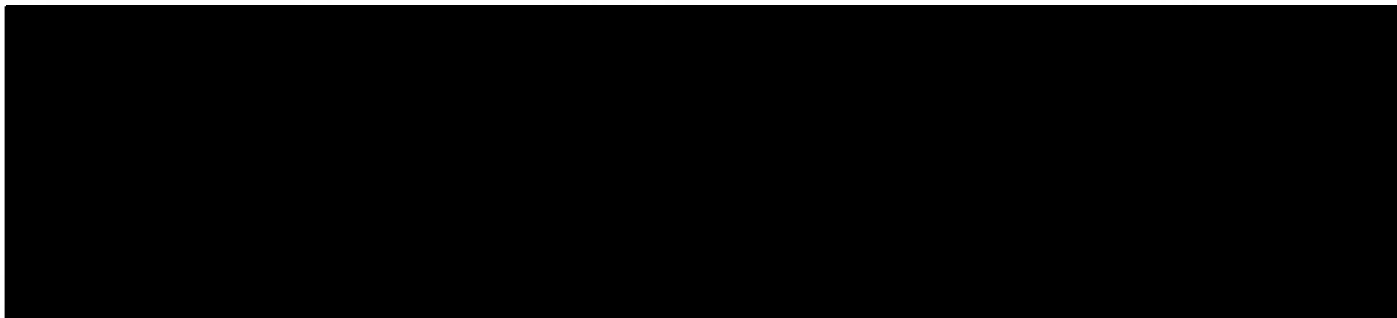
Vessel 62. Rim, erect with added wedge-shaped strip, from jar. Some simple incised decoration. Solid red paint.



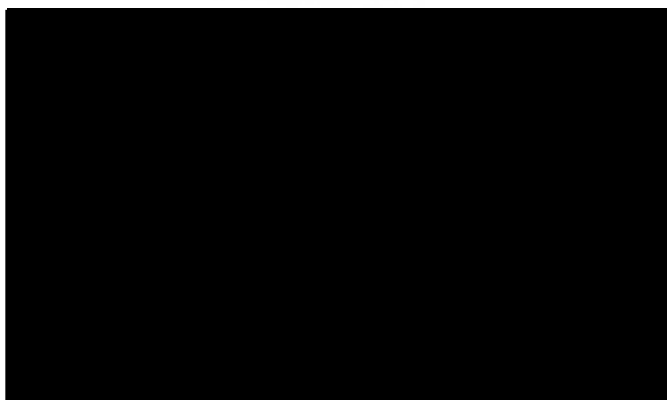
Vessel 63. Rim from partial compressed globular bowl, Carabelle Punctate.

Vessel 64. Miniature vessel. Applique ovoid elements on shoulders. Height 3½ inches.

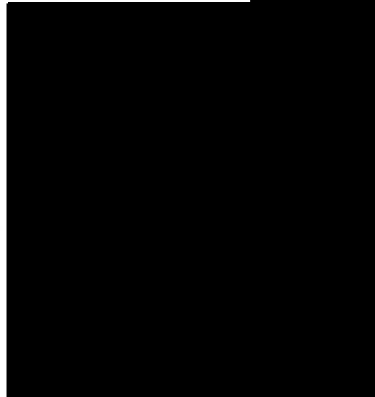
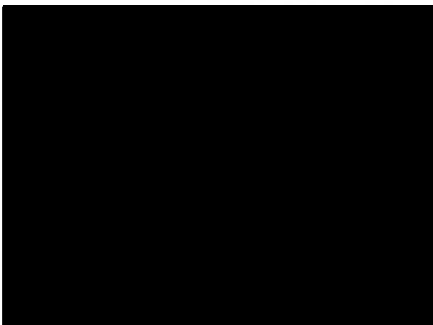




Vessel 65. (a, b, c) Sherds from lower rim, shoulder, and rim small jar with incised decoration, rim appliques, over-all red paint. Complete vessel not present.



Vessel 66. Rim sherds from compressed globular bowl with great amount of excision. Complete vessel not present.



Stone chisel, ceremonial form. Slight edge at each end, plano-convex cross section. convex side uppermost in photograph. Length $12\frac{3}{4}$ inches.

Plate XXXIII!



a

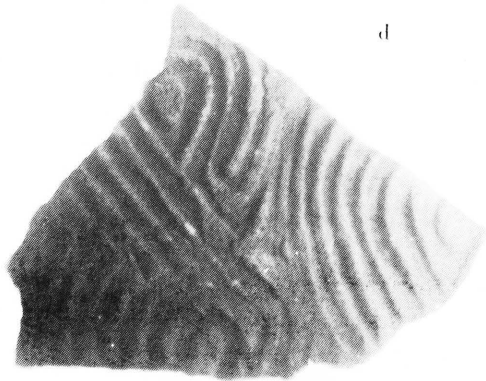


b



c

(a, b, c) Kolomoki Complicated Stamp. Motifs in heavy range.



d



e

(d, e, f) Kolomoki Complicated Stamp. Motifs in normal range.



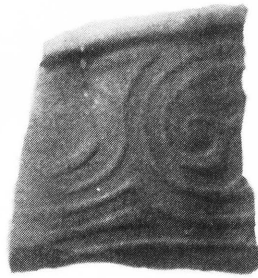
f

Plate XXXIV

Kolomoki Complicated Stamp.



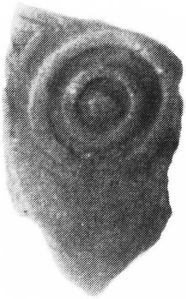
(a) Rim form I, unusual motif.



(b) Rim form IIb, unusual motif.



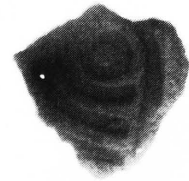
(c) Rim form IIb, common motif.



d

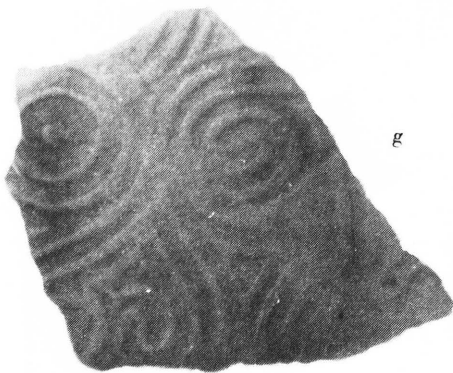


e



f

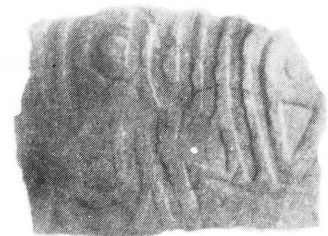
(d, e, f) Common stamp motifs.



g



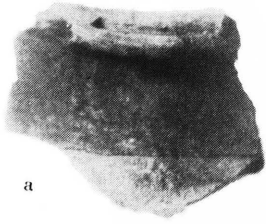
h



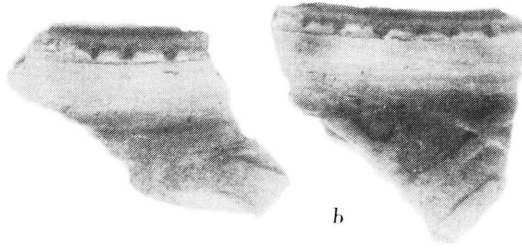
i

(g, h, i) Unusual motif combinations in Kolomoki Stamped.

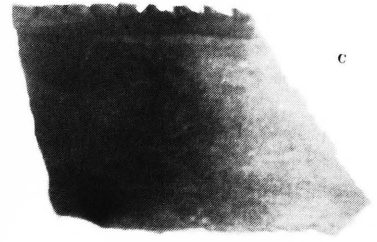
Plate XXXV



a

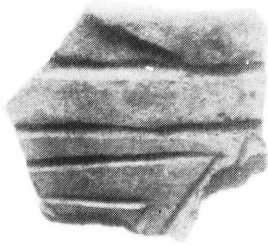


b

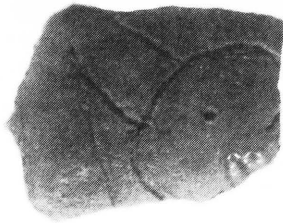


c

(a, b, c) Unusual rim treatments late varieties, on Kolomoki Complicated Stamp vessels.



(d) Incised sherd. Trade piece?



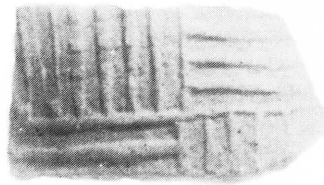
(e) Incised sherd, unique.



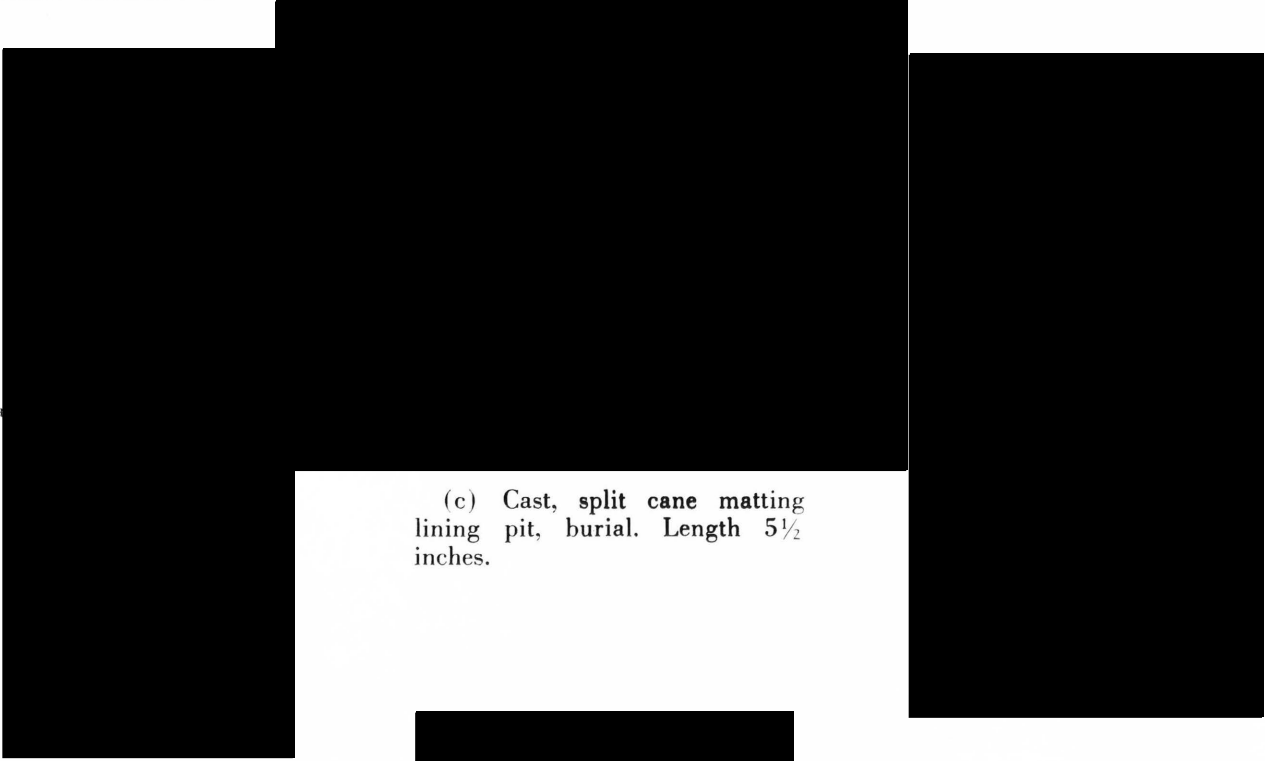
(f) Stamped sherd, non-Kolomoki in character.



(g) Swift Creek II (Weeden Island) period sherd.



(h) Line block stamp from Kolomoki period midden.



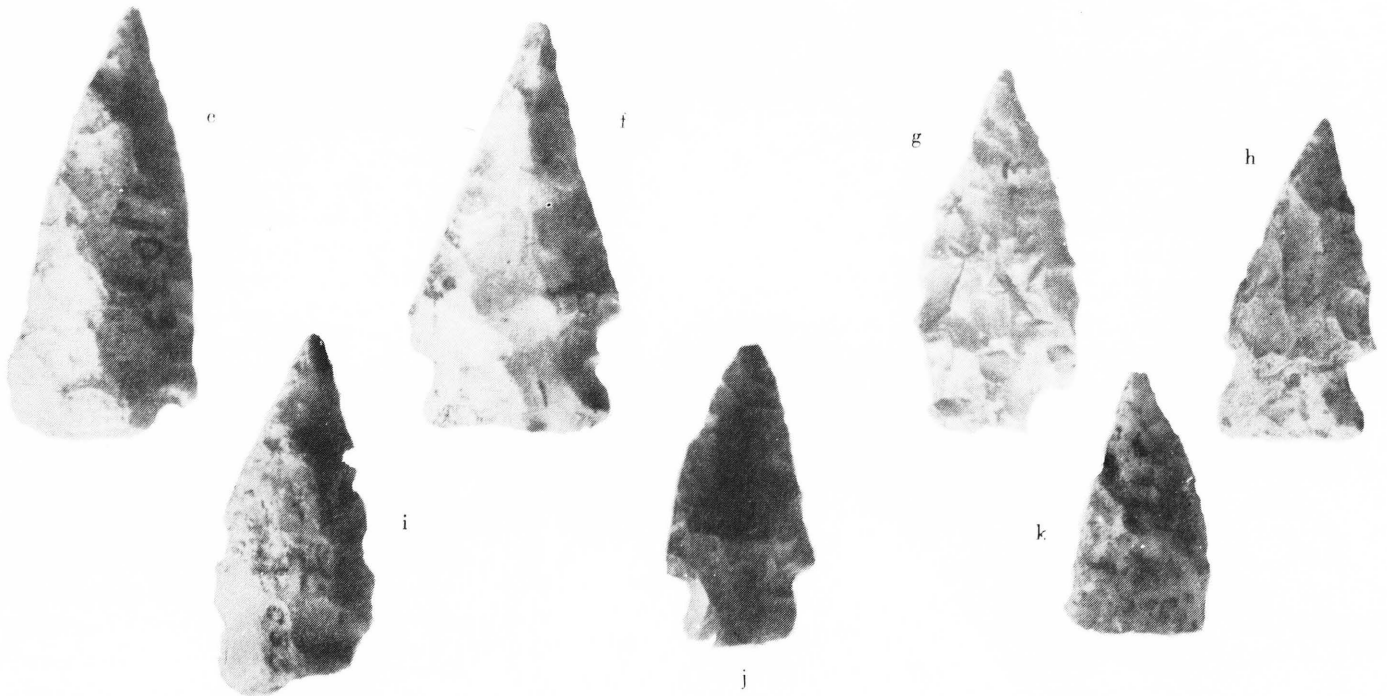
(c) Cast, split cane matting lining pit, burial. Length 5½ inches.

(a) Mica sheet, shape as side and basal notched projectile point. Length 7 inches.

(b) Mica sheet, perforated for attachment. One of large number in fill of feature 6. Maximum dimension 3 inches.



(d) Fragment from upper portion conch shell, decorated with incised lines. Erratic diamond motif encircles specimen on second whorl from top, traces on top whorl and on third one down. Found in pottery deposit. Length 5½ inches.



(e-k) Kolomoki projectile points, total range illustrated. g and i, erratic notched or stemmed perhaps most typical. k is a triangular projectile point. All are from midden under mound D. Length of e 1⅛ inches.

APPENDIX

Mound D Cordage and Textiles

By DOROTHY F. O'REILLY

The Kolomoki Indians appear to have had a fairly extensive knowledge of textile manufacture, as evidenced by the remains of several rough but well woven cloths adhering to portions of a series of copper discs removed from the mounds (Figs. 1 and 2). In general, these discs are badly corroded and are so brittle as to require special handling. Naturally, the cloth fragments are in even worse condition, and in most cases cannot be removed from the discs without being destroyed. The threads have an S twist and are built from fibers of approximately 28 mm. diameter; hence they are approximately the same size as cotton. In the coarser cloth the fibers are 18-62 mm. in diameter and much darker in color.

In addition to the cloth, some of the discs carry fragments of a white granular material at intervals along the outer circumference. This material has the same microscopic appearance as the particles from the white pigment used for decorating pots (Figs. 1, 11, 13).

Sample Preparation

All the samples except the fiber pads (described below) were given a preliminary brushing with a camel's hair brush and then washed gently in tap water. Acetone treatment was tried on some discs to remove the Alvar coating used to protect them, but this treatment had to be discarded because disc 5 proved too fragile to handle without the supporting plastic, and the pear on disc 8 dissolved in the acetone.

After being washed, the samples were individually mounted on the stage of a stereoscopic microscope and cleaned with a camel's hair brush and dissecting needles under low power. The discs and cloth fragments were photographed by use of a Leica focalslide, while the individual fibers and cross sections were photographed on a Leitz Panphot. Cross sections were prepared on the Hardy quick cross sectioning device. This device consists of a flat metal plate slotted in the center and a plunger machined to fit the slot. It is operated by a graded screw, thus enabling the user to obtain cross sections down to a few microns in thickness.

Description

Disc No. 1 is in good condition, being quite uniformly covered by a film of copper oxide. Fig. 3 shows a striped pattern along the side. Microscopic examination proved this to be fragments of twisted fibers adhering to the surface and fiber impressions in the dirt film covering the disc (Fig. 5). There is also a patch of pigment material (Fig. 4).

Included with these artifacts were some small fragments of a copper ornament (Fig. 6). This ornament shows the remains of a design consisting of curved, roughly-concentric lines. None of the other discs show this type of marking.

Disc No. 2 is brittle and heavily corroded; the convex surface is distorted and ridged. Adhering to this surface is a very brittle white porous-looking structure (Fig. 7) and a small twist of thread. X-ray analysis showed the porous material to be bone, probably from a skull.

Disc No. 3 is in very good condition and even has several areas of uncorroded copper (Figs. 9 and 10); however, the outer edge is broken in two places. This disc was resting on a dark brown fibrous pad (Fig. 28) which easily separated into two layers (Figs. 23 and 24). Between these layers, not attached to either but running from the perforated area towards the circumference, was a well formed 3-ply twine (Fig. 27), comparable in diameter and structure to an ordinary string. Microscopic examination of the individual layers shows a coarse, loose weave, somewhat distorted by the breakage of the fibers (Figs. 25 and 26). The fibers are broken in many cases, but a few measured 28 to 39 mm., which is comparable to cotton.

When examined under the compound microscope by incident and transmitted light, the individual fibers are yellow to red brown in color. Their surface is rough and cracked, which may be an effect of aging, and they possess a well developed S spiral structure on their walls, and in some cases a clearly marked Lumen (Fig. 30). The cross section has an unusual squared appearance (Fig. 3).

Discs Nos. 4 and 6 (Figs. 11 and 13) have no cloth fragments but show pigment patches.

Disc No. 5 (Fig. 12) was broken in handling.

Discs Nos. 7, 9 and 10 (Figs. 14, 17 and 18) are in a very poor state of preservation, but have a few cloth fragments adhering to them. The excessive amount of dirt on both discs and the folded condition of the cloth on disc 10 make examination difficult.

Disc No. 8 is the best preserved specimen of the lot, although the pearl (destroyed by acetone) was blackened and caked with dirt.

Disc No. 11 holds by far the best cloth specimens, both sides being almost covered (Figs. 19 and 20). This cloth is made from much finer fibers than the pads in Figures 23 and 24 and is much more tightly woven (Figures 21 and 22). However, because of its extreme fragility, no further effort will be made to remove it from the disc or to cross section and otherwise examine the individual fibers.

In addition to the copper discs, a half disc of a peat-like material was included in artifacts. This mass is compact and porous, about 26 mm. thick. The upper surface has a design impressed on it. Microscopic ex-

amination shows it to be composed of a granular, clay-like structure (Fig. 29).

Discussion

It is impossible to state whether the design in Figure 29 was stamped on the disc when it was made or was impressed by contact over a long period of time.

In the other cases the cloth and the metal discs are very closely associated. The discs may have been wrapped in cloth, but the presence of the bone on disc No. 2 would seem to show that at least in this case the discs rested on something else and the whole surface was cloth-covered. The cloth on disc No. 11 in particular (and on disc no. 10) is finely made and similar in appearance to modern textiles such as monks cloth. The coarser cloth in Figure 23 is not too dissimilar to a modern cheesecloth or burlap. The copper discs themselves are well shaped and varied in size.

We wish to thank Textile Research Institute for their kindness in allowing us the use of their microscopes, cameras, and other laboratory equipment, and Mr. Frank Meyer for preparing the X-ray diagram.

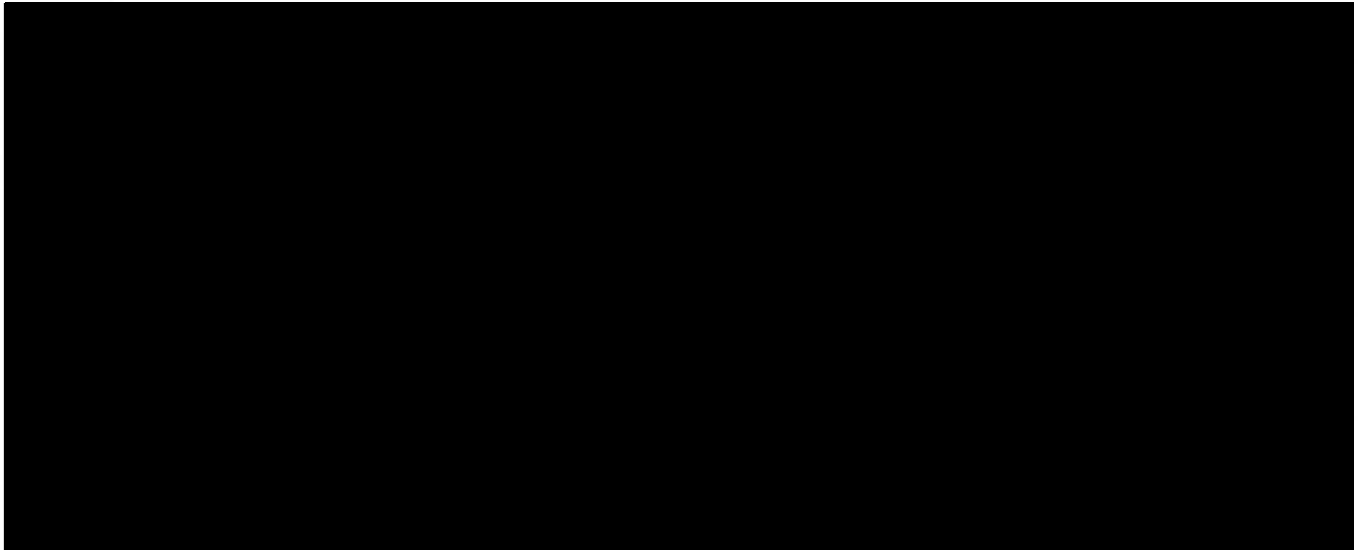


Fig. 1. Discs and Cloth Fragments

Fig. 2. Reverse Sides of Fig. 1

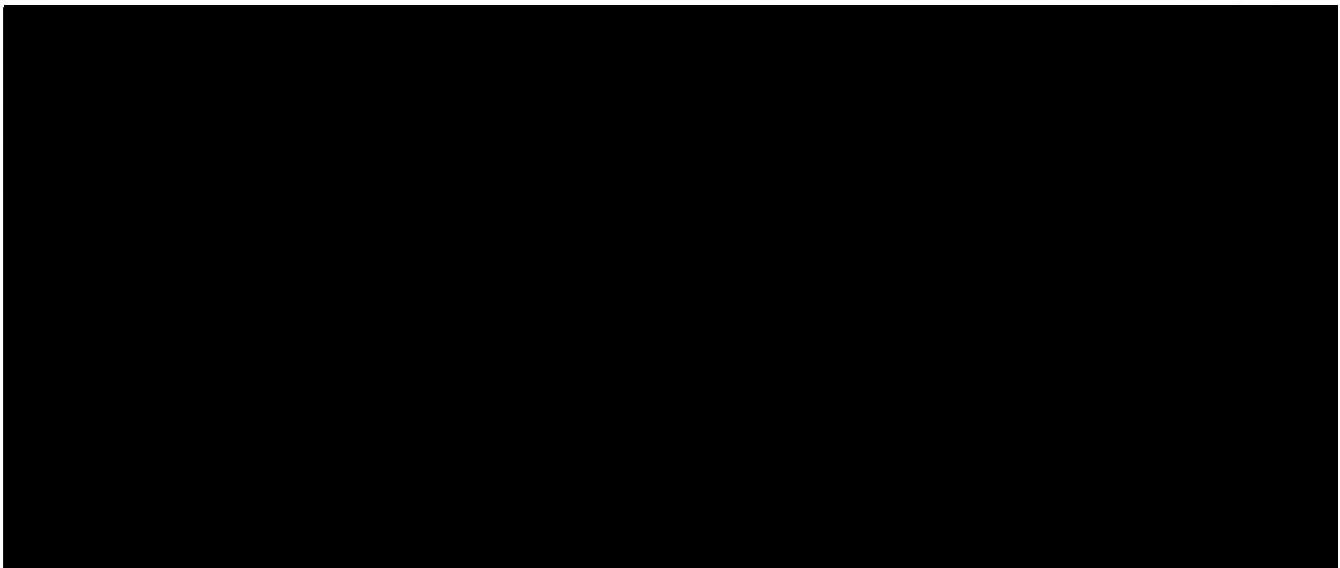


Fig. 3. Disc 1, showing pattern left on surface by cloth fragments

Fig. 4. Disc 1, showing pigment patches on reverse side



Fig. 5. Disc 1, showing pattern made by cloth fragments and impressions

Fig. 6. Fragments of Copper Disc, showing design

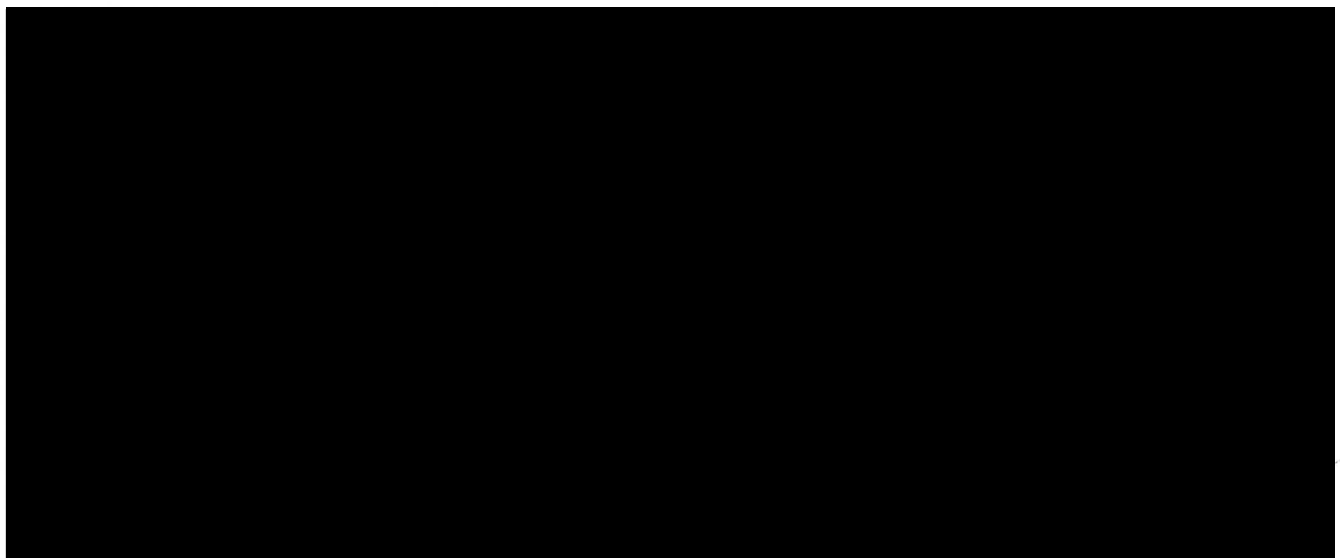


Fig. 7. Disc 2, showing bone and twist of threads

Fig. 8. Reverse Side of Disc 2

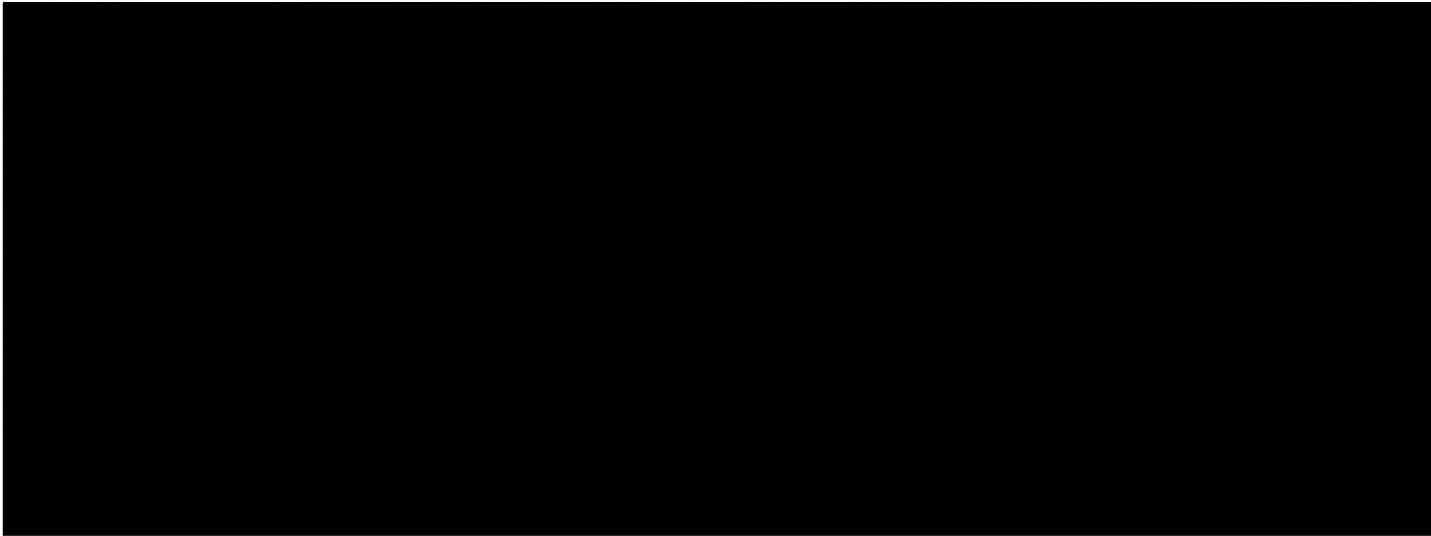


Fig. 9. Disc 3, after removal of fiber pad.
Note the few fibers still adhering

Fig. 10. Disc 3 Reverse. Note patches of
uncorroded copper

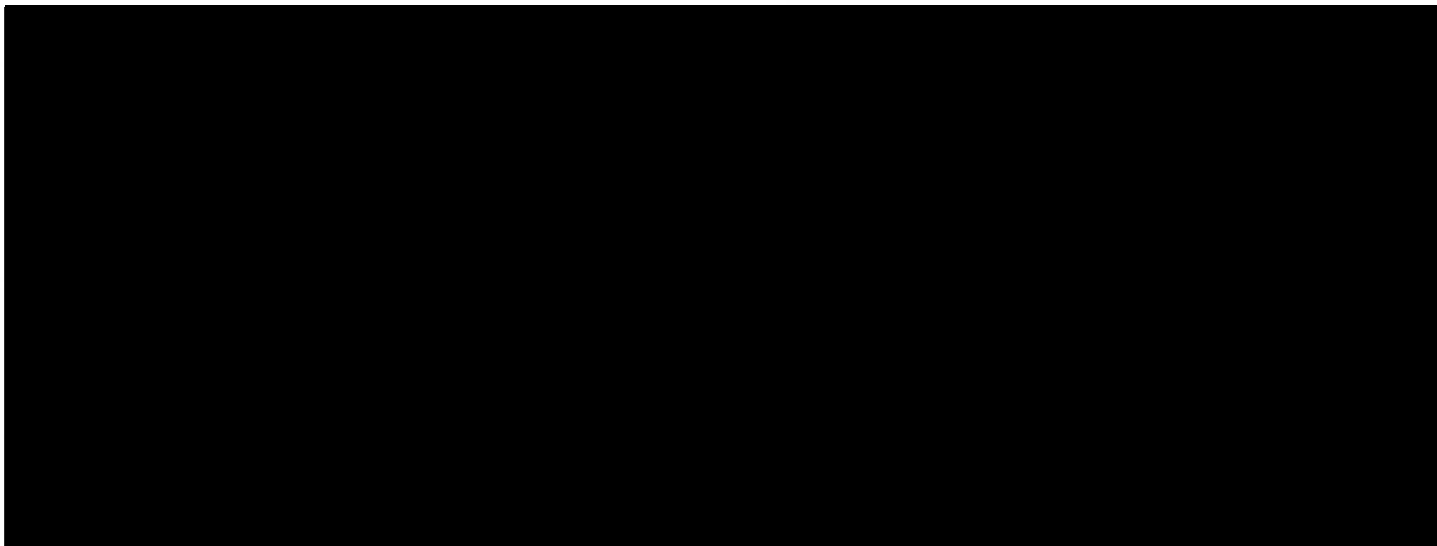


Fig. 11. Disc 4 showing pigment patches

Fig. 12. Disc 5 and 3 Fragments

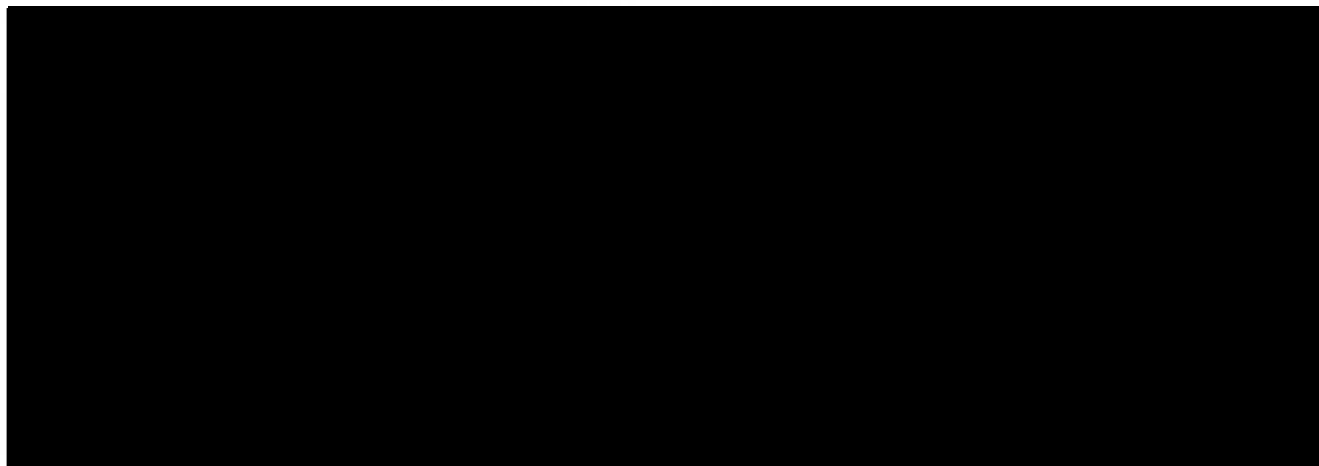


Fig. 13. Disc 6, showing pigment

Fig. 14. Disc 7, showing cloth embedded in dirt

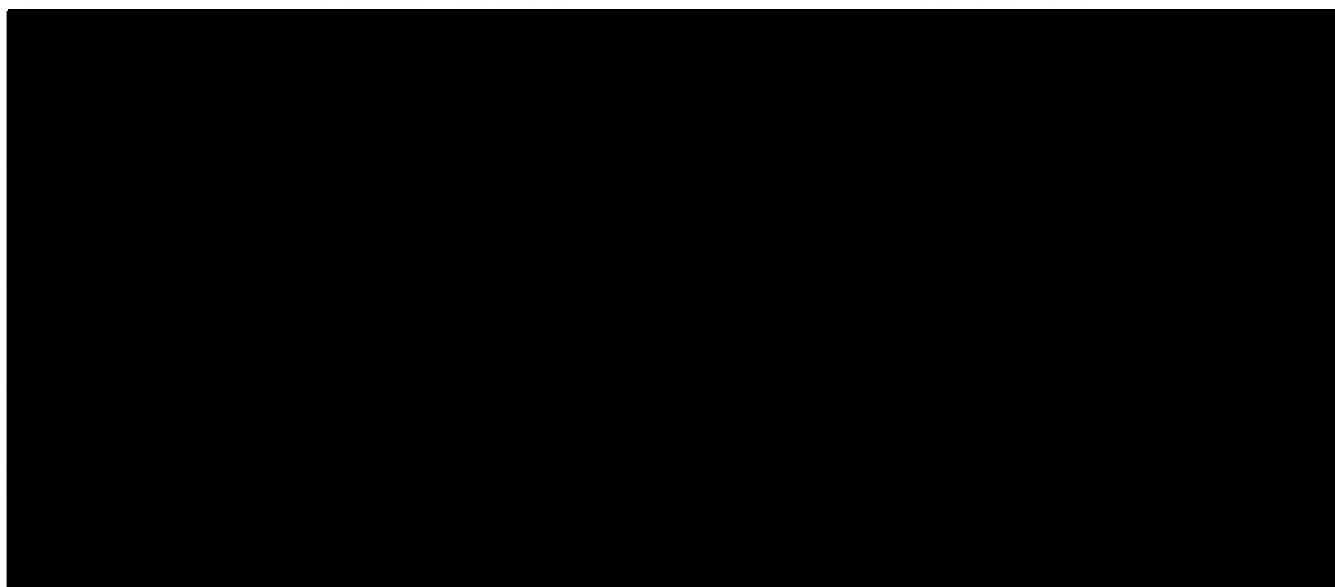


Fig. 15. Disc 8

Fig. 16. Disc 8, showing pearl fragment



Fig. 17. Disc 9, showing cloth impressions and a few fragments of cloth

Fig. 18. Disc 10, showing cloth lying in folds

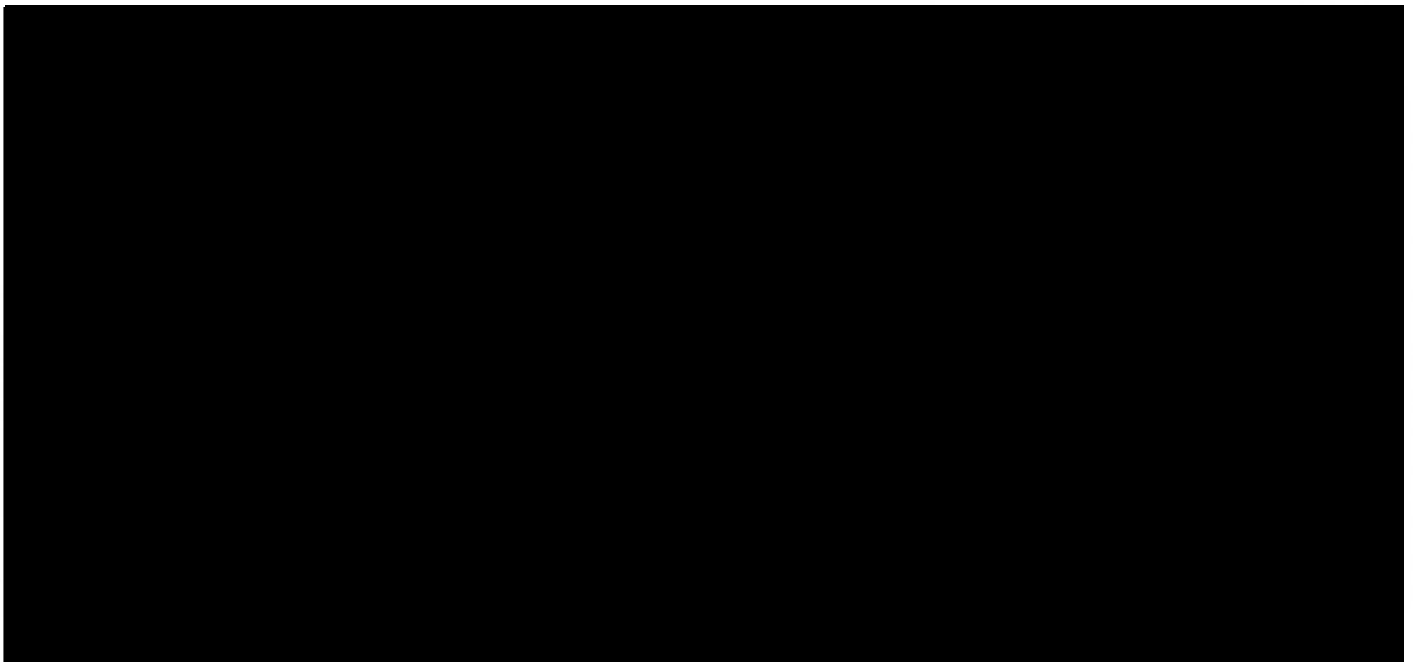


Fig. 19. Disc 11, showing cloth fragments

Fig. 20. Disc 11—Reverse Side, showing more cloth fragments



Fig. 21. Enlargement of Area from Disc 11, showing remains of cloth

Fig. 22. Enlargement of Area from Disc 11, showing fragments of cloth

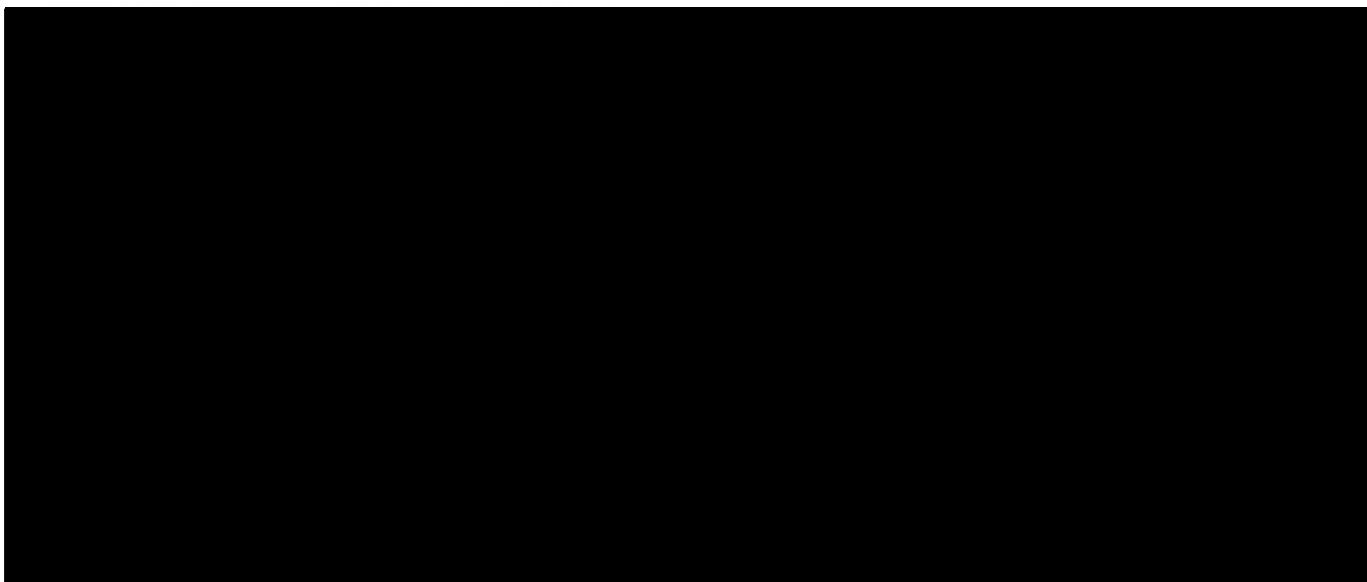


Fig. 23. Coarse Cloth Mat 1, covering back of Disc 3. Note weave in center

Fig. 24. Coarse Cloth Mat 2 between Disc 3 and Mat 1

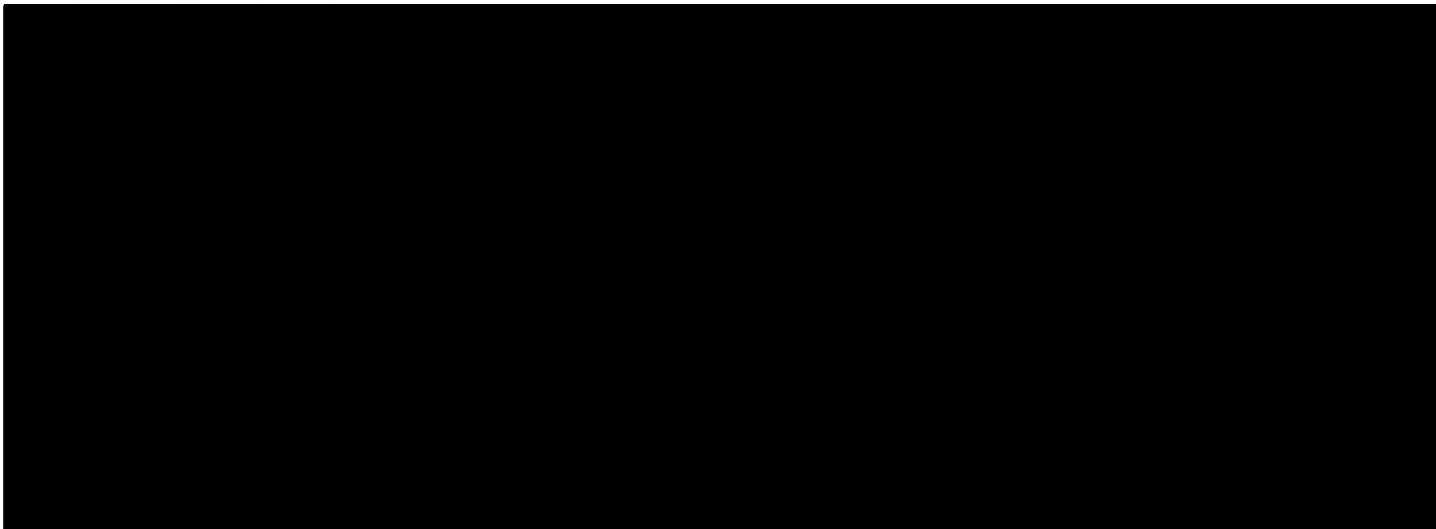


Fig. 25. Enlargement of Area from Mat 2

Fig. 26. Enlargement of Area from Mat 1

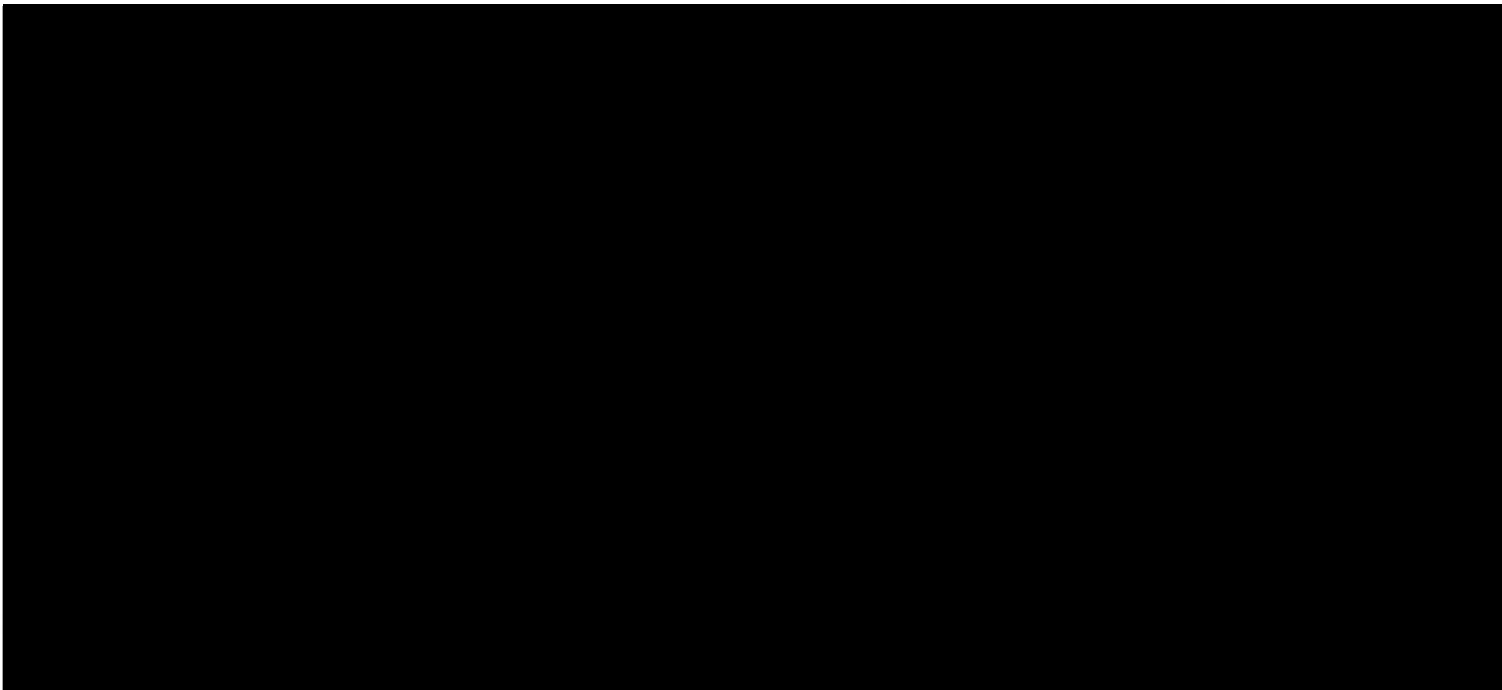


Fig. 27. Twine Removed from Back of Disc 3

Fig. 28. Disc 3 and Mats 1 and 2. Needle shows location of twine (Fig. 27)



Fig. 29. Surface of Fragment of Non-Metallic Disc, showing design

Fig. 30. Single Fibers from Edge of Mat 1. focussed to show lumen. Original magnification 100x



Fig. 31. Cross Section through Fibers from Mat 2. Note unusual square outline and varied lumen. Original magnification 100x

Fig. 32. Cross Section through Fibers from Mat 1. Note presence of heavily-pigmented masses at fiber edge. Original magnification 100x

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