

Certain Aboriginal Mounds

OF THE

GEORGIA COAST

BY

CLARENCE B. MOORE

Inhumation and Incineration in Europe

BY THE

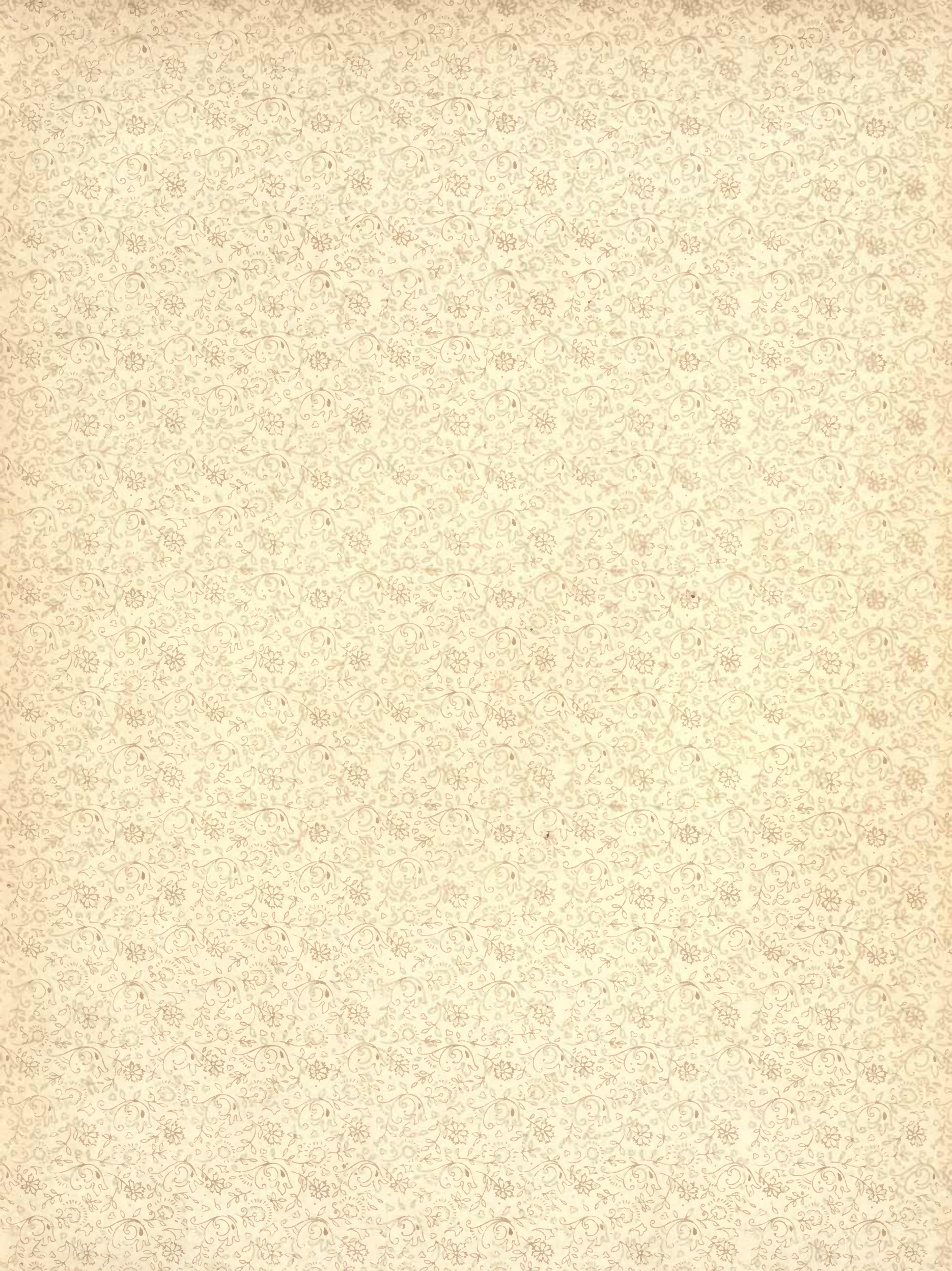
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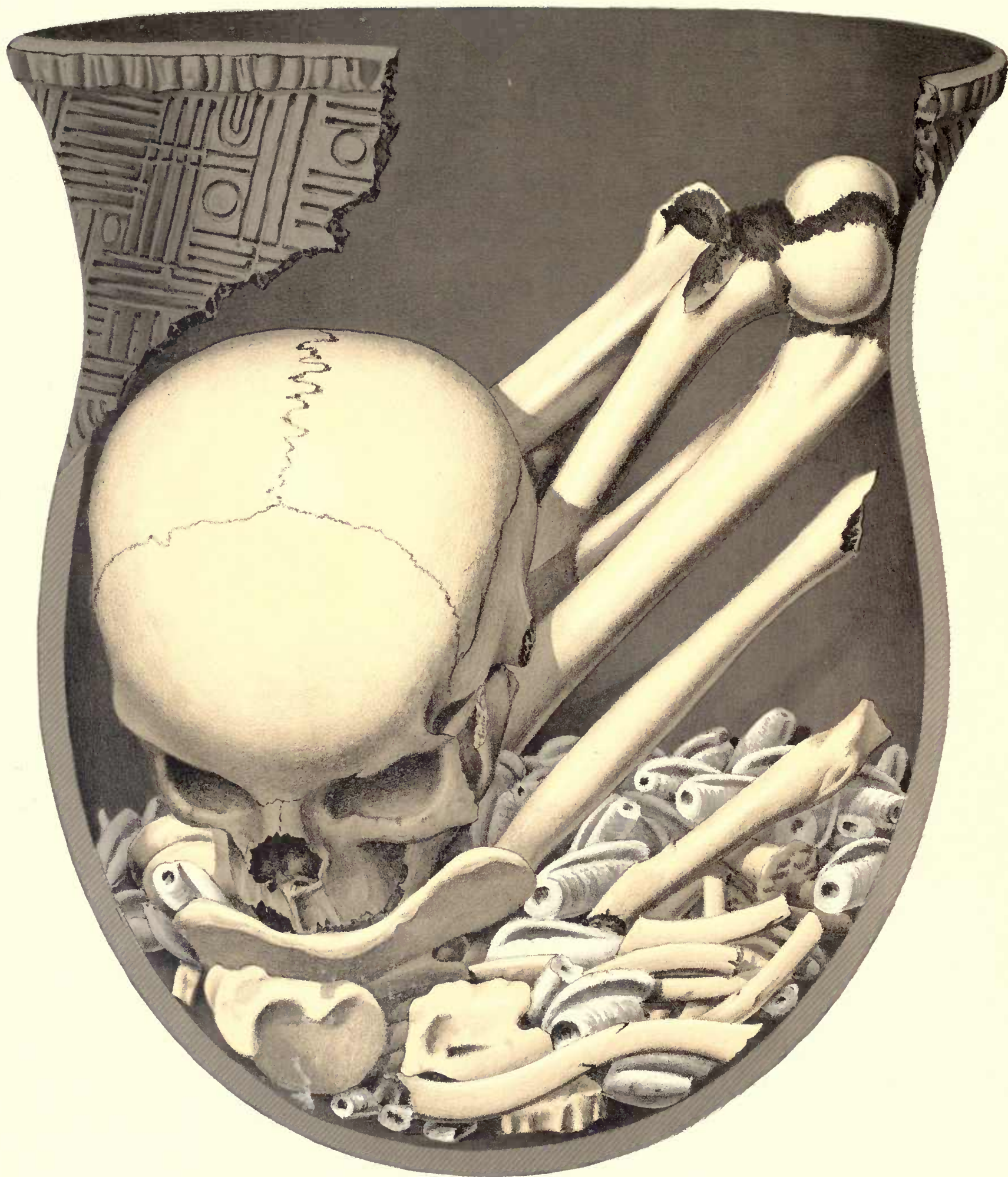
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MOORE: GEORGIA COAST MOUNDS.

VESSEL A (BURIAL NO. 3). MOUND ON ST. CATHERINE'S ISLAND. (TWO-THIRDS SIZE.)

CERTAIN
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REPRINT FROM THE JOURNAL OF THE ACADEMY OF NATURAL
SCIENCES OF PHILADELPHIA, VOLUME XI.
PHILADELPHIA, 1897.



PHILADELPHIA :
P. C. STOCKHAUSEN,
1897.

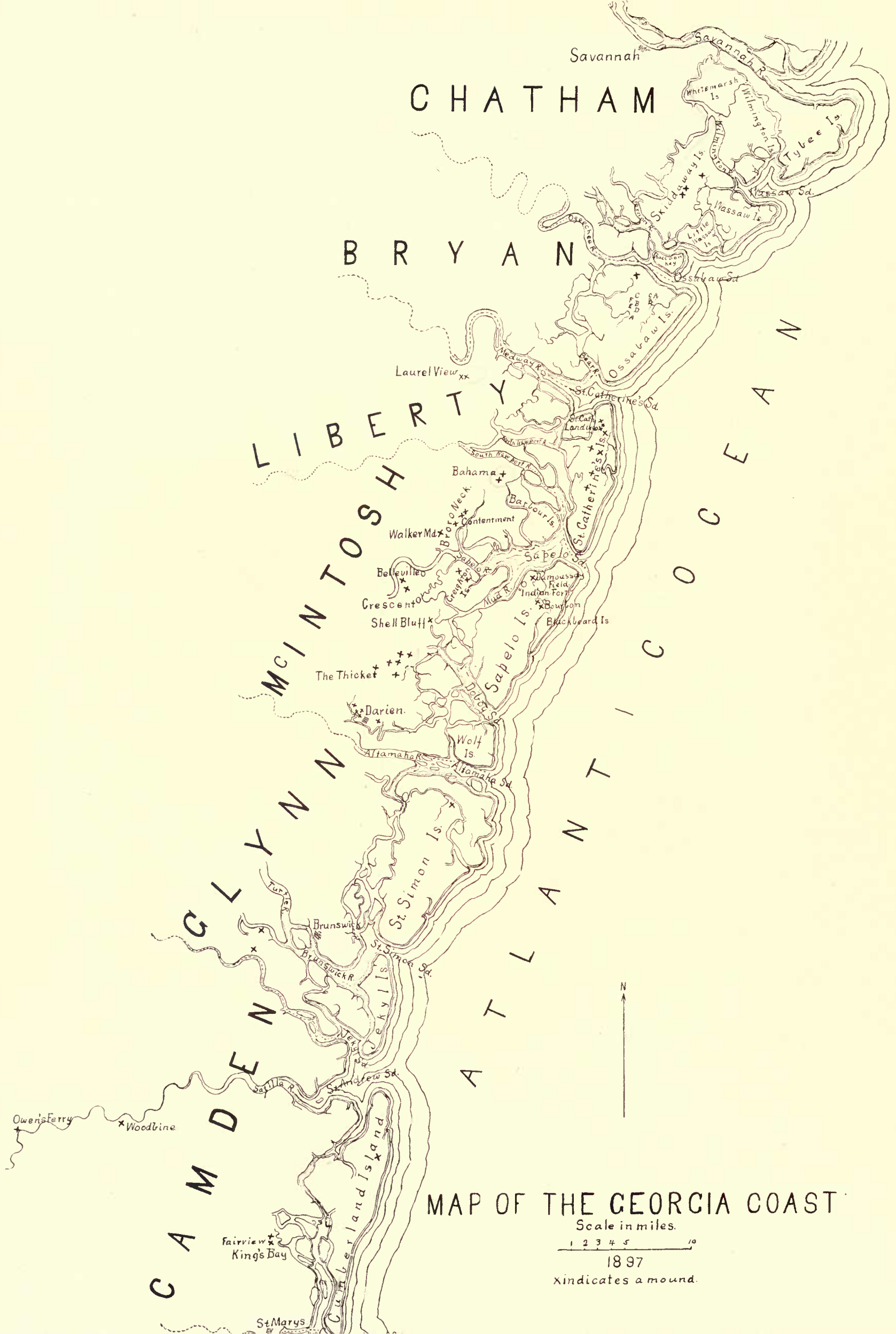
PREFACE.

Our thanks are tendered for material assistance in this work to the Marquis de Nadaillac, to Dr. E. Goldsmith, and to Professors Putnam, Holmes and Pilsbry. Our acknowledgments are due also for the aid extended by our lamented friend, the late Professor Cope.

Again we have to thank Dr. M. G. Miller for continuous assistance in the field and in the preparation of this report.

June, 1897.

C. B. M.



CHATHAM

BRYAN

LIBERTY

MCINTOSH

GLYNN

CAMDEN

Savannah

Laurel View xx

Bahama +

Walker Md +

Belleville +

Crescent +

Shell Bluff +

The Thicket + + +

Darien + +

Wolf Is

St. Simon Is.

Brunswick

Owen's Ferry

Woodbine

Fairview +
King's Bay

St. Marys

MAP OF THE GEORGIA COAST

Scale in miles.

1 2 3 4 5 10

1897

x indicates a mound.

JOURNAL
OF
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OF PHILADELPHIA.

CERTAIN ABORIGINAL MOUNDS
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As the reader is aware, an inland passage by water, parallel to the ocean, enables vessels of light draft to traverse the entire coast of Georgia without venturing to sea or incurring risk greater than the minimum one of crossing certain sounds at a distance from the open water.

This marine highway, shown on ordinary maps, is connected with a net-work of waterways and tributary streams, many appearing on sectional charts alone,¹ enclosing considerable fertile territory suitable for living sites, and great tracts of low-lying marsh.

Fish and oysters are abundant in this region, and were doubtless still more so in early times, but great deposits² of oyster shells are not so numerous as on the

¹ U. S. Government Charts, Nos. 156, 157, 158.

² The circular enclosure on Sapelo Island and a great causeway on Barbour's Island are the only shell deposits of importance met with by us on the Georgia coast. A considerable shell deposit on St. Simon Island has been reported. We have not seen it.

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Florida coast, nor do they compare in size with the great heaps of fresh-water shells so noticeable on the St. Johns River.

Before proceeding to a detailed description of certain coast mounds of Georgia, we wish to point out that it has not been our intention to investigate each mound included within the limits of the entire territory, as we have done on the St. Johns and the Ocklawaha Rivers, Florida, but rather, by demolishing a considerable number, to give a general idea of the aboriginal earth-works of the territory bordering the Georgia coast.

Five months of continual work have been devoted by us to the coast mounds of Georgia, during which time most of the territory has again and again been traversed by steam motive power, so that but little time has been consumed in transit. A few important mounds still remain unexamined, through no fault of ours, however, notably at the north end of Ossabaw Island and on the islands of St. Simon and Sapelo.

But little work has been previously done among the mounds of the Georgia coast. The late Col. C. C. Jones, whose interesting work¹ we have largely consulted, occasionally refers to certain objects as derived from coast mounds, but nowhere makes reference to any systematic explorations.² The territory is virtually a new one for the archæologist, though relic hunters have at times left traces of their work in the shape of comparatively small trenches or superficial excavations near the summits of certain mounds.

Before proceeding to a detailed description of our mound work it may be well to make clear to the lay reader certain terms frequently to be used by us.

The "bunched" burial, which we found to predominate in Florida when the condition of the bones made determination possible, is present also in the coast

mounds of Georgia, though to a much more limited extent. This method of interment consisted of bunching together a number of bones; sometimes the skull and long bones of one individual with perhaps some of the smaller bones, or in others, taking parts of the skeletons of two or three individuals and burying them in a heap together. The exposure of the dead body until deprived of flesh, prior to inhumation, was a common aboriginal custom. In Fig. 1 we give a representation of a typical bunched burial.



Fig. 1.—A "bunched" burial. (Not on scale.)

In the Georgia coast mounds the burial in anatomical order exceeded all others, though it is not unlikely that many at least of the skeletons had suffered exposure

¹ "Antiquities of the Southern Indians."

² See also "A Primitive Urn Burial," Smithsonian Report, 1890, p. 609 *et seq.*, by Dr. J. E. Snyder, in relation to Southern Georgia.

previous to inhumation but were held together by ligaments when placed in the sand. Occasionally, some bone or bones in a position not to be accounted for under the hypothesis of shifting sand, testifies to this.

Of the burials in anatomical order, the "flexed" burial predominates. This form consists in placing the remains usually on the right or on the left side and

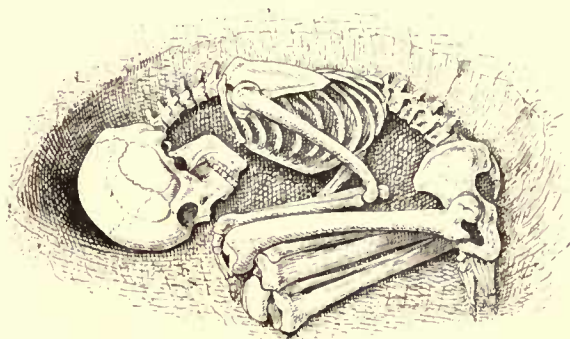


Fig. 2.—A "flexed" burial. (Not on scale.)

drawing the knees and chin well together with the legs drawn up almost parallel to the thighs. The arms occupy almost any position except an extended one. This form of burial doubtless recommended itself through economy of space,—a flexed skeleton calling for a grave not much over three feet in length. Fig. 2 shows a typical "flexed" burial.

In determination of sex there have been consulted the conformation of the forehead, the glabella, the superciliary ridges, the thickness of the outer upper

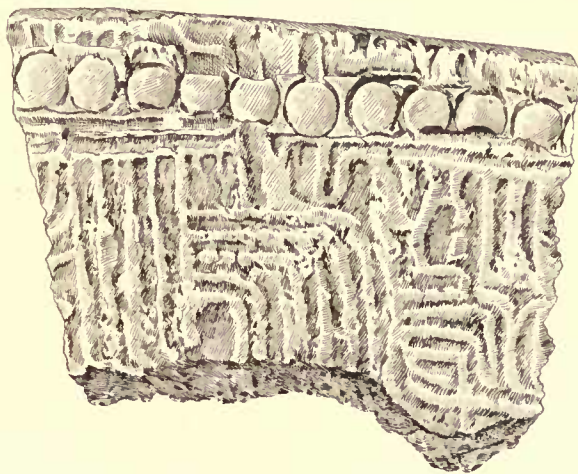


Fig. 3.—Sherd with ornamentation of circular impressions. (Full size.)

margin of the orbit, the character of the facial bones, the muscular marking of the temporal region, size of mastoid process, size of external occipital protuberance and muscular markings in its vicinity, character of lower jaw, size of mental prominences, form of clavicle, size and muscular markings of the bones in general.

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Age, when stated, was based upon an examination of the teeth and sometimes of the epiphyses. When not otherwise stated in our descriptions, the skeleton is that of an adult.

All anatomical determinations have been made by Dr. M. G. Miller, who has been present during all our field work in Georgia and in Florida.

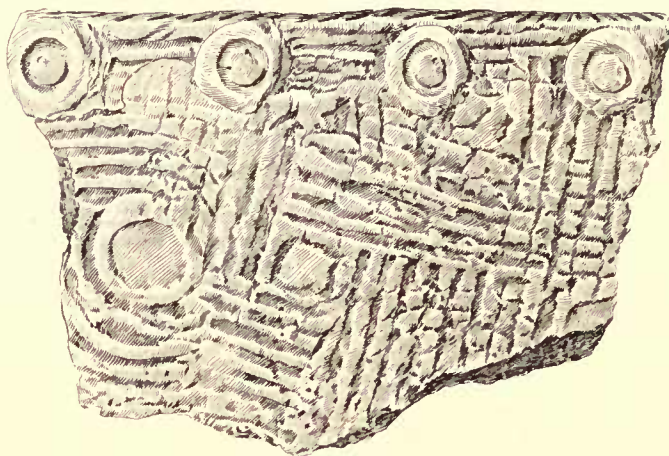


Fig. 4.—Sherd with button-like decoration. (Full size.)

We shall see that burials of infants in some localities, of adults in others, were in large jars made of clay tempered with gravel,¹ almost invariably of the same type, consisting of a rounded base, an almost cylindrical body, a slightly constricted



Fig. 5.—Sherd showing loss of decoration. (Full size.)

neck and a flaring rim, whose margin was exteriorly decorated with circular impressions, contiguous or nearly so, doubtless of a section of a reed (Fig. 3), or with button-like ornaments some distance apart, made separately and impressed before baking (Fig. 4), and which sometimes are seen to have fallen from their places, as

¹ Termed gritty ware. This ware forms the majority of that found on the Georgia coast.

shown in Fig. 5; or with an encircling band impressed at intervals (Fig. 6). The decoration of the body and neck of these vessels is usually a complicated stamped pattern so well known in Georgia and in Carolina.

One of these burial jars (various forms were used for cremated remains) is shown in Plate IX.

The late Col. C. C. Jones describes four similar vessels, all containing infant

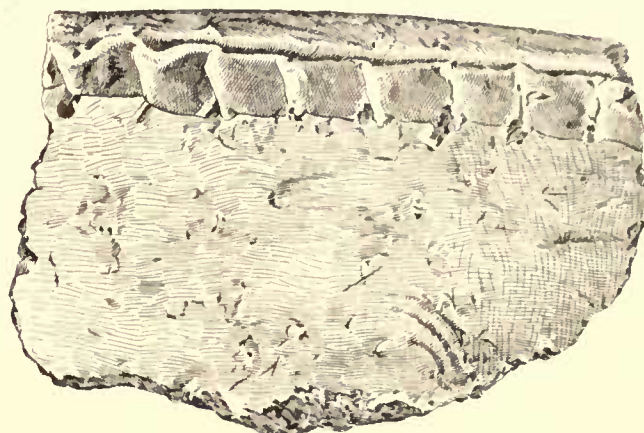


Fig. 6.—Sherd showing band with impressions. (Full size.)

remains, as coming from mounds of the Georgia coast.¹ We shall not again go into a detailed description of this form of vessel, but shall refer to it as the common, or ordinary type.

The reader will observe that considerable care has been taken in referring to, or in describing, vessels of shell or of earthenware, to note whether or not they were imperforate as to the base. This, it may be well to explain to some, has been done in reference to a custom obtaining to a considerable extent in Florida where vessels placed with the dead often had the bottom knocked out, the base perforated, or a hole made in the base at the time of manufacture, presumably "to kill" the vessel to free its soul to accompany that of the dead person. This curious custom has been regarded as peculiar to Florida, but it is interesting to note a possible observance of it to a limited extent in the mounds of the Georgia coast. It is well to note, however, that in cinerary urns, perforation of base is never met with.

Mounds Investigated.

Fairview, Camden County (2).	Crescent, McIntosh County.
Woodbine, Camden County.	Walker Mound, McIntosh County.
Owen's Ferry, Camden County.	Contentment, McIntosh County.
Brunswick, Glynn County (2).	Broro Neck, McIntosh County (2).
Lawton's Field, Darien, McIntosh Co. (3).	Sapelo Island, McIntosh County (3).
Townsend Mound, Darien, McIntosh Co.	Bahama, McIntosh County (2).
Cat Head Creek, Darien, McIntosh Co.	Laurel View, McIntosh County (2).
"The Thicket," McIntosh County (6).	St. Catherine's Island, Liberty Co. (7).
Shell Bluff, McIntosh County.	Ossabaw Island, Bryan County (9).
Creighton Island, McIntosh County (2).	Skiddaway Island, Chatham County (3).
Hopkins Mound, Belleville, McIntosh Co.	

¹ "Antiquities of the Southern Indians," p. 456.

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LOW MOUND AT FAIRVIEW, CAMDEN COUNTY.

Fairview, the property of Captain W. F. Bailey, to whom we are indebted for courteous permission to investigate, lies on the bank of Marianna Creek which empties into Kings Bay, Cumberland Sound.

The mound, in a cultivated field, had a diameter of base of 38 feet, a height of 2 feet 8 inches, though a large stump remaining on the mound gave evidence of a loss of about 1 foot additional height through the agency of the plow.

The mound was completely demolished.

The closest examination of the structure of this mound seemed to indicate that the usual pit, made previous to the erection of the mound, was wanting, and that the mound, composed of loamy brown sand and unstratified, had been erected upon the undisturbed level ground.

There were no marginal burials. In addition to fragmentary bones, thrown up by the plow, human remains were met with at seven points.

One and one-half feet from the surface and 10 feet from the northwestern margin of the mound was the flexed skeleton of a child, in anatomical order.

An adult skeleton, showing the same form of burial, lay 2 feet from the surface.

One foot down was a deposit of fragments of calcined human bones beneath a local layer of oyster shells. With the remains lay a sheet copper ornament with repoussé decoration.

A burial, well in toward the center, had seemingly its full quota of bones, and the lower portion of the skeleton lay in anatomical order. The cranium, however, was upside down; the mandible lay on its side, embracing one bone of the forearm and two ribs. In all probability ligaments held together a part of this skeleton at the time of its removal to the mound. Reference has already been made to the custom formerly obtaining with many of the southern Indians, namely, the exposure of the body for a certain time previous to interment. Juan Ortiz, a member of a former expedition, rescued by De Soto, had been accorded by his captors the task of keeping carnivorous wild animals from remains thus exposed.

About 2.5 feet down, just above a thin layer of calcined oyster shells extending several feet beyond, were the bones of a young infant. With them were many shell beads of various sizes.

At another point lay a deposit of calcined bits of bone, some certainly human, all probably so.

Almost in the center of the mound were parts of a skeleton, considerably scattered. A small hole apparently had been dug previously at this point, causing a disarrangement of the bones.

Sherds were limited in number, about one dozen being met with, the majority plain though several bore a complicated stamped decoration.

With the exception of two or three bits of chert the mound yielded nothing farther of interest.

CERTAIN ABORIGINAL MOUNDS OF THE GEORGIA COAST. 11

LOW MOUND NEAR FAIRVIEW, CAMDEN COUNTY.

In pine woods, about one-quarter of a mile in a northerly direction from the preceding mound, on property of Mr. Robert H. Frohock, to whom our acknowledgements for permission to dig, are herewith tendered, was a mound 2 feet 5 inches in height and 34 feet across the base.

The northern half was completely dug through. Considerable charcoal and fireplaces lay seemingly on the base.

Several bunched burials and fragments of human bones were met with at various points. Nothing in the way of art relics was encountered with the exception of about one-half of a small and gracefully-shaped vessel of earthenware and several sherds, most of which bore an incised cross-hatched decoration.

MOUND NEAR WOODBINE, CAMDEN COUNTY.

About three-quarters of a mile in a westerly direction from the town of Woodbine near the Satilla river, is Bedell's Landing. About one-quarter of a mile south of the landing is a very symmetrical mound 4 feet 9 inches in height and 40 feet across the base. A number of large hickories are on the eastern side and these were left standing through a natural desire on the part of the owner of the large plantation on which the mound is situated to preserve the earthwork as a landmark. About two-thirds of the cubic contents of the mound were displaced and subsequently returned, leaving the mound in appearance as we found it.

Our thanks are tendered to Mr. J. K. Bedell, the owner, for full permission to investigate, a courtesy which, considering the proximity of the mound to his homestead, might have reasonably been declined.

The mound was composed of light-brownish sand with a slight admixture of clay. A vertical section of the mound from the summit plateau to where traces of human handiwork came to an end, had a height of 6 feet.

The usual fireplaces and admixture of charcoal with the sand were encountered. The mound had probably at an earlier period lost somewhat in height and had been considerably disturbed within recent years through use as a place for burial. In fact, at the present time, but 35 yards distant, are numerous graves dating from the last half of the present century, and several intrusive burials, doubtless of this period, were discovered in the mound. One skeleton, the bones of which still had a raw appearance, had, near the pelvis, two brass buttons apparently belonging to an old fashioned "dress coat," while another had iron nails, probably belonging to the coffin, in close proximity. The intrusive skeletons were buried at length and considerable care had been bestowed in the arrangement of the bodies, in one instance the hands being folded at the waist.

Original burials numbered about two dozen and were so badly decayed that in the case of some the method of interment was not determinable. When unmistakably identified as to position the bones were found in anatomical order. The bodies had been variously flexed. These interments were found from 1.5 feet from

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the surface to a depth of 6 feet. In some cases local layers of sand dyed with the red oxide of iron lay immediately above the bones.

At two points in the mound were pockets made up of fragments of calcined human bones. In the mounds of Florida such pockets are sometimes found though cremation was not, so far as our experience extends, largely practised there. We shall see later to how considerable an extent this form of burial was in vogue among the aborigines of the Georgia coast.

EARTHENWARE.

Sherds were very infrequent and probably of accidental introduction, none lying with human remains. They were, as a rule, undecorated, though the complicated form of stamp, so well known in Georgia, was present.

No vessels of earthenware were encountered.

In a central portion of the mound, 5 feet from the surface, near human remains, was an undecorated tobacco pipe of earthenware, of a type common to the mounds of the lower thirty miles of the St. Johns river and other sections, where the aperture for the stem rivals that of the bowl in size. We have figured¹ a pipe of this type in our account of the mound at Point La Vista, Duval County, Florida.

STONE.

A graceful lance-point of chert lay with a skeleton about 4 feet from the surface.

Two polished "celts" lay with burials 1 foot and 2.5 feet from the surface, respectively.

A small hammer-stone and a portion of a pebble were with the pipe to which reference has been made.

Loose in the sand was an arrowhead of chert.

SHELL.

Loose in the sand, throughout the mound, were several conchs (*Fulgur*) and fragments of conchs.

Upon a number of occasions shell beads lay with the burials.

A little over one foot below the surface, over the ribs of the skeleton of a child, was a gorget of shell, irregularly oval in form, 4.5 inches by 5.5 inches. Near the upper margin is a perforation for suspension. A companion to this perforation had apparently been destroyed by a blow from a spade, received at the time of discovery. The concave surface of this gorget shows traces of intricate incised decoration, the exact pattern of which is no longer apparent.

Less than one foot from the surface, with human remains, were two stopper-shaped objects of shell. This form (Fig. 7) so well known in certain sections, is not present in the mounds of the Georgia coast strictly speaking and has not been met with by us in shell in Florida though present in the great deposit of objects

¹ "Additional Mounds of Duval and of Clay Counties, Florida."

of earthenware found by us in the Thursby Mound, Volusia County.¹ These may have served as ear-plugs since we know it to have been an aboriginal custom to wear articles of considerable size thrust through the lobe of the ear.

About 3 feet from the surface, lying near the cranium of a skeleton, were beads of shell, some of considerable size; several stopper-shaped objects of shell; an imperforate drinking cup wrought from *Fulgur perversum*; and an undecorated gorget of shell, 3.75 inches by 4.5 inches, with double perforation for suspension. Almost immediately above these remains and relics was an intrusive burial of recent times, having fragments of clothing and buttons.

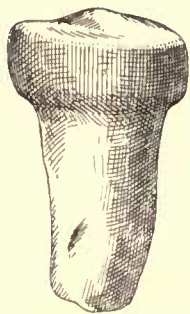


Fig. 7.—Stopper-shaped object of shell. Mound near Woodbine. (Full size.)

Other stopper-shaped objects were found associated with a finger-ring of copper, to which reference will be made later.

About 3 feet from the surface was a nest of oyster shells and charcoal.

COPPER.

Associated with human remains, 1.5 feet from the surface, was an ornament of sheet copper almost oblong in shape. The margin was beaded,² as is so commonly the case with similar ornaments in Florida, and a central concavo-convex boss had its origin in a great number of semi-perforations placed closely together with the aid of some pointed implement. The sheet copper is decidedly thicker than that met with in Florida, more resembling sheet copper we have seen from Ohio. Not far from the center of the margin of the smaller end is a perforation for suspension. Length, 3 inches; maximum breadth, 2.75 inches; minimum breadth, 2.25 inches.

About 1.5 feet from the surface, 2 feet from a skeleton lying at the same level, was a circular ornament of sheet copper, 3 inches in diameter. The usual concavo-convex boss at the center is present, as likewise is the beaded margin. There is one perforation for attachment or suspension.

In the northern slope of the mound, about 2 feet from the surface, with a skeleton, were shell beads, several stopper-shaped objects of shell and, in place on a finger bone, a finger-ring wrought from a band of thin sheet copper (Fig. 8).

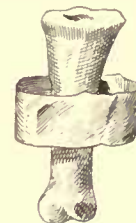


Fig. 8.—Finger-ring of sheet copper. Mound near Woodbine. (Full size.)

Prehistoric finger-rings are of extreme rarity in this country. In the cemetery at Madisonville, Ohio, where are the famous ash-pits, Professor Putnam found on the fingers of one skeleton four rings made from bands of sheet copper, and speaks of such rings as "unique in American archaeology."³ Professor Putnam does not recall the discovery of similar rings from the date of publication of his report to the present time.

¹ "Certain Sand Mounds of the St. Johns River, Florida," Part I, Fig. 100.

² The same beaded margin, so frequently seen on ornaments of sheet copper in Florida, is represented as present on a sheet silver disc from Peru. "Necropolis of Ancon," Reiss and Stübel, Berlin. Part VII, Plate LXXXI, Fig. 19.

³ XVI and XVII Annual Reports, Peabody Museum, p. 166.

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It is worthy of remark that similarly shaped finger-rings of metal bands have been found on Peruvian mummies, two such rings being figured¹ in Reiss and Stübel's magnificent plates. Unfortunately, the metal from which the rings are made is not specified, but as they are shown of a deep green shade presumably copper is represented. On ornaments of silver containing copper one is not likely to find so marked and so uniform a deposit of carbonate.

MISCELLANEOUS.

The tooth of a fossil shark, about 4 inches in length, apparently unassociated, lay 5 feet from the surface.

Another shark's tooth, 1 inch in length, lay in caved sand. At its base was a perforation possibly for suspension as an ornament, or just as probably for attachment to a wooden handle for use as a cutting tool, such implements having been found by Mr. Cushing in the mud near shell-heaps of the southwestern coast of Florida.

On or just beneath the surface, at a considerable distance from any burial, was a polychrome glass bead which we believe to have been dropped upon the mound subsequent to its completion.

REMARKS.

The interesting mound near Woodbine, which we have included here, has nothing in common with the mounds of the coast, being on fresh water and at a considerable distance from the sea. This fact should be borne in mind when the contents of the mound are taken into consideration.

MOUND AT OWEN'S FERRY, CAMDEN COUNTY.

At Owen's Ferry, on the left hand side of the Satilla river, going down, in full view from the water, on the property of George S. Owen, Esq., of Savannah, is a symmetrical mound apparently uninvestigated previous to our visit. It is picturesquely situated on a bluff sloping to the water's edge and on it grow a number of forest trees. The mound, considered a landmark, is in full view of the Owen house and we deem it an especial courtesy on the part of Mr. Owen to have placed it so readily at our disposition.

In shape the mound resembles an inverted bowl. Its height from the east, which may be considered a fair average, is 6 feet 4 inches; its diameter at base, 52 feet. Over one-half of the mound, the northernmost portion, was dug away and subsequently replaced. The mound was composed of light yellow sand without stratification.

Small fragments of human bone in the last stage of decay, were present at three points.

¹ "The Necropolis of Ancon," Berlin. Part III, Plate XXX, Fig. 14.

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A few sherds, some plain and some ornamented with the usual diamond or square stamp, lay loose in the sand, as did three arrow-heads of chert, found separately. Well in toward the center was an irregular mass of oyster shells, about 6 feet from the surface.

The result of our examination of this mound surprised us greatly, since it strongly resembled the rich little mound at Woodbine a few miles below.

TWO MOUNDS SOUTH OF BRUNSWICK, GLYNN COUNTY.

At South Brunswick, opposite the town of Brunswick, about 200 yards in a southerly direction from the railroad wharf, was a mound 2 feet high and 26 feet across the base. It bore no marks of previous investigation. A total demolition of the mound was without result.

About 1.5 miles inland from Fancy Bluff, an abandoned plantation on a creek a short distance from South Brunswick, was a mound 2 feet 3 inches in height, and 28 feet across the base. This mound was investigated so far as a large tree upon its northern portion permitted. No discoveries of any sort were made.

MOUNDS IN LAWTON'S FIELD, DARIEN, MCINTOSH COUNTY.

The town of Darien, on a branch of the Altamaha river, is about 10 miles distant from the sea in a straight line.

In the northern outskirt of the town is a large field, the property of Mr. P. C. Lawton, an intelligent colored man, who readily placed at our disposal three mounds included within the limits of his field.

Mound A. This mound, which had been plowed over for years, had, according to report, lost considerably in height which, at the time of its total demolition by us, was 4 feet 6 inches. Its diameter at base was 46 feet.

Previous investigation was limited to a narrow superficial trench through a portion of the mound.

The mound was composed of yellowish sand with local layers of oyster shells, calcined in one instance, and of sand, brownish in color, probably through presence of foreign material. A layer of brownish sand, about 1 foot in thickness, seemed to mark the lower portion of the mound, as immediately below it was bright yellow sand, undisturbed, and containing no object of artificial origin. At the center, from this bright yellow sand to the highest portion of the mound, vertically, was 6 feet.

A number of fragmentary and disconnected human bones were found in the neighborhood of the trench, left by previous investigators. Undisturbed human remains, which were almost entirely confined to the eastern side of the mound, were eleven in number. The form of burial was that in anatomical order. The skeletons were considerably flexed. Nearly, if not, all had been, to all appearance, wrapped in bark much of which, though badly decayed, still remained.

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Sherds were comparatively of infrequent occurrence and were apparently of accidental introduction. The plain, the checked stamp, and the intricate stamp were represented.

The mound was unusually devoid of artifacts. Large shell beads were present with several skeletons, and some small ones with the skeleton of an infant.

With human remains, just beneath the present surface, were two stone hatchets, one very rude; one pebble and one bit of earthenware.

Loose in the sand were a bit of fossil wood, and, in another portion of the mound, a small mass of sandstone, pitted on one side. Unassociated, 5.5 feet from the surface was a very rude implement of stone.

Mound B. This mound, about 30 feet south of the preceding one, had a height of 4 feet, a diameter at base of 36 feet. A narrow trench, about 2 feet in depth, had previously been dug through a portion of it.

The mound was completely demolished.

Its composition was almost identical with that of Mound A.

HUMAN REMAINS.

Exclusive of certain loose bones, disturbed by previous investigators, 32 burials were noted in the mound. Of these, 30 were in anatomical order and flexed, while two consisted of deposits of charred and calcined fragments of human bones. Above certain skeletons lay small local layers of oyster shells. With one skeleton was a small amount of sand tinged pink with red oxide of iron—its sole occurrence in the mounds of Lawton's field.

With very few exceptions, skeletons were associated with wood or bark, in some cases included above and below and again apparently heaped over with bark or with slabs of wood, in the last stage of decay. Several skeletons were enclosed in cribs or pens of wood, as for instance, one 8.5 feet from the eastern margin of the mound and 4 feet from the surface. The bones lay in a pen composed of logs from 3 to 5 inches in diameter. The longitudinal logs had an average length of 3 feet, that of the transverse ones at the bottom was about 2 feet, at the top about 20 inches. The top was composed of parallel logs running longitudinally. There was no bottom to this pen or, more properly speaking, coop. Within it lay a skeleton flexed on its right side, heading south. The head and body were in line, the head at one end of the pen, the pelvis at the other. The thighs were flexed sharply on the body and the legs on the thighs. The right leg rested between the logs at the side of the pen, the foot projecting; while the left foot extended beyond the end of the pen. The arms lay along the body with the forearms lying between the thighs. We give a representation of this coop in Fig. 9, reproduced from a sketch made to a scale and on the spot. It has been found impossible to convey the decayed and crushed appearance of the wood, but the number and positions of the various pieces are exactly represented. The bones of the feet, held in place by the sand, fell apart when the sand was removed.

In this pen, with the bones, were four small bits of chert, one showing a certain amount of workmanship; one small cube of quartz and a small mass of clayey material.

With another skeleton in a somewhat similar coop, though less well preserved, was a small polished chisel of stone and a diminutive pebble.

Though, as stated, a great majority of the skeletons were buried with wood or bark, there were certain notable exceptions. One burial in the eastern margin, 3.5 feet from the surface, showed no trace of woody material. The cranium of this skeleton was preserved in good condition (A. N. S. Cat. No. 2,159).

Considerably below the level of the surrounding territory, beneath the extreme western margin of the mound, were two graves, distinguished by the dip of the artificially colored brown sand constituting the lowest stratum of the mound, into the undisturbed yellow sand of the field. Neither grave showed any trace of wood or bark.

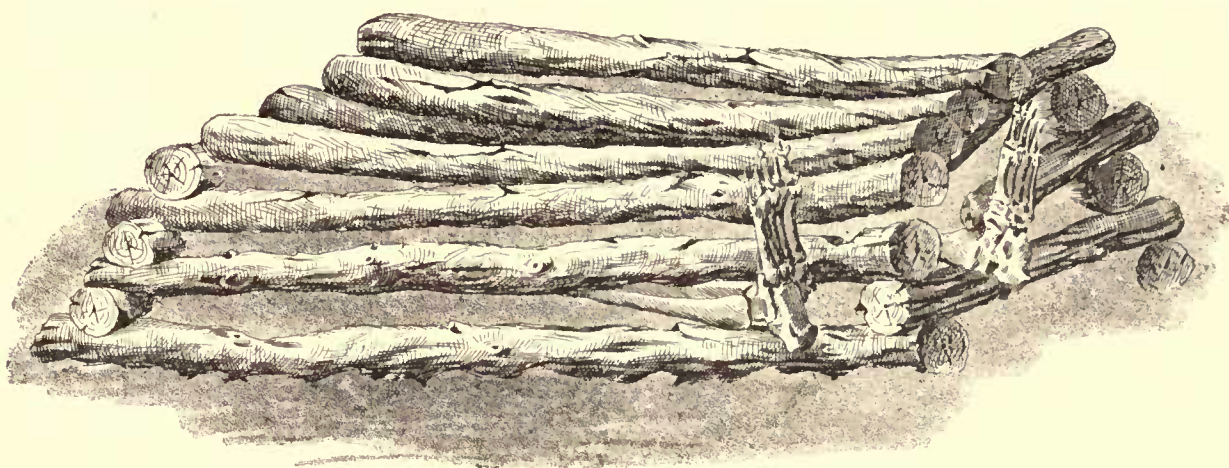


Fig. 9.—Burial pen. Mounds in Lawton's Field, Mound B. (About one-eighth size.)¹

Grave No. 1 contained a skeleton 5 feet 3 inches from the surface of the mound and 2 feet 3 inches below the bottom of the basal layer of brown sand which at this point extended two feet below the level of the surrounding territory. The mound at this point had a height of 1 foot. No artifact lay with the skeletal remains though, in close association, was the right humerus of an adult bald-eagle² (*Haliaeetus leucocephalus*). The bone was in a subfossilized condition. The bones of both forearms of this skeleton were ankylosed at the upper extremity in a position of pronation. They were sent to the Army Medical Museum at Washington. No ankylosis was noted at other points of the skeleton. The cranium, in fairly good condition, was preserved (A. N. S. Cat. No. 2,160). In this skeleton the bones of one hand were missing while the axis rested against the sacrum and a first rib and atlas lay above the pelvis. The lower jaw was back of, and turned from, the

¹ In the cut the feet are incorrectly represented as upright, their true position having been nearly parallel to the logs.

² Kindly determined by Dr. R. W. Shufeldt.

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cranium and, moreover, gave every evidence of not belonging to the skull. The teeth of the lower jaw showed considerably more wear than those of the upper jaw. In the upper jaw one wisdom tooth showed little sign of wear, while the other had been but recently lost. On the other hand, there had been a loss of both wisdom teeth of the lower jaw with absorption of the alveolar process. Moreover, the teeth of the jaws do not seem to coincide. It is seen that these signs of disturbance can be accounted for only under the hypothesis of exposure of the body previous to interment—a very common practice in some sections—and that the parts not in anatomical order had fallen from the skeleton which otherwise was held together by ligaments. The lower jaw, probably lost or mixed, was intentionally or otherwise, substituted by another.

About 8 feet due south from grave No. 1, 4.25 feet from the surface of the mound, and about 3 feet below the level of the surrounding territory, was grave No. 2, 3.5 feet long, by 33 inches wide, by 1 foot deep. The skull was saved in good condition (A. N. S. Cat. No. 2,155). The tibiae and fibulae showed inflammatory swelling. With the cranium were three shell pins of familiar type.

EARTHENWARE.

Sherds were not numerous, a few undecorated or with variously stamped patterns being met with.

Two and one-half feet below the surface of the southern margin, with human

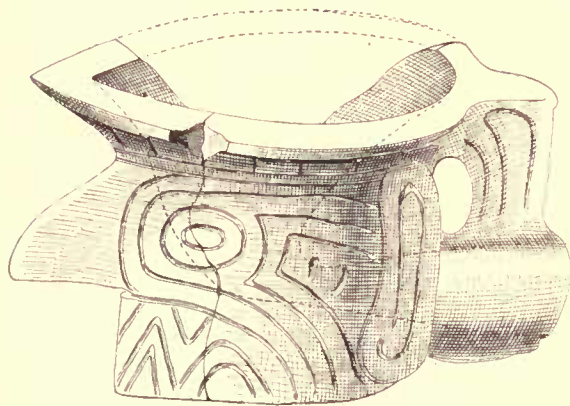


Fig. 10.
Tobacco pipes of earthenware. Mounds in Lawton's Field, Mound B. (Full size.)

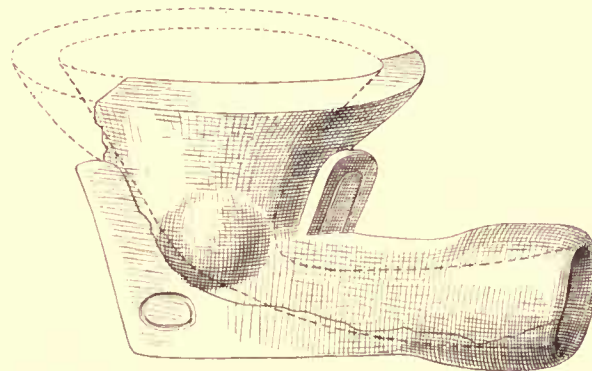


Fig. 11.

remains was an inverted imperforate vessel with flaring rim and encircling band of complicated decoration. The ware is of excellent quality. Height, 4.75 inches; diameter of rim, 4.25 inches; of body, 5 inches (Plate I, Fig. 1).

Two undecorated vessels of poor material, of about 3 pints and 1 pint capacity respectively, lay together about 2 feet distant from a skeleton on the same level. The smaller vessel, irregularly oblong, unfortunately received a blow from a spade. The larger, a bowl of ordinary pattern, was broken by pressure of sand. Both have been completely restored.

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Scattered fragments belonging to two earthenware tobacco pipes were recovered some little distance apart, and subsequently reunited as shown in Figs. 10 and 11. One is still coated interiorly with carbonized material, probably tobacco. Tobacco pipes of this type are figured by the late C. C. Jones as coming from a mound on Colonel's Island on the Georgia coast.¹

SHELL.

With various burials were five drinking cups of shell (*Fulgur perversum*), two imperforate, three having round and even perforations in the base. These holes were much more carefully made than those made by roughly knocking out a portion, so frequently found in the Florida mounds. This perforation, the reader will recall was an aboriginal custom obtaining in Florida though not universally practised. It is supposed to have been done to "kill" the vessel, thus freeing its soul to accompany that of the departed into the other world. We have found no perforation of shell drinking cups north of Darien.

Shell beads were not numerous and were present in but two cases.

Near the margin, together, were seven fresh-water mussel shells (*Unio Cuvierianus*, Lea²) and nearby, a number of marine shells (*Littorina irrorata*²). These apparently, were not in the neighborhood of human remains.

STONE.

Ten inches below the present surface of the mound was a beautifully polished little hatchet of plutonic rock,³ apparently unassociated. Another larger hatchet was found superficially. Several pebbles lay with burials or loose in the sand.

MISCELLANEOUS.

Beneath the base of the mound, with human remains, was the lower portion of the femur of a bear, evidently separated by a cutting tool.

In a portion of the trench made previous to our investigation, which had been partially filled, were various objects of recent manufacture: a rusty pocket knife; a fragment of glass; the head of an iron hammer; an iron ring, etc. A hasty or unscrupulous investigator could easily refer these objects to the period of construction of the mound.

Mound C. In the same field, about 300 feet east of Mound A, was a mound 2 feet 9 inches in height. Its diameter of base was 34 feet.

A small and superficial trench had previously been made through a portion of it. The mound was completely dug through.

Seven entire skeletons were met with in addition to a few loose bones disturbed by the makers of the previously mentioned trench. All skeletons were apparently lying flexed on the side, and all but one were buried with coverings of bark or wood

¹ C. C. Jones, "Antiquities of the Southern Indians."

² Identified by Prof. H. A. Pilsbry.

³ We are indebted to Dr. E. Goldsmith for determinations of rock, included in this report.

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which dropped into small pieces upon removal. In some cases the covering of wood was simply thrown over. In one instance, however, in the case of a child buried 2 feet deep beneath the extreme southern margin of the mound which at that point was about on a level with the surrounding territory, the skeleton was covered by a coop 26 inches in length, 14 to 16 inches in breadth, lying northeast and southwest. In this case the top consisted of flat pieces placed transversely and not of logs laid longitudinally as in the case of the coop in Mound B.

Beneath one burial was a thin layer of ashes, while another was surmounted by a layer of oyster shells, 6 to 8 inches in thickness.

No artifacts were present with the burials. A few sherds lay loose in the sand. Superficially and near no human remains was a copper bead apparently of European manufacture.

The curious burials present in Mounds B. and C. in Lawton's field, where skeletons were enclosed in pens, must not be considered as representative of the coast since nowhere else have they been met with by us. We have it on excellent authority that in mounds farther up the Altamaha this form of burial was in vogue.

TOWNSEND MOUND, MCINTOSH COUNTY.

This mound, about one mile east of Darien, was placed at our disposal by Mr. J. S. Townsend, of Darien, the owner, to whom our cordial thanks are tendered.

The mound, which, it is believed, had sustained no previous investigation, is reported to have been under cultivation in ante-bellum days, and at that time, to have been ploughed over for considerable periods.

Its present height is 3 feet 8 inches; the diameter of its circular base, 42 feet.

With the exception of a few square feet surrounding two live oaks on extreme marginal portions, the mound was completely dug through.

The mound was composed of yellowish-brown sand, without stratification. In various parts were layers of oyster shells. In the central portion was an irregular layer of these shells, 3 feet in thickness at places. Occasionally, near human remains, were pockets of sand dyed pink or red, with hematite.

HUMAN REMAINS.

This mound, a perfect charnel house, teemed with skeletal remains from margin to center, human bones being met with at fifty-nine points, and it probable that these interments represented the remains of fully seventy-five individuals.

Interments varied as to depth from .5 of a foot to 4.5 feet from the surface.

Three forms of burial prevailed: cremation, the bunched burial and the burial in anatomical order. Deposits of portions of human bones, charred and calcined by fire, were noted at five points in the mound. Once charred remains lay associated with many bones unaffected by fire. We shall refer to this farther on.

In all, 18 bunched burials were present, some representing parts of but one individual, others being layers of bones in absolute confusion, one such having a

CERTAIN ABORIGINAL MOUNDS OF THE GEORGIA COAST. 21

length of 3.5 feet, a breadth of 22 inches, a thickness of 8 inches. In several of these layers five or six crania were present. With one layer was a mass of calcined human remains to which reference has been made.

In each case burials in anatomical order showed flexion to a certain extent—in certain cases to a much greater extent than in others. No uniformity of direction had been observed as to the positions of the skeletons—crania pointing to every point of the compass. Twenty-six skeletons lay upon the right side, eight upon the left. One lay upon the back with legs flexed to the left; another upon the back, had the face turned to the left. The position of one skeleton in caved sand was undetermined.

The bones in this mound, perhaps owing to the presence of shell, were unusually well preserved, offering a marked contrast to skeletal remains in many Florida mounds from which frequently all intermixture of shell is absent.

In no instance did the remains indicate individuals of unusual size. The linea aspera was not especially defined. One platycnemid tibia had an index of .54, which, as the reader will recall, means that the transverse diameter is .54 of that taken antero-posteriorly. No signs of injury or disease were present with the exception of alveolar abscesses. Three crania were preserved in fairly good condition. Two of these (Cat. Nos. 2,156 and 2,157) are in the collection of the Academy of Natural Sciences of Philadelphia. The remaining one was sent to the Army Medical Museum, Washington.

HUMERI.

	Male.		Female.		Uncertain.	
	Perforated.	Not Perforated.	Perforated.	Not Perforated.	Perforated.	Not Perforated.
Right	4	15	3	2	3	11
Left	6	11	3	1	5	8

Of the 10 male skeletons in which both humeri were recovered in a condition for determination, 7 showed no perforation in either humerus; two skeletons showed the right humerus perforated, the left imperforate; in one skeleton the condition was reversed.

Of the 2 female skeletons recovered, one had the right humerus perforated, the left imperforate; the other, perforation of both humeri.

Of the uncertain humeri but one pair, the left perforated, the right imperforate, belonged to the same skeleton.

ARTIFACTS.

Earthenware.—No earthenware vessels were present in the mound nor were sherds associated with human remains. A small number of sherds, probably

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accidentally introduced, plain, with the ordinary square stamp, with intricate stamped decoration and in one case, incised, were present.

Eight tobacco pipes, whole or but slightly broken, of the same type as those from the mound at Darien, came from different points in the mound. They lay in immediate association with human remains, as in fact, did all artifacts discovered, save only the sherds. Of these tobacco pipes, two of which we show in Figs. 12 and 13, one had incised decoration while several had encircling bands upon the

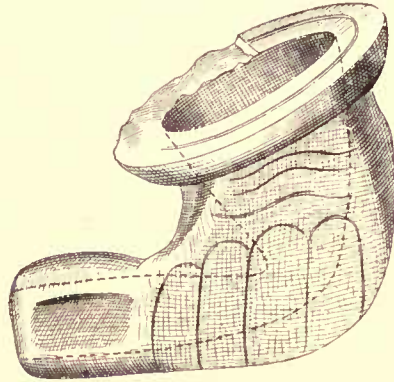


Fig. 12.
Tobacco pipes of earthenware. Townsend Mound. (Full size.)

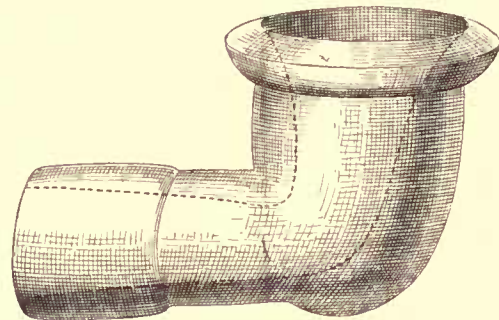


Fig. 13.

bowl. All were moderate in size, differing markedly from the great tobacco pipes from the mounds of Duval Co., Florida. In the bowls of some remained carbonized material—doubtless tobacco.

Shell.—With numerous burials were shell beads, at times a few only and again in considerable numbers; some minute in size, others—sections of columellæ—over 1 inch in length. Nineteen of these longitudinally perforated sections were found with one burial.

Eleven pins of shell of the familiar type, none over 2.5 inches in length, were with various crania, often with shell drinking cups. These drinking cups were imperforate. One, with the skeleton of a child, was but four inches in length. We have not met with so diminutive a shell drinking cup before.

A number of fresh-water mussel shells (*Unio Shepardianus*),¹ perforated for suspension, lay with other objects near a skeleton.

With a bunched burial 2 feet from the surface, were five implements wrought from columellæ of *Fulgur carica*, ground at the beak doubtless to serve as chisels. In four the spire remained, from the fifth this portion had been removed.

Stone.—Three small polished “celts,” each about 2 inches in length, two about double that size and a fine chisel 10 inches in length, with a maximum breadth of 3 inches, a maximum thickness of .9 of one inch, lay with human remains.

Two discoidal stones, each about 1.75 inches in diameter, one .75 of an inch in thickness, the other a little over 1 inch, were found separately with human remains. This is the southernmost occurrence of the discoidal stone in our investigations.

¹ Identified by Prof. H. A. Pilsbry.

But one arrowhead came from the mound.

Two bits of soapstone lay separately with burials.

A number of pebbles, each about 1 inch in diameter, were with several skeletons, and a considerable number, each about the size of a pea, doubtless formerly enclosed in a turtle shell to form a rattle, were met with together near a burial.

Several bits of chert, fragments of hatchets and one-half of a good-sized pebble of quartz were variously associated.

Glass.—A considerable number of glass beads lay with a burial two feet from the surface.

Miscellaneous.—A bit of plumbago, also a mass of bitumen, came from the mound, and ordinary piercing implements of bone were with two interments.

ASSOCIATION.

To give an idea of the association of various objects present in the mound we shall describe certain burials and the objects found with them.

One foot from the surface, with a skeleton, were the nineteen large shell beads already referred to; a saw apparently of a diminutive saw-fish and a bit of chert.

Another skeleton, with sand tinged red near the cranium, had five shell pins almost in contact with the skull, and eighteen large beads of shell.

A skeleton having a thin layer of oyster shells immediately above it, had associated several piercing implements of bone and one arrowhead of chert.

With a bunched burial, contiguous to a confused mass of human bones, around the skull, were a few shell beads, many beads of glass, and one minute piece of copper or of brass, of about the area of twice that of the head of a pin. It was carbonated through and through.

With a bunched burial, 2 feet from the surface, were three tobacco pipes, two slightly broken; four pebbles; three piercing implements of bone, and five cutting implements of shell.

The reader will bear in mind that these objects described as associated are not additional artifacts but have previously been referred to separately.

REMARKS.

We have noted the presence of glass beads at one point in the mound. The burial with which they lay had no appearance of being intrusive. Unfortunately, the height of the mound was such that one can draw no conclusion as to the period of the burial on account of its comparatively superficial character.

PASSBEY MOUND, McINTOSH COUNTY.

This mound, in the yard of Mr. Frank Passbey (colored) is in the suburbs of Darien, about 1 mile northwest of the town proper. It had been under cultivation but no previous investigation was apparent.

Its present height is 5.5 feet; the diameter of its base, 48 feet. The mound was about one-half dug through. It was composed of yellowish-brown sand with

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a band of sand about 3 inches thick running about 1 foot below the level of the surrounding territory.

Human remains were encountered at eleven points. In each case but one, where incineration had been practised, burials were in anatomical order, flexed and lying on the right side or on the left side with no uniformity of direction. Several marginal burials were considerably below the blackened stratum, to which reference has been made, and in each case the stratum was disturbed, showing the burials to have been made subsequent to the extinction of the fires.

Several burials in the mound showed partial disturbance, and at these points the sand was less solid than elsewhere, probably through removal of trees when the mound was cleared for cultivation.

With the interments were no artifacts whatever. Loose in the sand were four or five sherds, undecorated or with the usual square or diamond-shaped stamp. The only other object of human origin, present in that portion of the mound excavated by us, was an arrowhead of quartz. This, so far as our experience extends, is the southernmost occurrence of this material in use for a lance-head or for a projectile point.

MOUNDS NEAR "THE THICKET," MCINTOSH COUNTY.

About 5 miles by land, or about 12 by water, in a northeasterly direction from the town of Darien, is a settlement on Peace Creek, having no general name, either locally or on the chart, but, with the exception of certain homes of colored people, it is composed of various estates, each having a name of its own, such as "The Forest," "The Thicket," etc. As the boat landing is situated on the estate known as "The Thicket," we shall, for convenience, give that name to the entire settlement.

About three-quarters of a mile in a westerly direction from the landing at "The Thicket," on the property of Mr. Mansfield, of Darien, are three mounds about one-quarter of a mile apart. All are symmetrical and vary in height from 5 to 7 feet. Two of these mounds were investigated, though not demolished. Their diameters of base are about 40 and 50 feet respectively. They are composed of yellow sand unstratified, and having that raw look indicative of absence of organic matter. The smaller mound yielded absolutely nothing, with the exception of a flexed skeleton near the surface at the margin, which we took to be intrusive, and some charred bones with several small shell beads, two or three inches below the surface.

The larger mound was not excavated in our presence though experienced persons were in charge. Fragmentary human remains were reported as present at two points and these also we take to have been intrusive. With the exception of a few small bits of earthenware and one arrowhead loose in the sand in the larger mound, no artifacts were met with.

Within sight of a road at "The Thicket," on the property of Mr. H. S. Ravenel, of Darien, was a symmetrical little mound of brownish sand, 3 feet 5 inches in height and 30 feet across the base.

It was totally demolished.

In the northwestern margin, 33 inches below the surface which was there just above the surrounding level, was a layer 4 feet by 3 feet by 10 inches thick, of oyster shells and sand completely blackened by an admixture of charcoal. With this blackened sand was considerable other sand dyed red with hematite. This curious layer formed the bottom of a pit as was clearly shown by undisturbed sand of a different color on either side. Closest scrutiny failed to reveal human remains or artifacts in this peculiar pit.

About the center of the mound, 2 feet from the surface, was a bunched burial with two crania and a variety of other bones. In association was a great quantity of powdered hematite scattered among many oyster shells.

Four feet down beneath the central plateau, directly beneath the burial already referred to, was a confused mass of human bones including 27 crania, about 5 feet by 6 feet by 10 inches thick. The oyster shells and hematite lying beneath the bunched burial formed a covering for this mass of bones. With the bones was a small discoidal shell bead and a tubular bead of shell about .75 of an inch in length.

A few sherds lay loose in the sand throughout the mound.

On Mr. Mansfield's property at "The Thicket," about one-half mile in a westerly direction from the landing, on the edge of the road and opposite the church, was a symmetrical mound 2 feet 9 inches in height and 30 feet across the base. No previous investigation was apparent.

It was totally demolished.

The mound, which was composed of yellowish-brown sand, contained no oyster shells. Scattered bits of charcoal and one local layer of charcoal were present.

Human remains were in the last stage of decay. Apparently in all but three cases the bunched burial was represented. One skeleton lay in anatomical order and two pockets of calcined human bones were centrally situated 4 feet from the surface, immediately on a layer of sand blackened by fire and by intermixture with charcoal. In all, fragments of 13 crania were noted in the mound.

Nine inches down apparently near no human remains, were, the shaft of a bone of a lower animal, longitudinally grooved; a number of fragments of columellae of marine univalves, and a mass of stone of volcanic origin about 2 inches by 1.5 inches by .5 of an inch, deeply grooved on one side and grooved to a certain extent on the other. This stone had, in addition, been used as a hammer as a portion involving the groove, had been split off.

With a skeleton at length, to which reference has been made, near the cranium, was a portion of a disc of copper carbonated through and through. Immediately beneath the cranium were 246 small chips of chert. This skeleton lay 3 feet from the surface.

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About nine inches down, with sand colored with hematite, which was present with certain other burials in the mound, were a few small bits of chert; several small shell beads and parts of two copper discs each about 2.3 inches in diameter and having three concavo-convex concentric circles by way of ornamentation. On one side of each was the usual wood or bark.

Reference has been made to a black band of sand running through the mound. This layer .75 of one foot in thickness, was, at the center of the mound, 4 feet from the summit, or 1 foot 3 inches beneath the surrounding level. In close proximity to one of the pockets of human bones which we have noted as lying in this blackened sand, was an imperforate vessel of very thick and heavy ware; length, 8 inches, maximum width, 3.1 inches, height, 1.8 inches, consisting of three compartments joined longitudinally very much in the same style as the vessel figured by us as coming from the Monroe Mound¹ in Florida. Vessels of this character are supposed by some to have been used for paint, the separate compartments holding different colors.

A sheet of mica about 3 by 2 inches was found in caved sand.

A few sherds, possibly half a dozen, were scattered throughout the mound.

An irregularly shaped mound about 5 feet in height, mainly composed of shells, on the property of a colored man named King, was dug into without result.

MOUND AT SHELL BLUFF, MCINTOSH COUNTY.

Shell Bluff on Shell Bluff creek, approximately three miles by land and six miles by water, from Crescent, is the property of George E. Attwood, Esq., who kindly placed at our disposition a mound in a cultivated field near his residence.

This mound, reduced by years of ploughing, scarcely rose above the general level. It was distinguished by the paucity of oyster shells upon its surface, which lay more thickly on certain other portions of the field. It being impossible to arrive at any conclusion as to the exact area containing burials, a semicircle was taken with radii of 46 feet converging at a point seemingly the most prominent of the slight elevation. This semi-circle, including what we took to be the eastern half of the mound, was carefully dug through. The remaining portion of the mound apparently had not been used for interments beyond a few feet from the cross-section and after 26 feet of it had been dug through, without material result, the work was abandoned.

The mound was composed of yellowish-brown sand with the usual layer of surface loam above. There was no marked base line nor any stratum of oyster shells in the mound, though several pits containing burials, extending into undisturbed sand, were filled with them.

This mound, Mr. Attwood informed us, had been dug into by him at one spot, the result being a discovery of three vessels of earthenware filled with charred and

¹ Certain Sand Mounds of Duval County, Florida, Plate LXXIII, Fig. 2, Journ. Acad. Nat. Sci., Vol. X.

calcined fragments of human bones and covered with other vessels inverted. Owing to this previous investigation and the obvious reduction in height of the mound, a detailed description of the contents will not be given.

Sherds were not numerous and none with the complicated stamp was met with. Loose in the sand was a large pebble-hammer of circular outline.

The mound, not greatly above the water level, was unusually moist; and human remains, which were encountered 31 times, were, as a rule, when not calcined, in very poor condition. The usual diversity of form of burial was present, including that in anatomical order, the bunched burial, inhumation of parts of skeletons, pockets of calcined remains and cremated fragments in cinerary urns. We append certain burials seemingly worthy of record, including all associated with any artifacts.

Burial No. 8. Nineteen feet east of the point taken as the center, and about 1 foot 9 inches below the surface, was a layer of charcoal and charred wood about 3 inches thick. It was 4.5 feet across and extended in 28 inches. Above a portion of it was a thin layer of oyster shells. Beneath the center of the layer of charcoal, which was entirely unbroken, were the two bones of a forearm of a child, showing no signs of fire. With them was an imperforate drinking cup of shell, so carefully ground exteriorly that all prominent parts had been removed.

Burial No. 12 A. A comparatively small vessel of about two gallons capacity with a checked stamp decoration, crushed into small fragments. It had contained many pieces of calcined human bones. The record of its exact position was overlooked.

Burial No. 14. Sixteen feet E. by N., on the base of a pit containing numerous oyster shells, 16 inches from the surface, was the skeleton of a male flexed on the right side, heading S. by W. The cranium, an exception to the almost universal rule in this mound, was well preserved and showed a marked artificial flattening of the frontal bone. It was sent to the Army Medical Museum, Washington, D. C.

Burial No. 16. Twenty-one feet N. E. by N., 2 feet down, was a partially flexed skeleton of a male on the right side, heading N. W. by W. With it were two pebble-hammers, one, of quartz, about 3.5 inches in length, shows considerable use on one end as a hammer, while the other had been roughly chipped to a cutting edge, a feature new in our mound investigation.

Burial No. 20, B. C. D. E. Fourteen feet E. by N., on the same level, their bases 2 feet 9 inches from the surface, in line, were three vessels. The one to the left (C), imperforate, undecorated, somewhat resembling a bell-jar in shape, was almost intact, and contained to within 6 inches from the surface, a mass of fragments of calcined human bones (Plate II). This vessel, which had a diameter at mouth of about 8 inches, a maximum diameter of 10.5 inches and a height of 10.5 inches approximately, was completely covered by an undecorated jar (B), which fell into small fragments upon removal. In contact with C was a gracefully shaped vessel (D), imperforate, undecorated and entirely intact (Plate III). Approximately, it measured 7.5 inches in height, 7.5 inches across the mouth, and 9.5 inches maximum

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diameter. Within it were a certain number of calcined fragments of human bones. In contact with D was a bowl (E) in fragments. It bore the checked stamp decoration, and apparently contained no human remains, though immediately behind it was a small pocket of calcined fragments.

Burial No. 21. Ten feet S. E., skeletal remains disturbed by the plough. Below the chin were several large shell beads in line and a number of small ones.

CREIGHTON ISLAND, MCINTOSH COUNTY.—NORTH END.

Creighton Island, bounded on the north by the Sapelo river, a branch of Sapelo Sound, has on the northern portion, on such parts as were examined by us, great fields long under cultivation. Scattered through these fields are numerous shell-

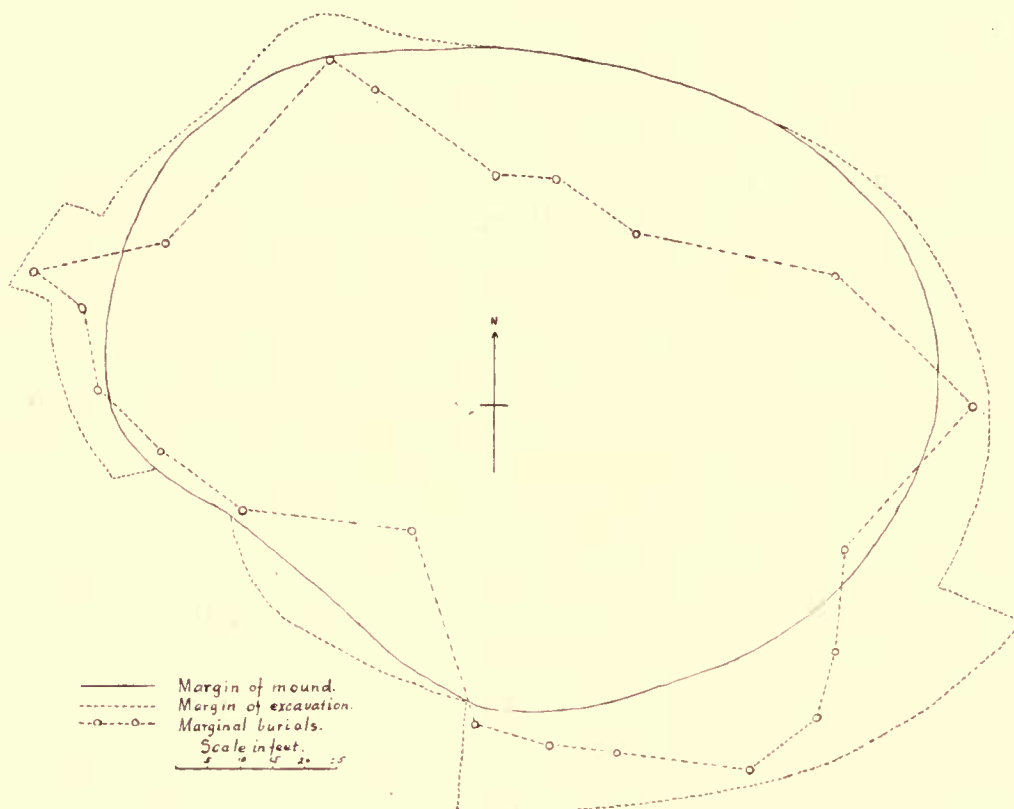


Fig. 14.—Diagram of mound at north end of Creighton Island.

heaps not greatly above the general level. Abundant sherds with incised decoration and with complicated stamp are scattered over the surface in every direction. All this interesting territory was cordially placed at our disposition by George E. Attwood, Esq., of Shell Bluff, near Crescent, Georgia, the owner, whose mound at Shell Bluff has already been described by us.

About one mile S. E. by E. from the landing was a mound, or rather an irregular ridge, extending about N. W. and S. E. a distance of 116 feet. Its maximum width at base was 100 feet approximately. Scattered oyster shells lay over the



CERTAIN ABORIGINAL MOUNDS OF THE GEORGIA COAST. 29

surface. Its height,¹ which attained its maximum at the central part, was 34 inches. Disturbed sand at this point extended 38 inches beneath the general level, as we afterwards learned on the total demolition of the mound, which was carefully sliced down and much adjacent level territory dug through. The diagram (Fig. 14) shows the outline of the mound, the outlying territory dug through and the area in which burials were met with, which included, we believe, all having any connection with the mound.

There had been no previous investigation, the nature of the mound being unknown even to the owner.

COMPOSITION OF MOUND.

The mound was composed of yellowish-brown sand lying upon undisturbed sand of a bright yellow color. The usual fire places and fragments of charcoal were present at various points. A dark band ran, off and on, through the mound at about the level of the surrounding territory. It presumably marked the base, but was so broken and so irregular that but little could be determined from it.

Oyster shells in layers and in pockets were locally present but so irregular were the deposits that none but a general description of them can be given. The southern half of the mound proper showed no shell save in small local pockets until at a distance of 23 feet from the center in a southerly direction, where a deposit of considerable extent began, continuing about to the center. This deposit was somewhat undulating in shape, at times almost reaching the surface, and again dipping one or two feet below it. Sixteen feet from the center the deposit divided abruptly leaving a space 8 feet broad filled with sand. Shell continued 18 feet to the west and 7 feet to the east of this interruption. The western deposit, reaching to just beneath the surface loam, was 3 feet thick. Its side adjoining the sand was perpendicular. The eastern deposit had an average thickness of 1.5 feet, its western margin, however, contained a considerable pocket of sand extending down from the surface. This division of the shell layer was doubtless caused by a pit dug through it, as several burials were present in the sand. A few feet farther in, the layer reunited, having then a total length of 34 feet. This layer, disappearing toward the center of the mound, gave place to two others in the eastern and western portion of the mound, each of considerable length, which ran out after continuing a few feet toward the north. Other layers of shell in the northern portion of the mound were local and restricted as to size.

About the center of the mound was a pit (see section, Fig. 15), about 5 feet 8 inches in diameter, of the type prevalent among the sea-islands and upon the neighboring mainland. Upon its base, 6 feet 10 inches from the surface (it may be as well to describe the burial in connection with the pit), was a layer of fragments of calcined human bones, 6 inches in thickness, with many large shell beads. Upon this layer were about 2 feet 8 inches of dark yellow sand surmounted by about 3 feet 8 inches of oyster shells. At the western upper extremity of the pit

¹ Long continued cultivation must have considerably impaired the original height.

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was a layer of oyster shells, almost superficial, 2 feet in thickness. The eastern upper margin would have contained a similar deposit had it not been that a pit of sand, 2 feet 4 inches across had been let into the shell at that point.

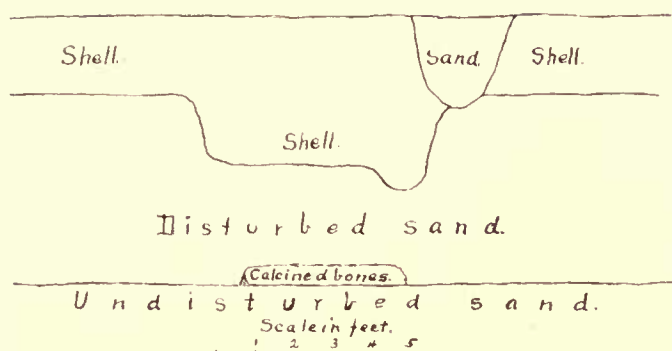


Fig. 15.—Diagram of central pit. Mound at north end of Creighton Island.

While various pits were present in this mound, in no mound investigated by us have they been so difficult to distinguish exactly. This arose partially from the considerable size of some, but mainly from the fact that but few extended into the bright yellow undisturbed sand beneath the base, and that the others in the disturbed sand, having been filled with homogeneous material, offered no distinct line of demarcation.

Beginning in the level ground and extending a considerable distance along the western marginal portion of the mound, was one of those great excavations filled with dark loam and refuse, and containing no burials, so often found in mounds of this type and for whose existence we have no explanation to offer save that possibly great pits made to furnish material for the mound were allowed slowly to fill during the occupation of the territory. The sand and loam filling pits of this class are always far darker than the sand of the mound which they adjoin.

HUMAN REMAINS.

In seven cases layers of decayed wood or bark, occasionally showing marks of fire, lay above human remains, and in two cases, above and below. Doubtless similar deposits in many other cases had disappeared through decay. It is interesting to note in this connection that a Yamaeraw Indian (the Yamaeraws lived near Savannah) dying in London during a visit in 1734, was interred by his companions, strapped between two boards¹—a survival of an ancient custom.

Human remains were present at every depth in the mound proper, and in certain outlying territory, at 262 points as follows:

220 skeletons.

10 pockets of calcined fragments of human bones.

6 urn-burials of uncremated remains of infants.

3 bunched burials.

¹“Antiquities of the Southern Indians,” p. 185.

13 parts of skeletons disturbed by aboriginal pits.

7 fragmentary skeletons, in caved sand, disturbed by the plow, etc.

3 skeletons in the last stage of decay.

Skeletons.—Of the 220 skeletons the following subdivision as to sex may be made, prefacing it with the explanation that, under the head of uncertain sex are included such skeletons whose characteristics were not sufficiently marked for determination; and such others, mainly from pits in the damp sand, whose advanced state of decay made a definite conclusion impossible:

78 males.

16 adolescents.

64 females.

12 children.

47 uncertain.

3 infants.

These skeletons lay in the following positions:

166 flexed on the right side.

32 flexed on the left side.

7 partially flexed on the right side.

6 partially flexed on the left side.

2 with extremities flexed and trunk on back.

2 extended at full length.

1 semi-reclining.

1 body on back, thighs flexed to either side.

3 infants disturbed by our men in digging.

The two skeletons buried at full length on their backs were 2 feet and 2.5 feet from the surface, respectively. The condition of the bones of both was exceptionally good but one cannot base final conclusions upon the state of preservation of bones. The arms of one lay along the trunk, while those of the other were flexed to the pelvis. No aboriginal artifacts were present with either, nor, on the other hand, were buttons, coffin-nails, or any like object, discovered though specially careful search was made.

The direction in which the skeletons headed was as follows: 185 were included between the compass points S. E. and S. W., many being due S. Of the remaining 35—21 headed south of the E. and W. points; 4 headed due E.; 1, E. by N.; 1, E. N. E.; 1, N. E. by E.; 1, N. E. by N.; 2, W. N. W.; 1, W. by N.; while the positions of the 3 infant skeletons inadvertently scattered by our diggers, were not determined.

The bones were in fairly good condition though in nearly every case the crania were badly crushed. No fractures were present, a considerable number of diseased bones were met with. Caries of the teeth, practically absent in Florida from other than superficial skeletons, was met with upon a number of occasions. Muscular attachments indicated less powerful individuals than many interred in Florida mounds. No marked platycnemias or pilastered femurs were present with one marked exception. A pair of femurs from an undoubtedly original burial have indices of about 159, which is greater, we believe, than any ever before recorded.¹ This index is

¹ Dr. Topinard has contributed an interesting note on a femur found by us in the mound at Tick Island, Florida. "Certain Sand Mounds of the St. Johns River, Florida," Part I.

arrived at by dividing the lateral into the fore and aft diameter. A tibia of the same skeleton has an index of 51; that is, its lateral diameter is about half of its fore and aft diameter. One of these femurs and the tibia were sent to the Army Medical Museum, Washington. It may interest the lay reader to know that the lateral flattening of the tibia and marked development of the linea aspera of the femur are now known to be the result of muscular action as in walking, running, ascending slopes and the like and not racial characteristics.

Calcined Remains.—The majority of the 10 pockets of calcined human bones were of moderate size, representing in each instance the remains of one individual. Several, however, were considerable layers and contained in addition numbers of loose bones unaffected by fire.

Urn-burials.—Under perfectly level ground, a considerable distance from the slope of the mound, was a vessel of the ordinary type with base perforation (A), upright and capped by an imperforate vessel of the same type, inverted and without a rim (B). Within the upright vessel were the remains of the skeleton of an infant of about 2 years of age. These vessels, both badly crushed, were sent to the Peabody Museum, Cambridge, Mass., where they have been carefully pieced together.

Near the others was a vessel of the same type, a portion of whose bottom was broken, but held in place by sand. It was otherwise intact. In the sand, within the vessel, were particles of bone resembling sawdust, and a portion of the tooth of an infant. This vessel (C) was sent to the Field Columbian Museum, Chicago.

Forty-eight feet E. by S. from the point taken as the center of the mound, was a vessel (D) of the ordinary type, imperforate as to the base, 21.5 inches in height, the maximum ever reported for this type, and having a diameter of mouth of 18.5 inches and a maximum diameter of body of 15 inches. A portion of the rim had been ploughed away and lost. Near the base were certain bones of an infant, judging from the femur. No teeth were present.

Vessel E, of the ordinary type, badly broken by the plow, had a circular piece crushed in, but not removed from the base. It was capped by a decorated bowl (F) crushed to fragments, some of which were held in place by the sand. This vessel has not been included in our list of urn-burials, as the most careful search failed to reveal the slightest trace of skeletal remains; but beyond question, such remains had occupied the urn at an earlier period.

Vessel G had been a bowl of about 4 gallons capacity, with marginal incised decoration surmounting the complicated stamp. Parts had been crushed and carried away by the plow. Beneath it was charcoal. Within it were fragmentary bones of an infant.

Vessel H, imperforate, of the ordinary type, rested upon decayed wood. It contained fragments of bones of a very young infant. Above the body of the vessel, whose rim had been carried away by the plow, were large fragments of earthenware, perhaps the remainder of a surmounting vessel.

Vessel I was represented by the lower portion of the body of a vessel of the ordinary type with base perforation. It contained fragments of diminutive human bones.

Vessel J, of the ordinary type, also had suffered through the agency of the plow. No human remains were discovered though their former presence can hardly be questioned.

The method of urn-burial in this mound presented certain points of similarity to, and of divergence from, that of certain other coast mounds, as the reader later on may remark. All these burial urns lay in the southern and eastern parts of the mound, in which they followed the general custom. They contained the uncremated bones of infants in common with the urn-burials of Ossabaw Island (cremation apart), but differed from the mounds of Sapelo Island where skeletal remains of adults exclusively were in the urns and of St. Catherine's Island where, with but one exception, adult remains were present in the urns.

Aboriginal disturbances.—When parts of a skeleton or skeletons were discovered disarranged adjoining a grave it was inferred that the construction of the grave was the cause of the disarrangement. Great care was taken to distinguish these disturbances from bunched burials.

Canine remains.—The skeleton of a dog, in the last stage of decay, was found unassociated with any human remains. The interment of dogs in mounds of the sea-islands will receive special reference in our account of Mound D, Ossabaw Island.

STONE.

In the mounds of the Georgia coast stone is not abundant. The mound on Creighton Island proved somewhat of an exception to this rule.

Hatchets.—Nine hatchets, or "celts," always with skeletons, were present in the mound, the longest somewhat exceeding 7 inches. All were gracefully shaped and tapered into blunt points opposite the cutting edge, a feature characteristic of southern hatchets and still more pronounced in the "celts" of St. Domingo and neighboring islands. The material was mostly volcanic rock, but as mutilation of the specimen is necessary for exact determination, we have not thought it necessary to specify in each case.

Chisels.—Eighteen chisels from 1.75 to 5.3 inches in length, having a thin longitudinal section, somewhat convex on one side and usually flat on the other, lay at different points with burials. In addition, were five large chisels of graceful design, one a beautiful specimen, of slate, having a length of 12.6 inches, a breadth at the cutting edge of 2 inches, tapering to 1.1 inches at the opposite end. Its maximum thickness is .7 of one inch (Fig. 16). Another chisel, of banded slate, is 8.75 inches long; another, 9.8 inches; and two somewhat smaller.

*Discoidal stones.*¹—Twelve discoidal stones, as a rule with burials, the largest 2.5 inches in diameter, came from the mound. Two were of quartz, ten of volcanic or of sedimentary rocks. One of these, unlike the rest, was a pebble, a portion of whose periphery had been pecked away to confer the circular outline. Certain discoidal stones, some of which are considerably larger than any found by us, are

¹ Discoidal stones are treated at length by the late Col. C. C. Jones.

The latest literature on the subject is to be found in Mr. Gerard Fowke's "Stone Art," Thirteenth Annual Report, Bureau of Ethnology.

supposed to have been used in the Indian game of *chungke* and to have been rolled down a level court. Discoidal stones of lava are used in the Hawaiian Islands in the game of *maika*. It is admitted that many discoidal stones, both on account of their size, which is too diminutive, and because their border slopes so as to interfere with rolling, must have served another purpose, probably in a different game. Those found by us show no wear and cannot have been used as smoothing stones or polishers. Discoidal stones have never been met with by us in Florida.

It is a curious fact that discs, roughly shaped from fragments of earthenware vessels, are frequently found in mounds of the Georgia coast¹ and these doubtless saw service in place of their prototypes in stone. It is interesting to note an aboriginal tendency to lighten labor or to supplement a deficient supply by the use of imitations. In neolithic Europe pendants made from canine teeth of large carnivores and pierced for suspension were imitated in horn and in bone,² while in

the great Shields Mound,³ near the mouth of the St. Johns River, we found many canine teeth used as pendants and imitations of them made of shell. At the present time, the natives of Kings Island, Alaska, sew upon ceremonial gloves used in dancing, beaks of a bird, the puffin (*F. arctica*) and with them, reproductions in wood.⁴

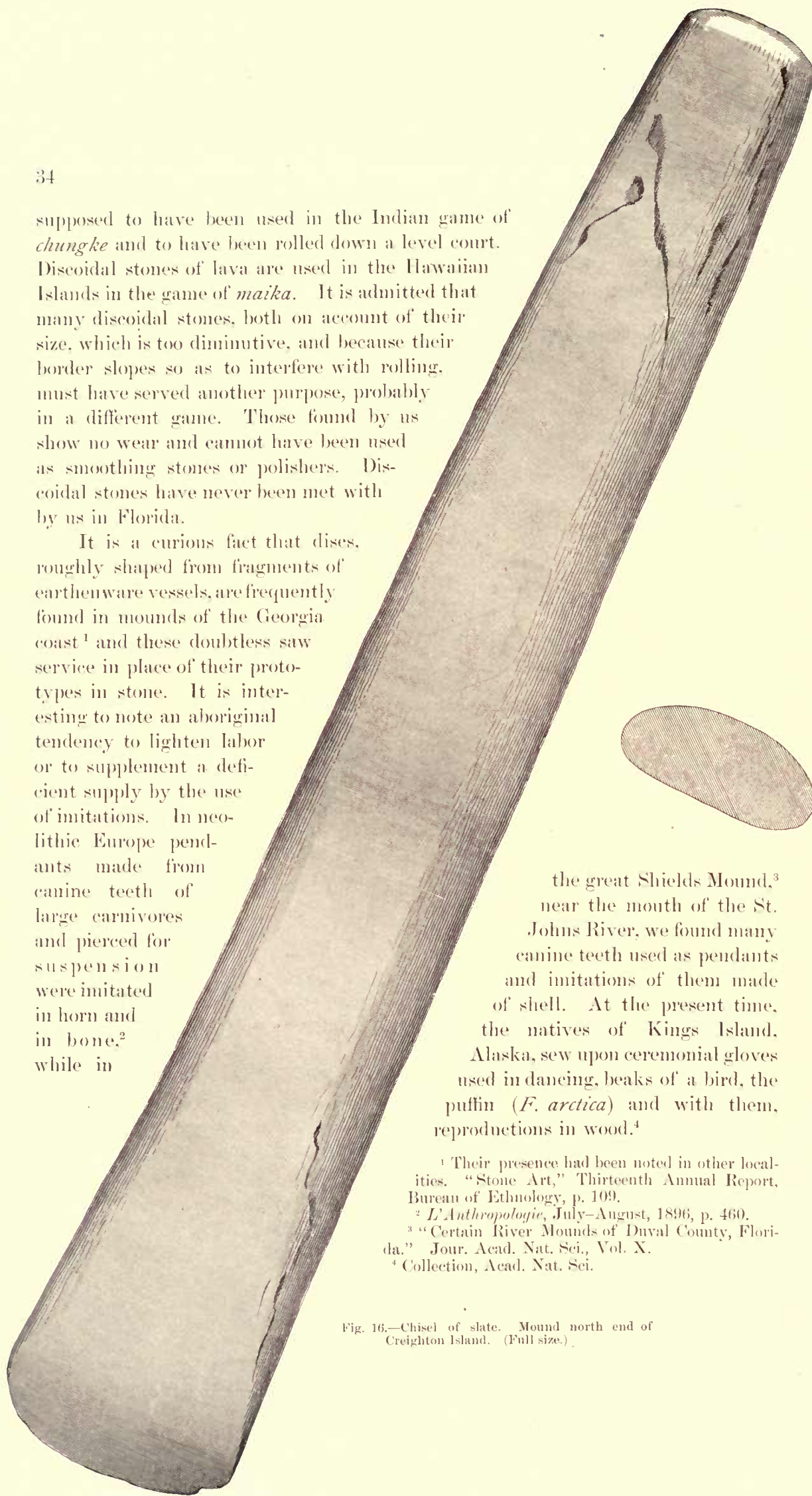
¹ Their presence had been noted in other localities. "Stone Art," Thirteenth Annual Report, Bureau of Ethnology, p. 109.

² *L'Anthropologie*, July-August, 1896, p. 460.

³ "Certain River Mounds of Duval County, Florida," Jour. Acad. Nat. Sci., Vol. X.

⁴ Collection, Acad. Nat. Sci.

Fig. 16.—Chisel of slate. Mound north end of Creighton Island. (Full size.)



Arrow and lance points.—Fourteen lance heads and arrow points were found, of quartz, of chert, and of chalcedony. No lance head exceeded 4.5 inches in length. One had a breadth across the base of 2.7 inches. An interesting deposit of six spike-shaped arrowheads, ranging in length between 1.6 inches and 3.1 inches, were together with a burial.

Miscellaneous.—Throughout the mound were numerous pebble-hammers, 4 lying with one burial.

One pebble, about 3 inches in length, showed a considerable percentage of loss through use as a smoother or polisher. Several other smoothing stones were variously associated.

Several small fragments of soapstone vessels, without any particular shape, had been deposited with the dead. One had a cross hatch decoration.

Two nests of quartz pebbles each about the size of a pea, lay with human remains. These doubtless formed parts of rattles, the covering having disappeared through decay.

SHELL.

In no mound in Georgia or in Florida, investigated by us, have shell beads in any way approached in number those present in the Creighton Island mound, nor have we elsewhere found so large a percentage of burials associated with beads.

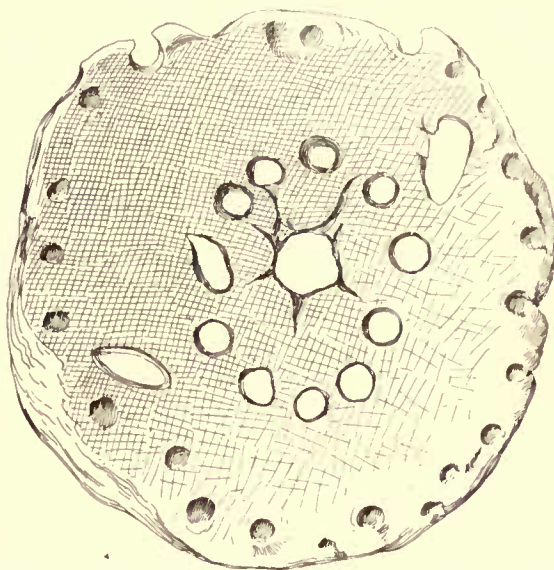


Fig. 17.--Gorget of shell. Mound north end of Creighton Island. (Full size.)

With thirty interments were large beads of shell, while small ones were present with twenty-eight. Certain burials, however, having large and small beads are included in both enumerations. Exclusive of great quantities of small beads of shell of the ordinary pattern, there were present in the mound many hundreds of massive beads having a length of nearly two inches or less. With one skeleton were 63 massive beads, while in a layer of calcined remains, in addition to almost innumerable small beads, were 267 having a diameter of half an inch and upwards.

None of these beads shows trace of fire. Many were large sections of columellæ probably belonging to *Fulgur*. Others were flat, circular or oval and pierced through their greatest diameter, sometimes a perforation 1.3 inches in length. Beads of this character were known as *runtées* and were highly esteemed by the aborigines.

Many skeletons in the mound had twenty or thirty massive beads each, often on the wrists and ankles, and some were so loaded that the mere weight must have been an inconvenience if thus worn in life.

Drinking cups.—Twenty-two shell drinking cups were present in the mound, some inverted, upon crania. All were imperforate. (The northernmost occurrence of base-perforation in the case of drinking cups, in our experience, was at Darien.) The largest cup had a length of 12.5 inches and bore an incised decora-

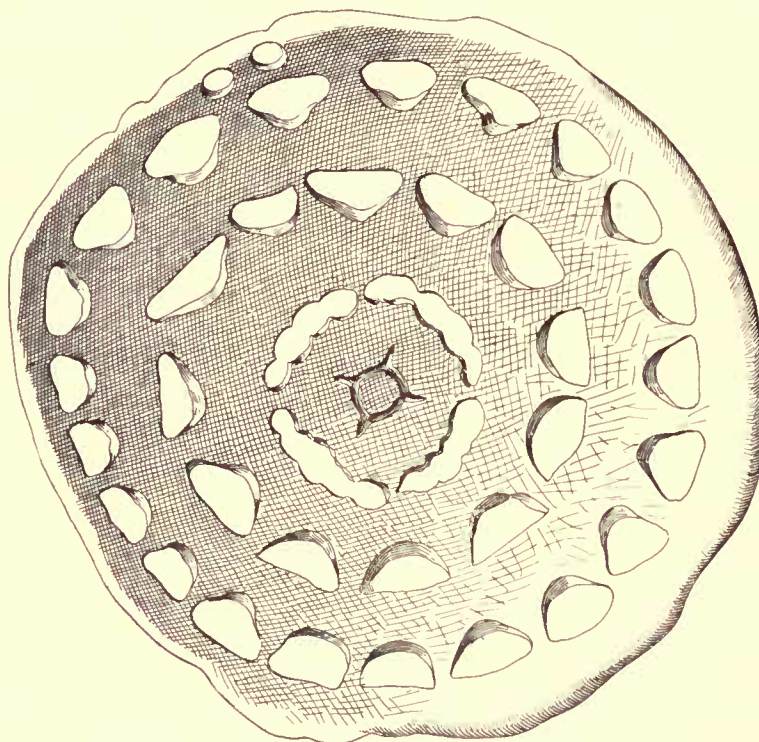


Fig. 18.—Gorget of shell. Mound north end of Creighton Island. (Full size.)

tion, unfortunately almost imperceptible, on a portion of the back. One cup, by the removal of the beak and by external grinding, greatly resembled Tennessee and Missouri vessels of earthenware having the conventional shell form.

Gorget.—With the skeleton of an adolescent was a roughly made gorget of shell, irregularly circular, having a maximum diameter of 3 inches. It is decorated with perforations and semi-perforations as shown in Fig. 17.

With the skeleton of a male, having many objects in association, was a circular gorget, concavo-convex, a shape conferred by the form of the body whorl of the shell used in its manufacture, with a diameter of about 3.8 inches. Its decoration consists of three concentric circles of somewhat irregular incisions around a central four-pointed star. It has a double perforation for suspension (Fig. 18).

Another gorget, found with an infant and shown in Fig. 19, has a diameter of about 2.4 inches. Its decoration, carved and incised, is the rattlesnake. A part of the margin was broken by a blow from a spade.

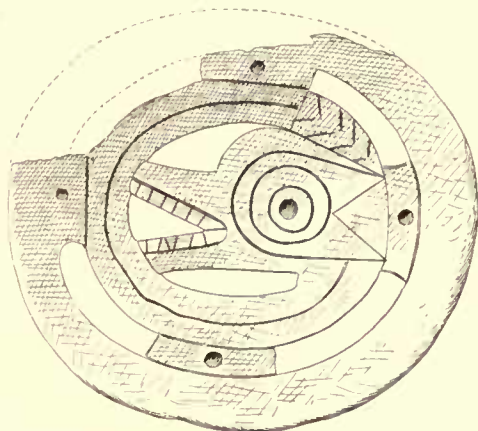


Fig. 19.—Gorget of shell. Mound north end of Creighton Island. (Full size.)

Chisels.—Two chisels, made by grinding beaks of *Fulgur* and removing the body whorl, were present in the mound.

Pins.—Shell pins, probably used in the hair, as they are invariably found near the skull, were met with to the number of sixteen. In length they ranged from 1 to 3.5 inches.

Mussel-shells.—Shells of various species of fresh water mussels were found with a number of interments. In some cases no perforation was present, in others the condition of the shell did not allow determination. In no instance was a perforation found.

Coral.—With the cranium of a skeleton was a mass of coral, 14 inches long, smoothed to the form of a "celt," the cutting edge being rudely formed, as also the blunt point of the opposite end.

PEARLS.

Nine pearls, some larger than a good sized buckshot, perforated for use as beads, were found with a burial, associated with beads of shell. Col. C. C. Jones¹ has written at length on pearls from southern mounds.

BONE.

Several small piercing implements of bone were met with.

With a skeleton was an implement 7.5 inches in length with a flat point, made from a longitudinal section of a long bone of a lower animal with the articular portion removed.

Together, also with a skeleton, were: an implement wrought from the ulna of a lower animal, 6.7 inches long, the articular portion remaining, and having its minor extremity ground to an oblique section, probably for use as a gouge; part of a wing bone of a large bird, with a length of 9.8 inches, the articular portions

¹ *Op. cit.*

removed, having a perforation, through one-half its proximal extremity and around the bone an incised spiral line (Fig. 20); also the upper half of a similar object without decoration.

EARTHENWARE.

Sherds.—Sherds were not abundant in the mound. The complicated stamp and various patterns of incised decoration were represented. About 1 foot from a skeleton were numerous earthenware fragments representing parts of three vessels. One large fragment was decorated exteriorly with large squares, enclosing good-sized circular spots, in red pigment.

Smoothers.—A number of masses of roughly baked clay, one-half the area rounded, in size resembling a goose egg, were present in the mound. They had possibly been used to smooth clay in the manufacture of earthenware.

Hones.—A curious custom markedly prevalent along the Georgia coast, namely, the use of earthenware to sharpen pointed tools, was fairly represented in this mound. This custom, perhaps induced by a short supply of stone, was carried to such an extent that not sherds alone but certain entire vessels were secondarily used as hones.

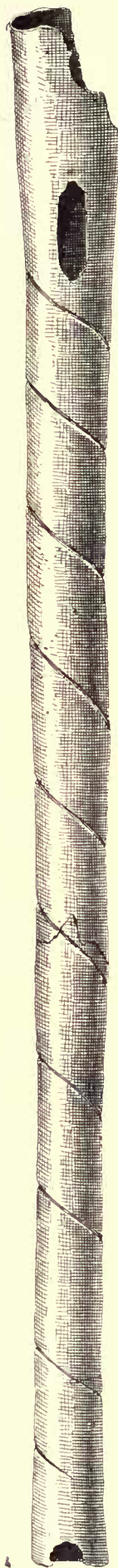
Earthenware discs.—Certain discs made from fragments of earthenware vessels were found. We have spoken of these curious objects in treating of discoidal stones. They are referred to by the late Col. C. C. Jones.¹

Tobacco pipes.—Nine tobacco pipes, with one exception undecorated, in shape of the type common to the coast were found, usually with burials, but upon several occasions apparently unassociated. Several are fragmentary to a certain extent and a number bear upon the stem or upon the bowl, and sometimes upon both, curious depressions caused by chipping, and equalling in size about one-half the area of one surface of the first joint of a finger. These chippings on pipes, found all along the coast, have, perhaps, some ceremonial significance, or were made to allow a firmer grasp with the fingers. In a number of bowls was a carbonized coating—doubtless tobacco. At first thought one might consider this a proof of recent inhumation, but the indestructibility of carbon is well known.

Near the surface, and unassociated, was a pipe having approximately a height of bowl of 2 inches and a diameter of bowl at the mouth of 2.2 to 2.4 inches. The bowl is strikingly ornamented with knobs, while from the proximal upper margin is a perforated projection. On the opposite side are traces of a similar one (Fig. 21).

¹ *Op. cit.* p. 348.

Fig. 20.—Object of bone. Mound north end of Creighton Island. (Full size.)



Colonel Jones figures¹ a somewhat similar pipe and describes it as coming from a mound near Macon, Ga.

We show (Fig. 22) another neat little tobacco pipe from this mound.

Vessels.—A detailed description of vessels used, or probably used, for interments has been given. Excluding these, there were present in the mound seven vessels of earthenware. With two exceptions, all these, and all the burial jars, were found in the southernmost half of the mound.

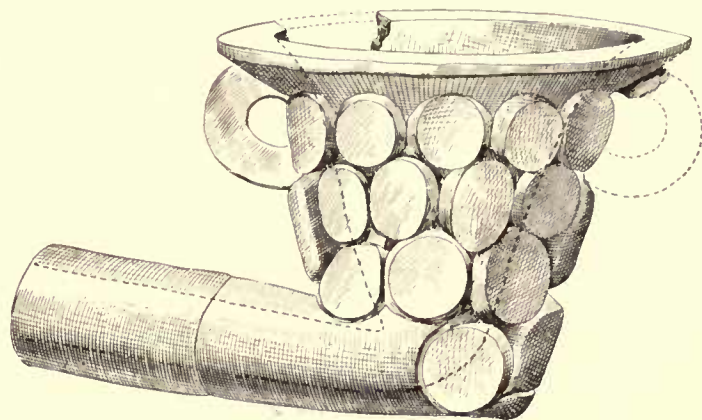


Fig. 21.—Tobacco pipe of earthenware. Mound north end of Creighton Island. (Full size.)

An undecorated bowl, of about one quart capacity with a kidney-shaped section, lay with the body of an infant. It was imperforate as to the base, as were all the seven under description.

With human remains, on the bottom of a grave-pit extending below the base of the mound, were two vessels. The larger, of black ware, had an ovoid body

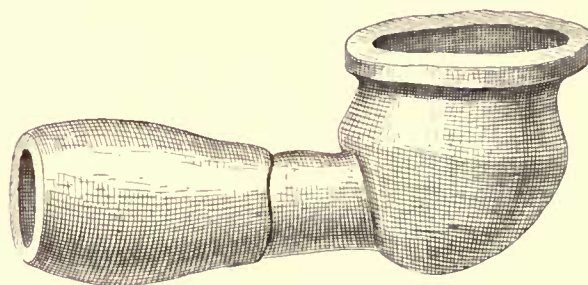


Fig. 22.—Tobacco pipe of earthenware. Mound north end of Creighton Island. (Full size.)

flattened at the base, with an upright neck rising from a slight depression in the body and flaring somewhat toward the margin. This vessel, which fell into many fragments upon removal, was successfully pieced together. Approximate measurements: maximum diameter of body, 5.6 inches; maximum diameter of mouth, 4 inches; height, 6.4 inches; height of neck, 2 inches. A cinerary urn of this type, though much larger, is figured in this Report as from the Walker mound.

¹ *Op. Cit.*

The second vessel, somewhat smaller, of yellow ware, was of the same type, but hopelessly disintegrated.

With human remains was an urn having a globular body, a constricted neck and flaring rim. It was decorated with two encircling rows of button-like prominences. Height, 5 inches; diameter of body, 5.3 inches; diameter of mouth, 5.6

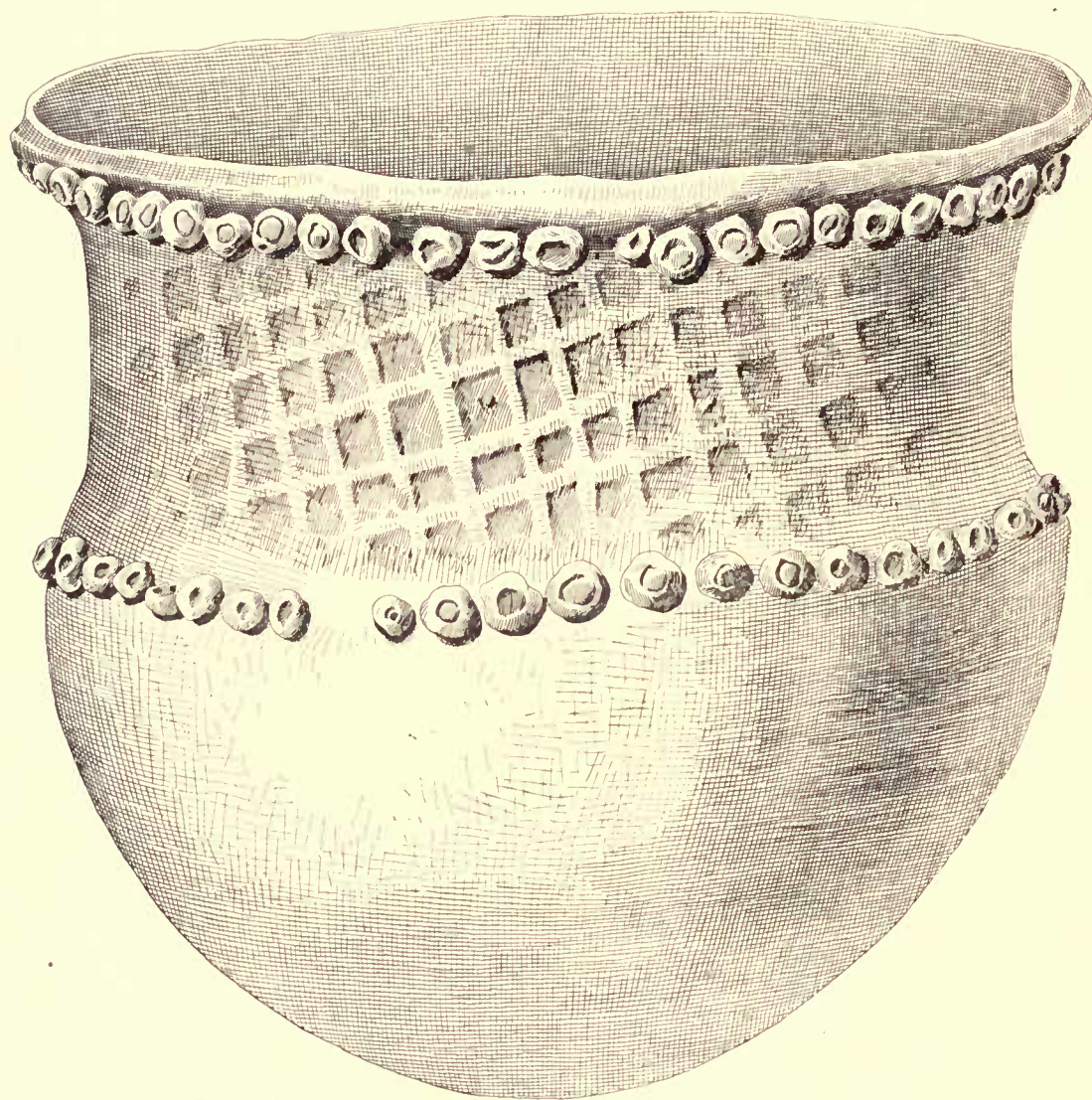


Fig. 23.—Vessel of earthenware. Mound north end of Creighton Island. (Full size.)

inches (Fig. 23). An almost similar vessel, in fragments, came from another portion of the mound.

With human remains was a vessel of black ware, undecorated, having a bowl-shaped body flattened at the base, a wide cylindrical neck with a slight flare at the margin, rising perpendicularly. Diameter of body, 6.1 inches; diameter of mouth, 5.2 inches; height of neck, 3.7 inches (Plate IV).

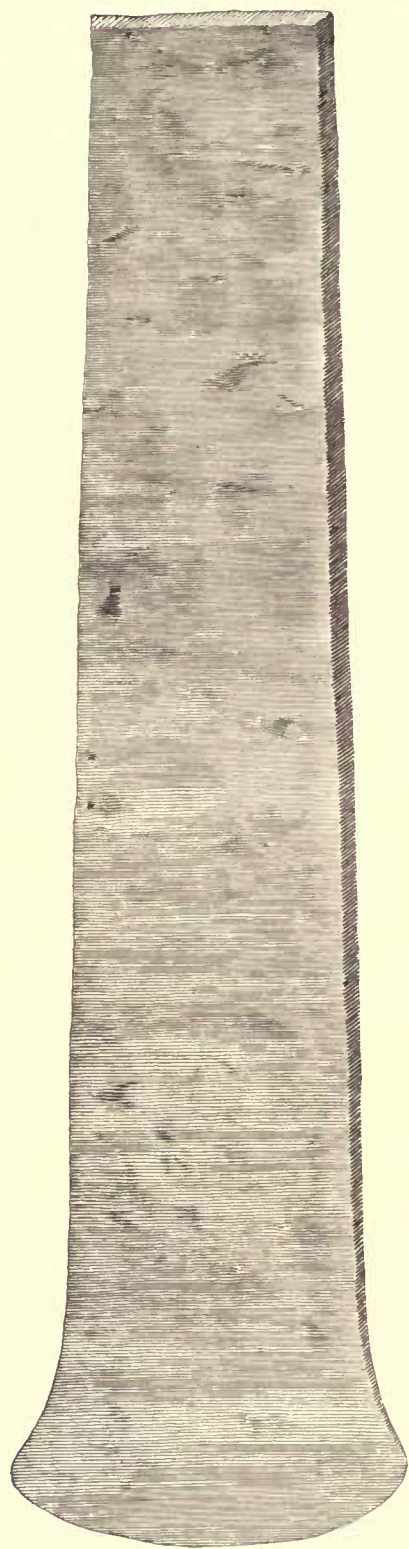


Fig. 24.—Chisel of copper. Mound north end of Creighton Island. (Full size.)

A very rude bowl, faintly decorated with a complicated stamp, lay inverted with the skeleton of a child. Diameter of mouth, 8 inches; height, 3.8 inches.

Several considerable fragments of medium sized, undecorated bowls were met with. It is possible that these, interred whole, were subsequently crushed and portions lost.

Miscellaneous.—An earthenware sphere, about .5 of one inch in diameter, lay loose in the sand.

COPPER.

In the eastern slope of the mound, 35 feet N. E. by E. from the center, on the base of a pit, 5 feet 8 inches from the surface, on which was an unbroken layer of oyster shells 2 feet in thickness, lay a skeleton in the last stage of decay. With it were various objects, including a chisel of copper (Fig. 24), 7.9 inches in length, with a breadth across the shank of 1.2 inches and 2 inches across the flaring cutting edge. Its thickness is .27 of an inch. It lay between wood or bark thoroughly decayed. Toward the end opposite the cutting edge on either side was a black band about 1 inch in breadth, where, apparently, it had been attached to a handle. A longer chisel of the same type, though much thinner, is figured¹ by the late Colonel Jones as coming from a mound of the Nacoochee Valley, Georgia. This chisel is the only copper found by us among the sea-islands of Georgia. The reader interested in aboriginal copper is referred to our memoir in Part II of "Certain Sand Mounds of the St. Johns River, Florida,"² where it is shown that the copper of the mounds is native copper, and far purer than the article produced in Europe during the mound building period.

MISCELLANEOUS.

With four skeletons were masses of plumbago, perhaps used as a black pigment.

¹ *Op. Cit.* Plate VI, fig. 2.

² Jour. Acad. Nat. Sci., Vol. X.

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Small sheets of mica were met with seven times. They bore no particular shape when found, and the chipped and broken edges left any determination doubtful. Certain of these sheets were peculiarly flexible, resembling tin foil, a characteristic, we are informed, conferred by fire.

With numerous burials were masses of red hematite in powder.

ASSOCIATION OF ARTIFACTS.

We now proceed to give several typical associations of artifacts, the objects composing which have mostly been individually described.

With a bunched mass of bones were: a large shell drinking cup; small shell beads; sixty-three massive shell beads; nine pearls.

With a skeleton having a layer of fine charcoal covering pelvis and thighs were: fifteen massive shell beads at the neck, small shell beads at the wrist and two pebbles near the thigh.

By the skeleton of an adolescent were: two masses of plumbago; powdered hematite; two shell cups; three discoidal stones; some delicate tubular shell beads; a wedge-shaped arrow point of chalcedony; one pebble; one small sheet of mica.

With the skeleton of a male were: ten cores, spalls and chips of chert; two rude arrowheads, one of quartz, one of chert; a bit of quartz; a number of pebbles;

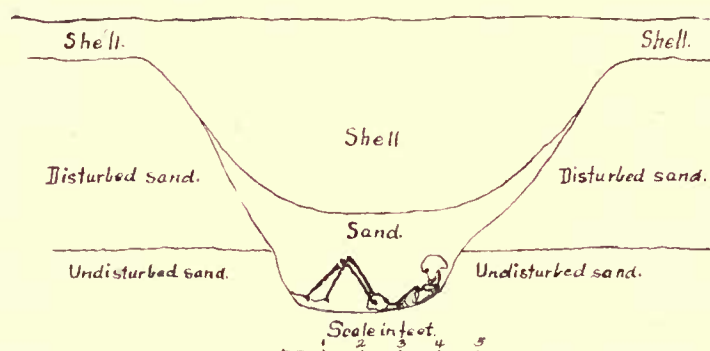


Fig. 25.—Diagram of grave-pit. Mound north end of Creighton Island.

several sherds; small fragments belonging to a soapstone vessel; a rude tobacco pipe of earthenware.

With a male skeleton were: three "celts;" a long chisel of slate; another somewhat smaller; five small chisels; one arrowhead; one smoothing stone; one nest of small pebbles; seventy-seven massive shell beads; small shell beads; a shell gorget; a bone pin, much decayed; an earthenware polisher; mica; hematite.

Let into undisturbed sand, upon the base of an interesting pit, was a skeleton of a male in a semi-reclining position. With the remains were: large and small shell beads; a deposit of small pebbles; a small stone chisel; a "celt;" powdered hematite. From the top of the pit containing this body to the level of the undisturbed sand was 5 feet 10 inches, including 1 foot of shell, there almost superficial. The exact width of the pit could not be determined, as the sand filling it resembled that of the mound. The pit had been filled with sand to the depth of 2.5 feet at

the bottom, and considerably higher around it. Oyster shells had then been poured in, forming a mass 3 feet 10 inches in depth, and 6 feet across where the pit was covered by the layer of shell belonging to that portion of the mound. This interesting grave is shown in section in Fig. 25.

REMARKS.

The mound on Creighton Island, the largest of its type investigated by us, is full of interest to the student of archaeology. Absolutely nothing in any way indicating white contact was discovered, and we fail to see how, knowing the wide distribution of objects through aboriginal barter, it could have been in use after the coming of the whites and yet contain no object derived from them.

Within view of the landing at Creighton Island was a low mound containing irregular strata of shell, which, though not thoroughly demolished, had a number of trenches dug into it by us, and a portion of the center excavated. Human remains in a layer, some cremated and some unaffected by fire, were encountered at the center of the mound. No artifacts were found with them. In other parts of the mound were many sherds with incised and with complicated decoration. In addition was what remained of a curious little earthenware effigy of a woman, without head, arms or legs (Fig. 26).

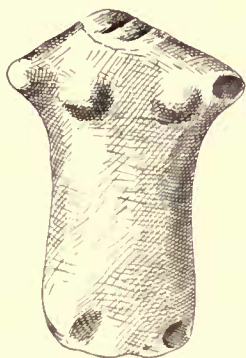


Fig. 26.—Earthenware effigy of female. Low mound at Creighton Island. (Full size.)

Another effigy of a woman, in a like state of mutilation, was shown us by a gentleman living on the mainland a few miles from Creighton Island, who stated it had been washed from a shell bluff on Cedar creek, fronting his residence. This figure tapered gracefully at the waist and bore incised ornamentation front and back.

HOPKINS MOUND, BELLEVILLE, MCINTOSH COUNTY.

Belleville, on the south side of the Sapelo river, is the landing of the settlement of Crescent about 1.5 miles inland.

In woods, though formerly cultivated land, about 1 mile in a westerly direction from Belleville, is a mound on the property of C. H. Hopkins, Esq., of Meridian, near Darien, Ga., who cordially placed it at our disposition.

The mound had been considerably dug into previously, but no sustained investigation had been carried on. Its height was 13 feet 2 inches; its diameter of base, 76 feet. The ascent of the most uniform side was at an angle of 26° . Investigation showed the mound to begin at about the commencement of its upward slope. A section 50 feet in breadth at the margin of the base, including the S. by W. to the S. E. by E. portion, with fairly oblique sides converging toward the center, was dug into along the base. The mound was made of yellow sand of a lightish color with but little discoloration from organic or foreign matter of any sort. In the central portion were five or six layers of oyster shells each about 4 inches thick,

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and separated by a little over one foot of sand. A well-marked black band at about the level of the surrounding territory extended to the center. No great central pit was present in the mound, nor were sub-basal graves encountered. Practically no sherds were met with. Interments, encountered at but ten points, began about 8 feet in from the margin. Flexed burials, masses of bones of various individuals together, an isolated cranium and pockets of fragments of calcined human bones were present. With certain burials was hematite and, with two or three of them, a few shell beads.

MOUND NEAR CRESCENT, MCINTOSH COUNTY.

In territory covered with trees of considerable size, though evidently formerly cultivated ground, about one-half mile in a southerly direction from the Hopkins Mound, and about 1 mile from Crescent, was a mound also the property of C. H. Hopkins, Esq., to whom we again acknowledge our indebtedness for permission to investigate.

This mound, which had been dug into to a comparatively small extent, had a height of 7 feet and a diameter of base of 70 feet. The eastern half was completely dug through with the exception of a small portion surrounding a large forest tree.

The mound, so far as our investigation extended, was without stratification and was composed of yellowish-brown sand. A dark layer, from 6 inches to 1 foot in thickness, ran along the base. No oyster shells were discovered, nor were outlying pits met with. The mound did not extend into level territory beyond the commencement of the slope. Sherds were very infrequent and none bore the complicated stamp. One chert arrowhead and a rough mass of chert, resembling an uncompleted spear head, lay loose in the sand.

Human remains were met with at sixteen points, as follows: 6 small pockets of fragments of calcined human bones; 3 layers of calcined fragments and parts of human bones unmarked by fire; 1 skeleton; 6 isolated bones and bunched burials.

We append in detail the most noteworthy of the above.

A skull and portion of humerus, very badly decayed, were about 18 inches from the surface. Near these on the same level was a pendant of plutonic rock, considerably disintegrated, having an elongated oval, longitudinal section, about 3.25 inches in length. At the base were small nicks or tally marks.

Near the surface were fragments of bones badly decayed, indicating a burial at full length.

On the base, 6 feet 10 inches from the surface, was a layer of calcined and unremated bones intermingled. In association was hematite and with one skull were six pearls perforated for use as beads.

Five feet from the surface was an isolated cranium. Toward the center of the mound, about 6 feet below the surface, was a considerable mass, mainly of long bones, imbedded in a quantity of powdered hematite.

Occupying a central position in the mound, 5 feet 9 inches down, was a layer

of calcined fragments of human bones mingled with others showing no trace of fire. The dimensions of this layer were 2 feet 6 inches by 1 foot 8 inches by 2 to 3 inches thick.

In line below the above, on or in the base layer, was a layer similar in composition to the one above it, 2.5 feet by 4 feet by 5 inches thick.

The bones in this mound were badly decayed. None was encountered within 15 feet of the margin of the base.

WALKER MOUND, MCINTOSH COUNTY.

This mound, in "Cooper's Field," may be reached from Sutherland Bluff on the Sapelo river, from which it is about two miles distant, but is more conveniently got at from Contentment, a small settlement on the west side of Broro river, about three quarters of a mile from its union with the Sapelo river. Broro river is a salt water channel joining the Sapelo river and Julianton creek.

The mound, about 1.5 miles in a westerly direction from Contentment, had a height of 5 feet 9 inches. Its diameter of base was 46 feet. It was the property of Mr. James Walker, of Darien, who kindly placed the mound at our disposal, without condition, to do with as we saw fit.

The mound had previously been dug into to an inconsiderable extent. On its northern margin grew a live-oak 5 feet in diameter, 3 feet from the ground. This tree was not removed, though otherwise the mound was totally demolished, being dug through at a depth considerably below the level of the surrounding territory.

The mound was composed of rich, loamy, brown sand with many local layers of oyster shells. The usual charcoal and fireplaces were present. A black layer from 3 inches to 1 foot in thickness, made up of sand mingled with charcoal in minute particles, ran through the mound at about the level of the surrounding territory. At the center of the mound, measurements showed this layer to be 5 feet 9 inches below the surface.

Although of very uneven distribution, human remains were numerous in the Walker mound, being encountered at thirty-six points (see diagram, Fig. 27), to which should be added a certain number presumably beneath the oak tree and probably a few disturbed by previous investigation.

As will be noted from the detailed account which follows, a deposit of human remains was by no means always limited to those of one individual, and it is not unlikely that the mound originally contained the complement of at least seventy-five skeletons, and probably considerably more. In reading the detailed description of the human remains present in the Walker mound, the reader is referred to the accompanying diagram, where burials are shown with numbers corresponding to those in the text.

1. Skeleton of child about 8 years of age, on back, knees to the right. A considerable amount of charcoal lay above the cranium.

2. Remains of skeleton of male. A fire had been built immediately on the pelvis, which, with some other bones, had been partially consumed. Considerable

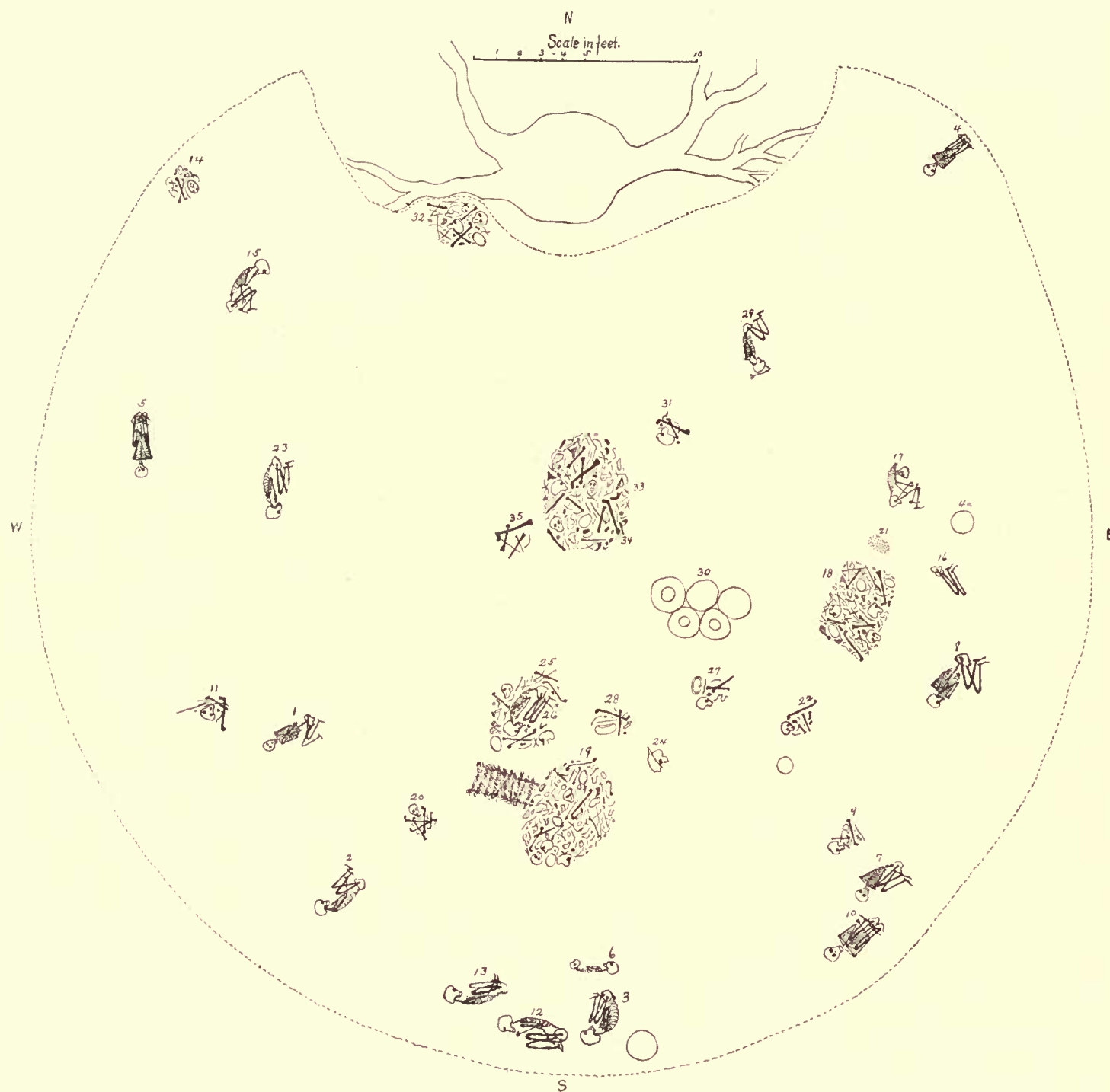


Fig. 27.—Diagram of Walker Mound.

charcoal remained. The skeleton lay on the left side. In association was sand, pink from hematite. The remains lay at a depth of 2 feet below the surface of the mound which was here but little above the surrounding level.

3. Skeleton of female on left side. Depth 2 feet 4 inches.

4. Skeleton of male on back. Remains of a fire along the left side. Face-bones and others in contact with the flames, considerably burnt. This skeleton, at the extreme margin, was 3 feet from the surface, or about that depth below the level of the field. It was doubtless a grave, as unquestionably, we think, were the other deep marginal burials in anatomical order.

4a. Twenty-one inches from the surface was an undecorated vessel with inverted rim, intact. Its height is 4.1 inches; its maximum diameter, 10.2 inches; its diameter of opening, 7.5 inches. Within it were the remains or a portion of the remains of the skeleton of an infant, in minute fragments, burnt and calcined.



Fig. 28.—Section of vessels with calcined bones. Walker Mound. (One-quarter size.)

With these burnt fragments were a number of shell beads showing no trace of fire—evidently added subsequent to the cremation. This bowl had apparently been placed upright on a small heap of sand in such a manner that a larger undecorated vessel inverted and placed over it, the inside of the bottom of the larger vessel in contact with the top of the small one, prevented all ingress of sand as shown in the section (Fig. 28). The dimensions of this larger vessel are: height 6.8 inches; diameter 13.5 inches. In shape the vessel is about square with rounded corners.

5. Skeleton of female on back. Depth 3 feet.

6. Skeleton of undetermined sex. Depth 22 inches. The position of this skeleton, disturbed by the digger, was not determined. About 2 feet distant were many fragments of a large vessel with stamped decoration.

7. Skeleton of uncertain sex, 31 inches down. Trunk on the back, legs to the

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right. On this skeleton was a covering of wood or bark .25 of one inch thick, in the last stage of decay.

8. Skeleton of male, on back, head and knees to the right, 3 feet from surface.

Although the human remains in the Walker mound were, comparatively speaking, in good condition yet the cranium of this skeleton (A. N. S. Cat. No. 2,158) was the only one recovered in fair condition.

9. Skeleton of female, fell with caved sand. Probably lay originally about 3 feet from the surface.

10. Skeleton of female on back, 2 feet down.

11. Skeleton of female, 3 feet from surface, disturbed by workmen, position not determined.

12. Skeleton of uncertain sex, somewhat on the right side. This skeleton, coming from a portion of the mound but little above the level of the surrounding field, was nevertheless 4 feet from the surface and lay at the base of a grave dug into the yellowish sand of the field, and filled with the brownish sand of the mound.

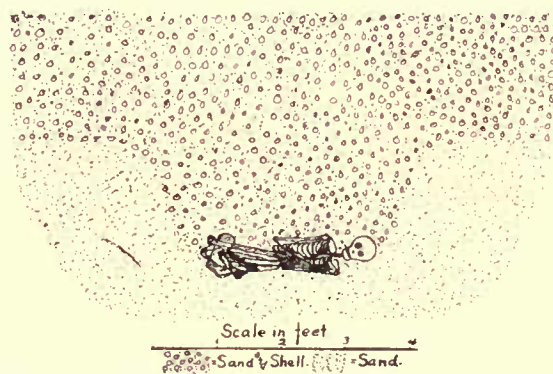


Fig. 29.—Grave containing skeleton 13. Walker Mound.

13. Another grave containing a skeleton of a male on left side. This grave, at the margin of the mound, showed a distinct line of demarcation from the surrounding soil to a height of 26 inches from its base. Above this was a mass of material 2 feet in thickness, similar to the contents of the mound at that place and to that present in the grave. Through this material the line of the grave could not be traced. The surface of the mound at this point was about level with the surface of the field (Fig. 29).

14. Another marginal grave containing a skeleton 4 feet from the surface. This skeleton was too much affected by a fire which had been placed immediately above it to permit determination of sex or position. With the bones were charcoal and fifteen shell beads .5 to 1 inch in length.

15. Skeleton of male with legs to the left and head pushed over on the chest, 3 feet from the surface.

16. Portion of skeleton 1.5 feet down. The body, from the pelvis up, had been removed by a previous investigation.

17. Skeleton of adolescent of about 14 years of age, 3 feet down. It lay on the left side. The skull had rolled on to the chest. Certain epiphyses were separated about 6 inches from their respective shafts.

18. Beginning at one foot below the surface and extending to a depth of from 8 to 10 inches was a confused mass of human remains about 4 feet in length and 3 feet in breadth. At one end were eleven crania together. Immediately above this deposit were four imperforate shell drinking cups and three polished stone chisels having a much flatter section than the ordinary "celt." With the remains were two pins of shell, the larger 4 inches in length.

The entire surface of the mound was covered with oyster shells to an average depth of 6 inches, but above this deposit the shells dipped down into the sand coming in contact with the upper surface of the layer of bones. It was evident that this was a species of grave made after the completion of the mound, though, likely enough, of about the same period, since, as we shall see, similar confused masses of bones were present in the mound at depths clearly showing their original deposit (see section of grave, Fig. 30).

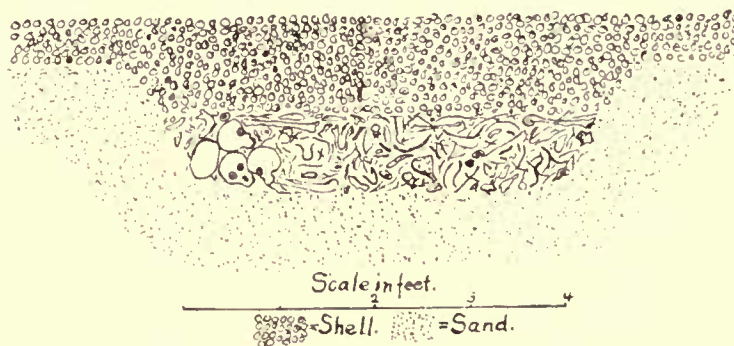


Fig. 30.—Section of grave 18. Walker Mound.

19. A grave similar in style of construction to the preceding. Its depth from the surface was 26 inches. It extended in on the same plane a distance of 5 feet with a breadth at first of 2 feet, broadening to 4 feet and narrowing to 2 feet at the end. It contained a mass of human bones, some calcined, and a few bones of a lower animal unaffected by fire. With the human bones were numbers of shell beads of various sizes.

With the bones was an interesting pathological specimen¹ consisting of a human femur showing material shortening through fracture. This example of bone-setting—or rather the lack of it—by the aborigines is shown in Fig. 31.

This deposit of bones had, on the same plane, contiguous to it a pen or pyre, constructed of logs 3 to 8 inches in diameter, which were charred through and through. The depth of this curious pen was 9 inches; its length, 32 inches; its width was not exactly determined owing to caving of sand. Within this pyre were calcined human remains in fragments.

¹ Now at the Army Medical Museum, Washington, D. C.



Fig. 31.—Fracture of femur. Walker Mound. (Full size.)

20. Certain human remains, buried in oyster shells at a depth of about 1 foot, fell with caved material before exact data were obtained. Two pairs of femurs were present and the deposit probably included the remains of several persons.

The reader's attention is called to the fact that it is next to impossible to slice down a mound of sand as can so readily be done with a mound of clay. Mishaps through caving sand are of occasional occurrence even in the case of the most careful workers.

21. A deposit of calcined human remains about 1 foot from the surface. In association were the columella of a marine univalve and eight shell beads, each about 1 inch in length.

22. Bones of male in caved sand.

23. Skeleton of male on right side, face to the right. Nine inches down.

24. A cranium unassociated with other bones. Capping it was a handsome drinking cup of shell having on its outer side three incised lines forming a parallelogram with a portion of the margin of the opening as one of the shorter sides.

25. Four crania with other bones and a few shell beads.

26. Flexed skeleton of a female lying on the right side, 10 inches down, immediately above number 25.

27. A bunched burial including approximately the skeletal complement of a male, 18 inches from the surface. With this skeleton was a vessel of good material, scaphoid in shape and handsomely decorated with a variety of incised designs and a knob on either side, to which justice has not been done in Plate I, Fig. 2. Within the lines, the decoration had been supplemented by red pigment bright and fresh in appearance when removed from the mound in a state of moisture but hardly apparent when dry. A small portion at one end, broken from the vessel, was present with it, permitting complete restoration. Approximate measurements: length, 9.4 inches; height, 5.75 inches; maximum breadth, 7 inches; breadth of aperture, 5.75 inches.

28. A bunched burial 2 feet from the surface, a short distance from 27. With it was a vessel almost the exact counterpart of the one just described, save that the decoration, though on the same lines, is much more elaborate, considerably exceeding in pretension anything met with by us in Florida or elsewhere in Georgia. This decoration is shown diagrammatically in Plate XVI. Certain portions of this vessel, lying with it, were recovered, and were successfully fitted into place.

29. Another grave, 26 inches in depth from the surface. It was filled with oyster shells and contained the skeleton of a male lying on the right side, the right arm under the head.

30. Beneath the roots of a good sized tree, their tops 8 inches beneath the surface, together in a group, all upright, were five cinerary urns each filled almost to the top with a closely packed mass of charred and calcined fragments of human bones. With these bones were a few shell beads showing no trace of fire. The tops of the vessels were covered with large fragments of earthenware belonging to other vessels, which had prevented any entrance of sand. These vessels were of poor material, some especially so, being of slight consistency and held together only by the surrounding roots of the tree above them. Three of the vessels, when the matted mass of roots was removed, fell into pieces so small in size that all hope of restoration was abandoned. The remaining two, though broken into many pieces, were successfully restored. The larger of these two vessels has a height of about 15 inches, a maximum diameter of 15.5 inches and a diameter of aperture of 13.5 inches, approximately. It is ornamented beneath the rim with deep lines incised before baking (Plate V).

The smaller vessel has a globular body with a neck rising from a depression. The ornamentation is of a complicated stamp variety. Approximate measurements: height, 15 inches; maximum diameter, 14.5 inches; diameter of aperture, 6.25 inches (Plate VI). In immediate association with these cinerary urns were eight imperforate drinking cups of shell.

31. Fourteen inches down, in caved sand were the bones of a male.

32. Sixteen inches from the surface, with sand tinged with hematite, was a bunched burial of numerous bones, surmounted by a mass of oyster shells. A large number of shell beads were in association.

33. This interesting grave occupied an almost central position in the mound. Its shape was that of an inverted truncated cone supposing the truncated end to be slightly rounded. The top of the grave, forming a portion of the summit plateau, had a diameter of 8 feet; the depth of the grave, vertically from the surface to the bottom, was 5 feet 9 inches. This grave, after completion, had been lined with a layer of oyster shells about 6 inches in thickness. The bones, present in considerable numbers, had apparently been poured in from the northern side and distributed in a fairly even layer over the bottom and up the northern side to within 2 feet of the top (Fig. 32). On the eastern and western sides were occasional loose bones, but none was present on the southern side, except immediately on the base (Fig. 33). The horizontal distance from the southern margin of the bones on the bottom of the

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grave to the northern margin along the side of the pit was 5 feet. The grave was filled with oyster shells and sand distinctly darker than the sand of the mound.

Fifteen crania, more or less imperfect, were present with the other bones, as were certain calcined fragments of human bone. Among the long bones was a

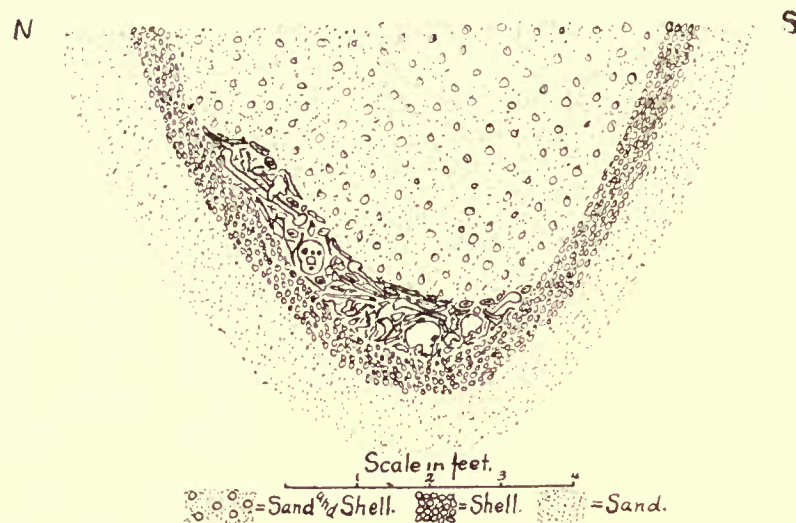


Fig. 32.—North and south section of grave 33. Walker Mound.

femur 19.75 inches in length, indicating a male about 6 feet in height—a stature we believe, greater than indicated by any bones discovered by us in Florida mounds.

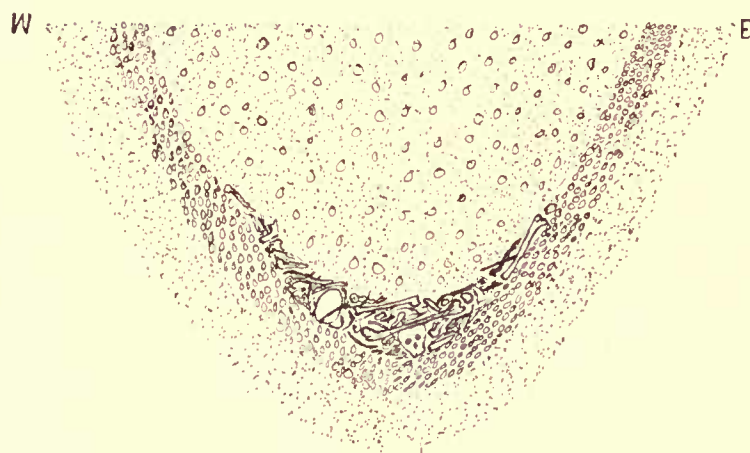


Fig. 33.—East and west section of grave 33. Walker Mound.

34. Immediately beneath the grave just described was a layer of oyster shells, which merged with, and took the place of, the black band running through the mound to which reference has been made. Particles of charcoal were abundantly present in the oyster shells and it would seem that these shells, at this point, 5 feet 9 inches from the surface, were there at the time when the fire was made which caused the black layer running through the mound. Just below the layer of shell,

which was 1 foot in thickness, in dark brown sand totally dissimilar to the yellow sand of the field, which enclosed the grave on either side, was a circular deposit of human bones, having a diameter of about 5 feet. These bones included five crania and with them were numerous shell beads, many tubular; one being over 1 inch in length. In one of the crania was a bright yellow sand differing in shade from any in the mound. Small quantities of this sand were scattered here and there among the bones.

35. A few bones of a male from superficial caved sand.

HUMERI.

Male.			Female.		Uncertain.	
	Perforated.	Not Perforated.	Perforated.	Not Perforated.	Perforated.	Not Perforated.
Right	6	15	7	6	3	6
Left	8	9	5	5	7	10

Throughout the mound were the usual loose sherds of accidental introduction. At several points were large vessels of poor material crushed beyond repair. None of these vessels contained human remains.

One small chisel of stone was found loose in the sand.

REMARKS.

In no one mound investigated by us has there been so well exemplified the various forms of aboriginal disposition of the dead—the burial in anatomical order; the burial of portions of the skeleton; the interment of great masses of human bones; the pyre; the loose deposit of incinerated remains; the burial of cinerary urns.

To a marked extent in this mound are noted, side by side, inhumation and incineration.

MOUND NEAR CONTENTMENT, MCINTOSH COUNTY.

Contentment, a small settlement of colored persons, is on the bank of the Broro river, a water-way joining Sapelo river and Julianton creek.

In woods on ground probably formerly under cultivation, about one-half mile in a northerly direction from Contentment, was a symmetrical mound in the form of a truncated cone. Its sides, by their steepness, gave evidence that no cultivation on the mound proper had ever been attempted. A comparatively small and shallow excavation was the only trace of digging previous to our own. The mound was kindly placed at our disposal by R. H. Knox, Esq., of Darien, under whose control the property is.

The mound had a height of 9 feet 9 inches, a base-diameter of 76 feet. The

southern half of the mound was dug away leaving a cross-section E. and W. No pits, outlying or in the body of the mound, were met with. A short distance in from the margin, a black band 6 to 10 inches in thickness was noticed extending through the part investigated by us, at the level of the surrounding territory. Apparently there had been considerable general disturbance beneath this band but as the sand of the mound resembled that of the surrounding territory, any exact line of demarcation was difficult to determine. No oyster shells in quantity were present, though the usual fire-places and pockets of charcoal sometimes contained a few scattering shells.

Human remains were encountered 45 times, at all depths, and extending in from the margin. Bones, in the last stage of decay, at times hardly indicated the form of burial. Occasionally burial of skeletons was indicated, while again, isolated skulls or skulls with a few other bones were met with. With some burials were masses of hematite in powder, sometimes extending the entire length of the skeleton. With one were three pebbles, all showing use as smoothing stones. Near human remains was a chert lance-head and with another interment was an undecorated bowl, broken by caving sand. A pebble and certain fresh-water mussel, and clam-shells lay near an interment.

Seven pockets of calcined bones, some including fragments entirely unaffected by fire, were met with. Centrally in the mound, 7 feet from the surface, with no pit apparent, was a layer of calcined and uncremated human bones, about 6 inches thick. With it were a graceful barbed arrowhead and a flat mass of gneissic rock about 4.5 inches by 2.5 inches with two parallel longitudinal grooves, probably made by sharpening pointed implements or by grinding shell beads into shape.

A considerable number of vessels, all imperforate, so far as could be determined, and undecorated or with an ordinary check stamp, were present in the portion of the mound investigated by us.

Just beneath the surface was a pot with checked stamp decoration, a rounded base and a somewhat cylindrical body—a common cooking vessel. Its height, and its maximum diameter, which was at its mouth, were 11.75 inches. In common with all the stamped pots encountered in this mound, its body was covered with soot showing its use to have been but a secondary one. It contained the calcined remains of not more than one individual and was surmounted by a considerable number of small and large fragments belonging to an undecorated bowl. It fell into pieces upon removal from the sand.

Eighteen feet east of the center, just beneath the surface and about one foot apart, were two interments in vessels, in all respects similar to the one just described.

Near these was an inverted, undecorated pot somewhat resembling in shape a reversed cone with rounded apex. It covered a few fragments of calcined human bones deposited on the sand. Approximate measurements: height, 7.75 inches; maximum diameter and width of mouth, 10.5 inches.

Closely associated with the foregoing bowl was an inverted, checked stamped vessel similar to those first described, covering calcined remains lying on the sand.

Another vessel also bearing the check stamp, half filled with calcined remains, had been capped by a vessel or a large part of a vessel represented by small fragments when found.

In another portion of the mound were the remains of two undecorated vessels in small fragments. One had presumably capped the other, judging by the position. A number of incinerated fragments of human bone were present.

In caved sand from the surface were several other broken vessels with incinerated bone, similar to the foregoing.

Specimens of the earthenware from the mound at Contentment were sent to the Peabody Museum, Cambridge Mass., and to the Davenport Academy of Science, Davenport, Iowa.

LOW MOUNDS NEAR BRORO NECK, MCINTOSH COUNTY.

Broro Neck, a settlement of colored people, is about 1 mile northeast of Contentment. A mound on the outskirts of the settlement is on the property of Mr. Thomas Grant (colored). Its height is 3 feet 4 inches. It is 55 feet across the base. It was about one-half dug through. At places were great quantities of charcoal and pockets of hematite. A number of deposits of fragments of calcined bones were met with and a few portions of long bones showing no mark of fire. With skeletal remains were: two hammer-stones, one cockle-shell (*Cardium*), one good-sized shell bead.

About one hundred yards from the preceding mound, on the property of Mr. E. W. Paris (colored), is another mound, which has evidently been ploughed over for a number of years. Its present height is 1 foot 8 inches; its diameter of base, 44 feet. The mound was trenched to the center. About 19 inches from the surface was a deposit of calcined human bones with a small, coarse, undecorated earthenware bowl. The surrounding sand was scarlet from admixture of hematite. Nothing else of interest was met with.

SAPALO ISLAND, MCINTOSH COUNTY. BOURBON.

Sapalo Island, which, with St. Catherine's and Ossabaw, was reserved for their individual use by the Indians, when much of the coast was ceded away,¹ has a settlement at the northern end reached by turning into a small creek from Sapalo sound and continuing up this creek a distance of about 2 miles. This settlement, called "Boobone" by the colored inhabitants, is said originally to have received the name Bourbon from French settlers.

Extending back from the landing is an extensive tract of rich land, undulating with shell deposits, long under cultivation, the property of Amos Sawyer, Esq., of Arlington, R. I., to whom we are indebted for cordial permission to make complete archæological investigation.

About one quarter of a mile S. E. by S. from the landing was a mound, the

¹ "The History of Georgia," Captain Hugh McCall, 2 vols., Savannah, 1811, Vol. I, page 37.

usual truncated cone in shape and still symmetrical, though rather considerable superficial digging had been attempted.

Its height was 8 feet; its diameter at base, 72 feet. The surface of the mound was covered with shell. With a beginning on the level ground 12 feet beyond the margin of the base, to ascertain the presence of outlying burials, none of which were met with, the entire southern half of the mound was sliced down, leaving an E. and W. cross-section. Next the remaining half was dug away with equal care.

The mound presented no uniform stratification. It was composed of local layers of bright yellow sand dug from beneath the surface loam of the field; of dark sand containing occasional shells, mostly belonging to the oyster; of shells with admixture of dark sand and, at the surface, of a layer of midden refuse made up of crushed shell and loam, varying from 8 inches to 2 feet in thickness and occasionally extending still farther down over burials let in from above. All the shell layers of the mound, some of oyster shells, some of shells of the salt-water mussel, seemed dis-



Fig. 34.—Section of pit. Mound at Bourbon.

tinety to be crushed and packed together as though trampled upon for a considerable period of time which seemed to indicate that the mound had slowly grown for a period of years, during which it was treated as a place of abode.

There was present in the mound no central pit such as is usually found in mounds of the coast, though, beginning a little north of the center was a general dip in the lower layers of the mound over a pit extending 2 feet into undisturbed sand, containing a skeleton at length. This pit had at the base a breadth of 3 feet, its exact length we were unable to determine owing to frequent caving of sand though it must have exceeded 6 feet. The layers above this pit, when of shell, in common with all shell layers of the mound, were compact through tread of feet and seemed to indicate that the pit had been dug at an early stage of the building of the mound and but partially filled and that layers forming afterwards shared in the depression. Fig. 34 gives a lateral section of this pit and of the mound above it.

CERTAIN ABORIGINAL MOUNDS OF THE GEORGIA COAST. 57

Though certain other pits were unmistakably present, with two or three exceptions in the marginal portion, we noticed none extending into undisturbed sand below the base, and though, owing to a rainy season, the base of the mound was just above water-level which induced the caving of sand and made exact scrutiny difficult, we believe few, if any, graves escaped us. In such parts of the body of the mound as were made up of yellow sand, burials were not present though many, apparently not in pits, lay in the dark sand. Many more seemed to be just beneath a thickening in the superficial layer of midden refuse while, in numerous cases, grave-pits extending into the dark sand were filled with shell debris from the surface layer.

HUMAN REMAINS.

In the mound, human remains were encountered at 192 points and others, it must be borne in mind, must have been removed by previous digging and by the use of the plow on the lower portions of the mound.

The 192 burials present in the mound, at the time of its demolition by us, may be classified as follows :

115 Skeletons.	8 Calcined deposits.
11 Aboriginal disturbances.	3 Skeletons in urns.
15 Late disturbances.	3 Calcined remains in urns.
31 Decayed and crushed remains.	4 Not noted.
2 Layers of uncremated bones.	

Skeletons.—Of those successfully removed there were :

43 Males.	5 Adolescents.
40 Females.	11 Children. ¹
12 Uncertain.	4 Infants. ¹

Many of the skeletons lay between decayed wood or bark. Skeletons were as to position as follows :

	Flexed on right side.	Flexed on left side.	At length.	Special.
Male	27	5	6	5
Female ²	28	4	2	5
Uncertain	8	1	1	2
Adolescent	3			2
Children ²	8			2
Infants	3			1

The skeletons at length were face down and all were below the base, on it, or well down in the body of the mound.

Special positions were as follows :

Burial No. 10, child of about 10 years, flexed with trunk on back.

¹ Eight additional skeletons, badly crushed and decayed, two certainly of children and six of infants, are included with the crushed and decayed remains.

² Data as to the side of one flexed female skeleton and of one child are omitted in the field notes.

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Burial No. 38, skeleton of infant, crushed and partly calcined. Exact position not determined.

Burial No. 43, skeleton of male in semi-reclining position, head forward on chest.

Burial No. 90, skeleton of male, face down, and extended as far as the knees, with legs drawn back and foot bones almost in contact with the pelvis.

Burials Nos. 99 and 100, skeletons of child and of adolescent, crossing at hips, the child on top. Both skeletons were extended to the knees with legs flexed back.

Burial No. 101, skeleton of female with trunk on back, thighs drawn up toward body but spread apart, with legs drawn back on thighs.

Burial No. 139, skeleton of female on back with lower extremities flexed up on body.

Burial No. 153, female, same position as 101.

Burial No. 154, skeleton of a male at full length, in water, 10 feet below surface, the upper part crushed but showing no trace of fire. The thighs and lower part of the arms with the hands were calcined. This burial might be included among skeletons at length.

Burial No. 158, skeleton of adolescent on back, the thighs partly flexed and separated.

Burial No. 160, a skeleton of uncertain sex in a semi-sitting position, head over on chest. The cranium was saved (*Acad. Nat. Sci., Cat. No. 2,163*).¹

Burial No. 168, skeleton of male on back as far down as could be determined, the legs having fallen with caving sand. This skeleton was surrounded by a thin layer of sand, colored red with powdered hematite.

Burials Nos. 173 and 174, part of a skeleton of uncertain sex, face down including the pelvis. At this point another skeleton, beginning with the cranium and including about one-half of the thigh bones, continued in the same direction. Then came thighs, legs and foot bones in anatomical order, probably belonging to the first skeleton. These remains lay at a depth of 4 feet from the surface and were unquestionably an aboriginal disturbance.

Burial No. 177, a skeleton of a female, lying on back to the knees, with legs flexed back on thighs.

Burial No. 186, skeleton of female, trunk on back, thighs and legs flexed to the right.

Not included under the head of special positions, since both were flexed, were burials Nos. 58 and 59, consisting of the skeleton of a female holding between its arms the fragile remains of a very young infant. The crania were in contact.

Of the 115 skeletons, 71 headed between S. E. and S. W., many crania pointing due S.

The remaining 44, with the exception of a woman, a child and an infant which are omitted from our field notes, headed as follows: E. S. E., 3; E. by S., 2;

¹ But one other cranium was in condition to preserve in this mound, namely that from Burial No. 73, a male (*Acad. Nat. Sci., Cat. 2,162*).

E., 11; E. by N., 1; E. N. E., 1; N. E., 4; N. N. E., 3; N., 5; N. N. W., 1; N. W., 1; W., 4; W. by S., 2; S. W. by W., 2; W. S. W., 1.

Aboriginal disturbance.—Aboriginal disturbance includes burials cut through by subsequent interments and possibly parts of skeletons accorded independent burial.

Late disturbance.—Under this head we include bones scattered by the plow, by superficial digging previous to our investigation, by caving sand and inadvertent disturbance by our men.

Decayed and crushed remains.—We have thus designated all such as seemed to be single skeletons which, through decay and through pressure were past determination as to sex, position and direction. It is not only possible but probable, however, that fragmentary aboriginal burials and small layers of bones of various individuals, badly decayed, have been included.

Layers of uncremated bones.—Two such layers unconnected with cremated remains were distinctly present in the mound. With one layer were five crania; with the other, six.

Calcined deposits.—Of the eight calcined deposits, the majority had fragments of human bones showing no trace of fire, associated with them. Some contained the remains, or parts of the remains of at least three individuals, while others probably represented but one skeleton.

Burial No. 117 was confined to the cremated remains of a child, a few remnants of whose bones were unburnt.

A small pocket of calcined bones lay upon decayed wood.

We have elsewhere referred to two partially cremated skeletons.

Skeletons in urns.—Vessel C, Burial No. 134, 15 feet N. E. by N. from the center of the mound, with its base 20 inches from the surface, its top just beneath the superficial shell layer, there 7 inches thick, was a vessel with incised decoration below the margin and a faint complicated stamp on the body. Decayed wood was above and below it. The vessel, crushed to fragments, was partly held together by sand and shells. It contained the long bones of an adult skeleton, parallel to each other and perpendicular to the base on which lay various smaller bones capped by the skull.

Near the preceding, forming a cluster with it and two other vessels, was a pot, Burial No. 135, Vessel D, on its side, having complicated stamp ornamentation. Decayed wood lay above and below it. Its condition was, if possible, worse than that of the preceding. It contained bones of an adult arranged similarly to those in Vessel C, and two polished stone hatchets, one rude quartz arrowhead, one undecorated earthenware tobacco pipe, and one fresh-water mussel shell, fragmentary through decay.

Vessel F, Burial No. 137, one of the group, had a complicated stamped decoration, but, unfortunately, was as fragmentary as its neighbors. It contained the remains of an adult arranged as in the other vessels and a circular piece of soap-stone with incised decoration, to be described under another heading.

Calcined remains in urns.—Vessel A, Burial No. 25, 20 feet S. W. by W. from the center, was a flat-bottomed, undecorated, globular, imperforate vessel of about two gallons capacity, slightly constricted at the neck. It was crushed to fragments. Within were the calcined remains of an adolescent.

Vessel E, Burial No. 136, made the fourth of the group to which reference has been made. It appeared to be of the ordinary type but was crushed to small pieces. It seemed to have been about half full of incinerated human remains.

Vessel G, Burial No. 163, 9 feet N. N. W. from the center, lay in fragments over part of a layer of calcined remains. Its decoration was red bands running laterally. The arrangement of the fragments seemed to indicate a former inverted position for the vessel.

Not noted.—Four burials included under this head were interments where full data, though obtainable, are omitted from our field notes.

EARTHENWARE.

Sherds.—Sherds were of infrequent occurrence, the majority undecorated or cord-marked, though a few had incised decoration. Excluding the burial jars and

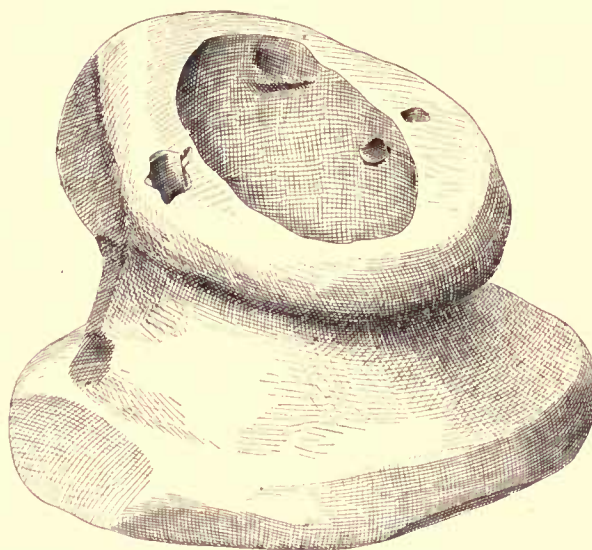


Fig. 35.—Vessel of earthenware. Mound at Bourbon. (Full size.)

one or two sherds believed to be superficial, the complicated stamp was not noted in the mound.

Vessels.—We have described certain vessels used for burial purposes.

With Burial No. 26, that of a child about eight years old, was an urn of about three pints capacity with globular body, constricted neck and flaring rim. Beneath the rim on the outside was an encircling row of button-like protuberances which had been modeled and pressed on to the clay before baking. Certain of these had dropped off.

Vessel B, an undecorated bowl with rounded base and slightly inverted rim,

has a diameter at mouth of 10 inches; a maximum diameter of body of 11.75 inches; a height of 8 inches. It contained a certain amount of decayed wood and a small quantity of material resembling sawdust—perhaps the last vestige of human remains.

With Burial No. 92, a child about seven years old, was a globular, undecorated pot of about one quart capacity.

With Burial No. 93, probably an aboriginal disturbance, was a curious vessel of earthenware, perforated for suspension at either side of the opening (Fig. 35), having a height of 2.5 inches; a maximum diameter of 3 inches. Its use is not apparent though it strongly recalls that numerous class of fantastically shaped mortuary vessels of earthenware found in many tumuli of Florida. A hole had been knocked through its base, the only case of base-perforation noted by us in the mound though certain of the burial jars were too fragmentary for determination as to this point.

In caved sand were several fragments of an oblong vessel having upright sides and inverted margin. The vessel, or rather such parts as were recovered, have on the base and sides—an unusual occurrence—an intricate incised decoration. Its height must have been 1.1 inches; its breadth of body, 2

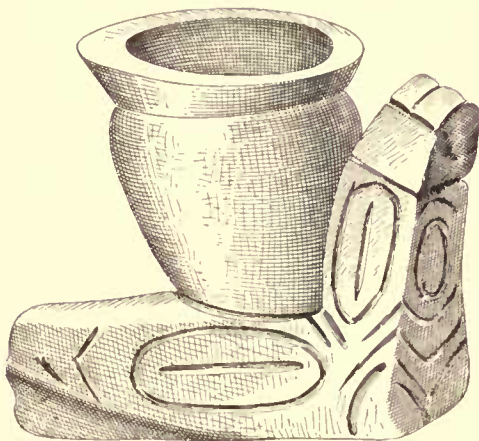


Fig. 36.

Tobacco pipes of earthenware. Mound at Bourbon. (Full size.)

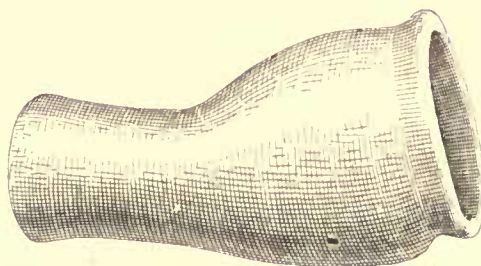


Fig. 37.

inches; of opening, 1.5 inches. Its original length is not obtainable as a part is missing.

With Burial No. 113, a male, was a cord-marked bowl of about one quart capacity.

Burial No. 154 had with it a small bowl in fragments bearing the checked, stamped decoration.

One of the most interesting pieces of earthenware ever met with by us lay with Burial No. 33, a mass of mingled calcined and unburnt bones, and consisted of a dish 12.2 inches in length, 7.7 inches across and 4.5 inches in height. Beneath the rim, exteriorly, is a row of large protuberances and, in addition, the dish bears traces of ornamentation by the use of red pigment. From either end project handles, one horizontal the other perpendicular—a curious feature. This interesting piece is intact (Plate VII).

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Tobacco pipes.—Thirteen tobacco pipes were present in the mound—several somewhat fragmentary. But two showed any serious attempt at ornamentation. One of these (Fig. 36) has a height of 2 inches, a diameter of bowl of 1.5 inches and a diagonal length of 2.8 inches, approximately. The bowl is supported by a figure probably representing a bird. Part of the body and tail served for the

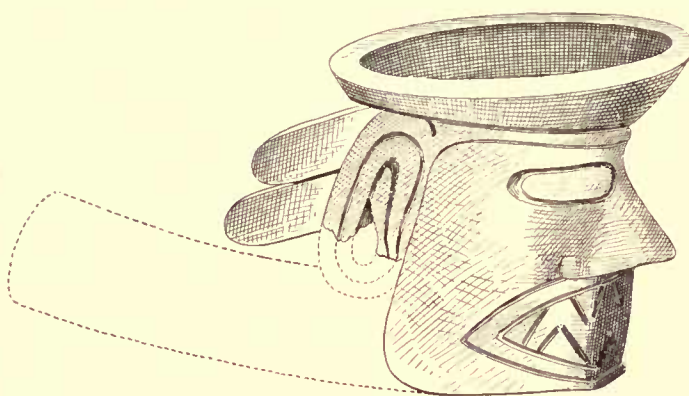


Fig. 38.—Tobacco pipe of earthenware. Mound at Bourbon. (Full size.)

reception of the stem. Found with this pipe was a small undecorated one shown in Fig. 37. The bowl forms an unusually obtuse angle with the remainder of the pipe.

In caved sand was a pipe representing a human head. The mouth is open showing the teeth and a curious head dress projects from the back of the head. A

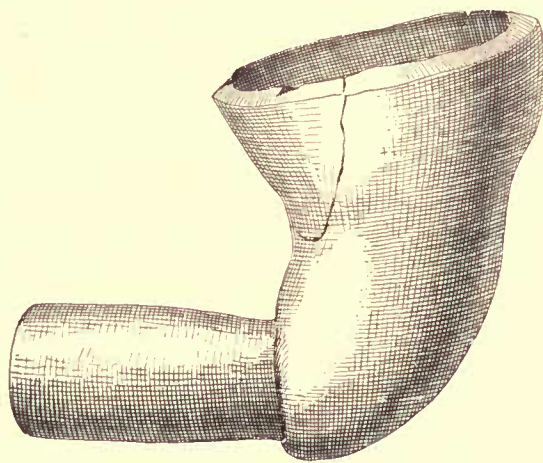


Fig. 39.—Tobacco pipe of earthenware. Mound at Bourbon. (Full size.)

portion of this pipe is wanting. Height and diameter of bowl, each 1.9 inches (Fig. 38).

An undecorated but rather gracefully shaped tobacco pipe (Fig. 39) lay with a burial.

A tobacco pipe of the poorest material and rude in form, apparently sun-dried, was recovered in pieces of hardly any consistency, though after drying it was fairly

well put together. Diagonal length, 5.5 inches; diameter of bowl and height, each 3.3 inches; diameter of stem, 2 inches; orifice for stem, 1 inch.

SHELL.

Cups.—Thirty-four shell drinking cups, none remarkable for size or finish, were taken from the mound, ten forming one deposit. All were imperforate and three varied from any yet found by us in Florida or in Georgia, we believe, in that they were wrought, not from *Fulgur perversum*, whose opening is to the left, but from a right handed *Fulgur (canaliculatum)*.

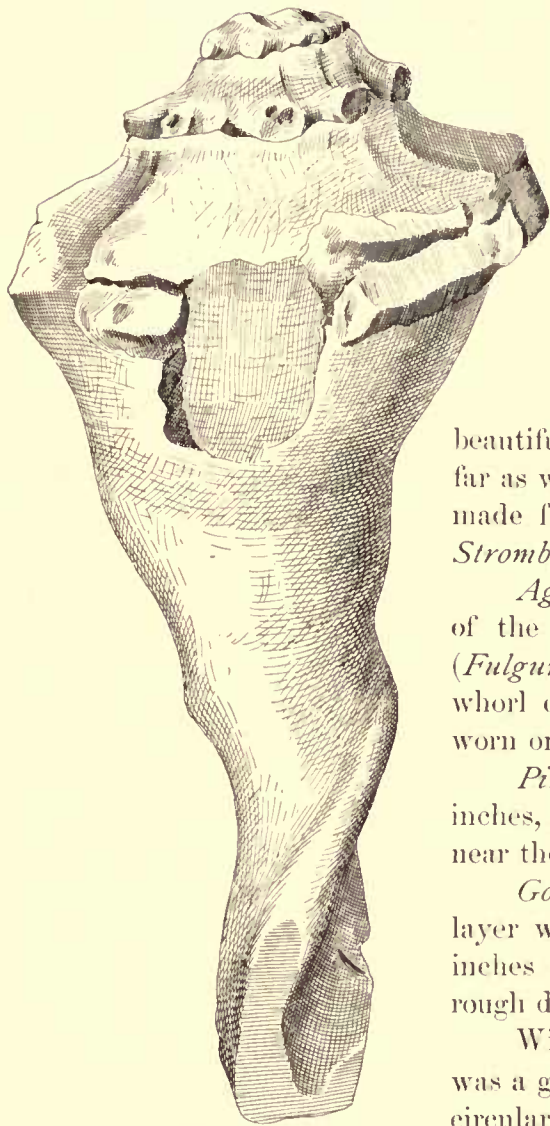


Fig. 40.—Chisel of shell. Mound at Bourbon. (Full size.)

Chisels.—Eighteen shell chisels were associated with human remains. These rather rough-looking implements, one of which we show in Fig. 40, made by grinding the beak to a cutting edge and removing the body whorl from the axis, must not be confounded with certain

beautiful shell chisels found in Florida but not, so far as we know, on the Georgia coast, which are made from the lip of the great marine univalve, *Strombus gigas*.

Agricultural implements.—Two specimens of the right handed, heavy form of the conch (*Fulgur carica*), with perforation in the body whorl opposite the aperture and with the beak worn or chipped down, came from the mound.

Pins.—Twelve pins, the largest about 4.5 inches, lay with skeletal remains practically always near the head.

Gorget.—In midden refuse composing a shell layer was a circular gorget of shell of about 2 inches diameter, having carved in the center a rough diamond-shaped figure (Fig. 41).

With Burial No. 92, a child of about 7 years, was a gorget near the head. This gorget, nearly circular, with a diameter of about 1.7 inches, bore the well-known design of the rattlesnake.

Beads.—Beads of shell were fairly numerous though in no wise comparable in size, number or state of preservation to those in the Creighton Island mound, with the exception of a fine tubular bead, 4 inches in length, having a diameter of .6 of one inch. To drill a bead of this sort longitu-

dinally must have required considerable time. We are told by Adair,¹ "Formerly four doe-skins was the price of a large conch-shell bead, about the length and thickness of a man's fore-finger; which they fixed to the crown of their head as an high ornament—so greatly they valued them."

With one burial were a number of discoidal beads, each about one inch in diameter, perforated in the center through the minor axis. These beads must not be confounded with *runties*, which have their perforation edgewise.



Fig. 41.—Gorget of shell. Mound at Bourbon. (Full size.)

Mussel shells.—Great numbers of fresh-water mussel shells, all Georgia species, some perforated for suspension, others not, were present with human remains. With one burial were many shells (*Unio Shepardianus*), some decayed and broken, though 33, all perforated, were recovered in fairly good condition.

PEARLS.

One pearl, perforated as usual, was met with.

STONE.

"*Celts.*"—Eleven polished "celts," most of them of volcanic rock, from 3 to 6.5 inches in length; were present in the mound. It has not been thought necessary to mutilate them for exact determination as to material. Several, probably of green-stone, were badly decayed through contact with water.

Pebble-hammers, hammer-stones, etc.—The mound was rich in these objects. One hammer-stone was apparently a portion of a celt. One pebble-hammer, with a length of 6.25 inches, had also seen use as a smoothing-stone. Certain ones, smoothed on four sides, presented an interesting appearance.

Arrow and Lance points.—Five arrow and lance points of chert, of chalcedony and of quartz, all of ordinary type, were found during the investigation.

Discoidal stones.—Four small discoidal stones were met with. One of micaceous sandstone was in a friable condition.

Soapstone objects.—With caved sand, near human remains, was a portion of a vessel of soapstone—a large vessel, as shown by the slight concavity of the inner surface. It is about 4 inches square and has on the margins a rude and irregular decoration.

With Burial No. 50, a male, was a bit of a soapstone vessel, rudely decorated with incised lines on either side and on two of its three margins. With it was a circular ornament of soapstone having the margin divided by five incisions. Height, .5 of an inch; diameter, 1.2 inches (Fig. 42).



Fig. 42.—Ornament of soapstone. Mound at Bourbon. (Full size.)

¹ "History of the American Indians," page 170. Cited by C. C. Jones.

With Burial No. 137, in vessel F, was an imperforate, irregularly circular piece of soapstone 2.3 inches by 2 inches by .5 of one inch thick. On one side was a rough incised design representing the serpent (Fig. 43); on the other a cross-hatch decoration (Fig. 44).

With Burial No. 45, was a curious little piece of soapstone 1.8 inches in height roughly wrought into the semblance of the upper portion of the human figure.



Fig. 43.

Engraved tablet of soapstone. Mound at Bourbon. (Full size.)



Fig. 44.

The arms are plainly apparent, as is the mouth. The upper portion of the head seems to be wanting through breakage or through omission (Fig. 45).

Several unworked bits of soapstone pots were present with burials.

Miscellaneous.—A number of flakes of chert, probably used as cutting implements, lay with burials or loose in the sand. With a skeleton was a small nodule of black jasper.

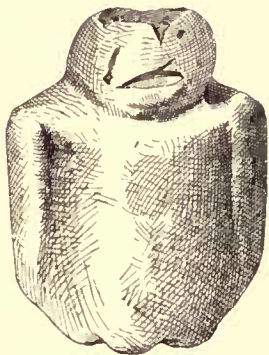


Fig. 45.—Effigy of soapstone.
Mound at Bourbon.
(Full size.)

BONE.

Piercing implements.—Piercing implements, some probably hair pins, were fairly numerous. Many were decayed and broken. Some piercing implements retain the articular portion of the bone at the blunt end.

A curious feature, not before noticed by us, was the presence in this mound of sections of bone pins with burials, not broken but apparently intentionally divided by cutting. With one burial were no less than seven of these fragments. A less number were found at several other points in the mound.

Miscellaneous.—With human remains were the jaws of a small carnivore and part of a lower jaw of a much larger one with the lower portion, including the roots of the teeth, ground away, leaving a flat surface. We shall again refer to this curious aboriginal custom in connection with jaws similarly treated from mounds on St. Catherine's and Ossabaw Islands.

MISCELLANEOUS.

The carapace of a tortoise, somewhat fragmentary, with two perforations, was found with a burial. The lower part of the shell was probably absent through decay. In the mound at Bourbon were several tortoise shells in the last stage of decay, usually surrounding nests of small pebbles; once or twice, flakes of chert; once, small square pieces of shell, probably originally destined for beads, and a number of the teeth of the drum-fish. We have, in other mounds, met with deposits of drum-fish teeth which doubtless had remained after the enclosing tortoise shells had decayed.

Plumbago, perhaps used as black paint, was present with one burial.

Many burials throughout the mound were associated with the red oxide of iron in powder.

A small bead of blue glass was found by a digger engaged on the surface layer. This bead, in view of the absence of glass beads with burials in the body of the mound, we took to be a relic of later Indians who, we know, inhabited Sapelo Island until a comparatively recent period.

ASSOCIATION OF OBJECTS.

With Burial No. 31 were: two pebbles; a flat mass of undetermined stone; two fragments belonging to a pot or pots of soapstone; a pebble worn down as a smoothing implement; a shell chisel; three badly-decayed bone piercing implements; a flat fragmentary smoothing-stone and one large pebble-hammer.

With Burial No. 33, a mass of calcined and unburnt bones, were two stone hatchets; two earthenware tobacco pipes and the earthenware dish already described.

There lay with Burial No. 73, a male, shell beads at the wrist; five tobacco pipes, some with portions missing; two pebble-hammers; one pebble; two fresh-water mussel shells; one shell chisel; one discoidal stone with a concavity on one side; one small quartz arrowhead; one portion of a columella of some large marine univalve; one decayed turtle shell containing drum-fish teeth, etc.; one shell drinking cup; one bone pin; one discoidal stone.

SAPELO ISLAND, MCINTOSH COUNTY. LOW MOUND AT BOURBON.

About 150 yards in a southerly direction from the large mound at Bourbon, was one having a diameter of base of 38 feet, a height of 3 feet 4 inches. Upon it lay the trunk of a large oak tree, which, with the root, interfered with complete investigation. Somewhat over one-half the mound was dug away, with the courteous permission of Amos Sawyer, Esq.

The mound at marginal portions was thickly covered with oyster shells, the layer gradually decreasing in thickness toward the center. The body of the mound was composed of black loamy sand. The presence of water near the base impeded investigation.

Human remains were met with at twelve points. Three skeletons lay at full length, two on the back and one face down in sub-basal graves under water. Other

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remains, all inhumations of single bodies, were in various positions, flexed, semi-sitting, reclining. There was no uniformity of direction nor any preponderance of a southern direction as a choice for the head. With one skeleton was hematite; with another, a few shell beads.

SAPELO ISLAND, MCINTOSH COUNTY. MOUND IN DUMOUSSAY'S FIELD.

Dumoussay's Field, taking its name from a French owner, deceased on the island in 1794, as his headstone sets forth, is a considerable tract formerly under cultivation but now overgrown with underbrush and small trees. It is studded with shell-heaps. It is distant somewhat over one mile in a straight line from Bourbon—N. N. W.—and may also be reached by water through a branch of the creek on which Bourbon is situated.

About one-quarter of one mile in a northwesterly direction from the landing, which is only a harder portion of the marsh, was an irregular rise in the ground much reduced in height and spread out by cultivation. Its maximum height was 18 inches; its exact diameter was difficult to determine. Probably a circumference with a diameter of 50 feet would have included all portions above the general level of the field. It was dug through by us by permission of Amos Sawyer, Esq., to whom we are indebted for the privilege of opening the neighboring mounds at Bourbon.

Through what we took to be the center of the elevated part of the mound, a line 90 feet in length was drawn running east and west. Taking this line as a chord, a semi-circle with radii of 45 feet, including the southern portion of the mound, was marked out and completely dug through. Evidences of disturbance in the soil were met with about 29 feet from the central point, the first interment, however, being 23 feet S. E. by S.

Next, the northern half of the mound was dug through starting with a diameter of 53 feet and gradually converging to a line 32 feet N. of the central point where all disturbance in the sand seemed to cease, and a considerable number of feet beyond an interment. On the limits of the mound were the pits so often found with coast mounds, in this case about 3.5 feet deep and covering a considerable area. As usual, they were filled with sand black with organic matter much darker than the sand of the mound, but contained no burials.

The mound, which had evidently lost much of its original altitude through cultivation, had upon its surface but a few scattered oyster shells and contained practically none. There was no central grave, unless a broad area of disturbed sand near the middle, extending into the bright yellow sand beneath the base and containing a number of burials may be so regarded. Pits similar to this, though smaller, were present elsewhere in the mound.

Skeletal remains were met with at fifty-one points in the mound, excluding scattered fragments from near the surface. These burials were distributed as follows as to form: skeletons, 42; late disturbance, 1; bunched burials, 2; isolated cranium, 1; uncremated remains in vessels, 3; cinerary urn with calcined remains, 1.

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Of the skeletons: 20, were of males; 12, of females; 6, of uncertain sex; 3, of adolescents; 1, of a child.

Of these 42 skeletons all but one were flexed¹ on the right side and all but the same one headed in a southerly direction, 17 being due south. The one exception lay flexed on the left side with the head pointing E. N. E.

We append all burials of interest and all associated with any artifacts.

Burial No. 2, 23 feet S. E. by S. from the center, at the bottom of a pit, 3 feet 6 inches from the surface, extending 1 foot 3 inches into undisturbed sand, was a skeleton of uncertain sex flexed on the right side, head S.

Burial No. 5, 21 feet S. E. by S., 2 feet 4 inches down, was a skeleton of a male, flexed on the right side, head S. With it was a tobacco pipe with portions of the rim missing, representing a human face and differing somewhat from the one from Bourbon, where the teeth are shown continuously, while in this specimen, which recalls the one from Darien, they are represented on either side only (Fig. 46).

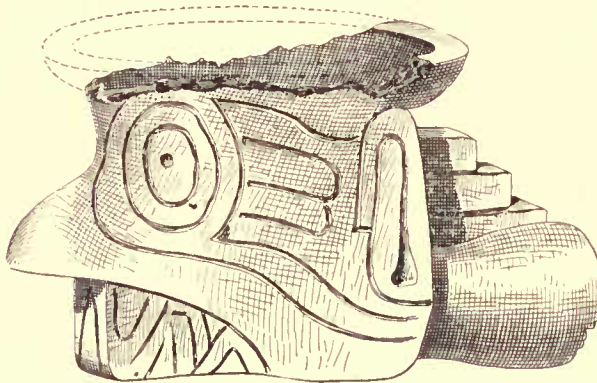


Fig. 46.—Tobacco pipe of earthenware. Mound at Dumoussay's Field. (Full size.)

Burial No. 8, 16 feet S. E. by E., 1 foot down, a skeleton of an adolescent, flexed on the right side, head S. by E. Above the skeleton was a layer of charcoal about 6 inches thick, with burnt shells and sand. In this layer were fragments of calcined human bones having no connection with the skeleton below, and a calcined shell pin.

Burial No. 13, 12 feet E., 2 feet 10 inches down—a bunched burial, the skull face up, the lower jaw under it and turned from it, one humerus above and one beneath, the cranium. Ribs heaped over upper humerus. No other bones except two vertebræ.

Burial No. 14, Vessel A, 11 feet S. E. by S., a vessel in fragments, probably broken by the plow. With it were scattered fragments of calcined human bones and a discoidal stone.

Burial No. 16, 7 feet E. by S., skeleton of female, flexed on the right, head S., on the bottom of a pit, 4 feet 7 inches from the surface. The pit extended 1 foot 9 inches into undisturbed sand. Diameter of pit as it entered undisturbed sand, 4 feet 3 inches. In the upper part of the pit was powdered hematite.

¹ One of these was a partial flexion.

Burial No. 26, male, flexed on the right side, head S. by W. Associated, were: two undecorated tobacco pipes, with parts missing; the lower half of a chert arrow-head; a bit of soapstone pot; two bone pins badly decayed.

Burial No. 30, 3 feet W. S. W., 3 feet down, a skeleton of an aged female, flexed on the right side, heading S. by E. At the neck were small beads and near by were: six imperforate marine shells (*Dosinia discus*)¹; three pebbles used as smoothing stones; one attractive pebble-hammer of quartz; and two rectangular dishes, the smaller inverted within the larger, each with rounded corners and slightly converging sides, having, in addition, an inward slope toward the middle of the longer sides. On the base of the smaller vessel and extending somewhat over on one side, is a curious incised decoration shown diagrammatically in Fig. 47.

Professor Holmes considers it to be "most certainly representative of some life form or forms."

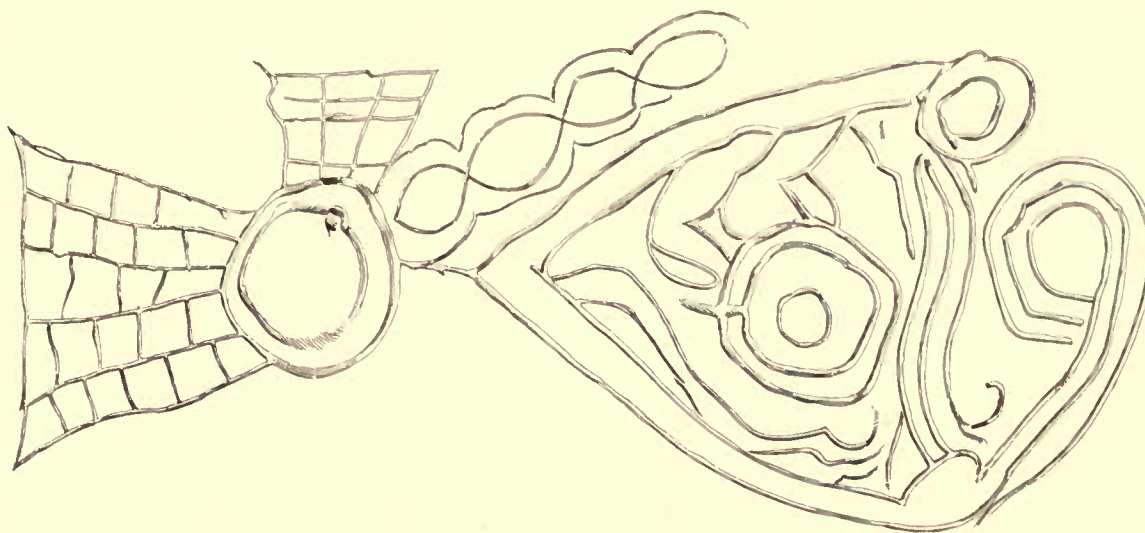


Fig. 47.—Incised decoration on dish. Mound at Dumoussay's Field. (Full size.)

Professor Putnam thus writes of it:—"As to the figure carved on the oblong dish from the Sapelo Island mound, both Mr. Willoughby and I find ourselves unable to reduce it to its elements. It is probably a conventionalized figure, which in time will be traced back to its realistic form."

The approximate measurements of the larger vessel, in which we noticed hematite, are as follows: length, 9 inches; breadth, 4.5 inches; height, 1.5 inches. The smaller dish was approximately 7 inches long, 3.25 inches wide, and 1.5 inches high.

Burial No. 32, Vessel B, 4 feet W. Just below the surface, was an undecorated imperforate bowl in fragments containing bits of unremated bones of a young infant. Nearby were: an undecorated imperforate vessel with globular body, constricted neck and flaring rim, of about 3 pints capacity; one shell drinking cup and one conch shell.

Burial No. 34, 13 feet E. by N., a skeleton of a male, flexed on the right side, head S., having in association a mass of powdered hematite.

¹ Determined by Professor Pilsbry.

Burial No. 35, 6 feet N. W., 3.5 feet down, skeleton of a child, flexed on the right side, head S. W. by S. At the neck were eight massive beads of shell, the largest 2 inches in length, and a number of small beads. On the chest was a rattle made from the shell of a tortoise, very badly decayed, having within many little pebbles; a gorget of shell with part of the rim missing, having a diameter of 2.6 inches, bearing the design of a rattlesnake.

Burial No. 36, Vessel C, 7 feet N. W. by W. A few inches below the surface was a badly crushed, undecorated, imperforate vessel held in place by sand, 17.75 inches long with a maximum width of 12 inches. The orifice is 14 inches in length and 9.5 inches wide. The height varies from 6 inches at the middle of the side to 7 inches at the end. In shape the vessel resembles the larger one described with Burial No. 30. At the bottom of the vessel were small shell beads in numbers, while powdered hematite was present in it in places. The top was covered or partly covered by fragments of earthenware, not representing any entire vessel. This oblong vessel, which, pieced together, is shown in Plate VIII, enclosed a lower jaw; arm bones on either side and in the middle, ribs; part of the sternum and a few vertebræ. These bones were not in anatomical order.

In the sand immediately below the vessel were the skull without the mandible; the pelvis with the left lower extremity in anatomical order and flexed. The bones of the right leg were parallel to, and alongside of, those of the left leg, while the right thigh was about one foot away. Scattered phalanges and vertebræ lay about and the portion of the sternum not contained in the vessel was present. With these bones were massive shell beads and a shell drinking cup. This burial we consider the most interesting of any it has been our fortune to encounter.

Burial No. 41, 10 feet N. W. by N., 1 foot 2 inches below the present surface, was a bunched burial, having: the bones of the lower extremities with one tibia reversed from its femur, the long bones parallel; the pelvis on top; the ribs mingled; one humerus; no forearm bones; no cranium and but one vertebra.

Burial No. 46, 17 feet N. N. E., 2.5 feet down, a skeleton of uncertain sex, flexed on the right, heading S. With it was a shell drinking cup and one pebble.

Burial No. 48, 16 feet N. N. E., 2 feet 3 inches down, was the skeleton of a male, on right side, head S. by E. In the grave with the skeleton, 2 feet west of it, were two vessels, each of about 2 quarts capacity, of the type described as found near Burial No. 32, each on its base but tilting toward the other, so that a part of the rim of one lay in the aperture of the other. The interior of one was coated with red pigment. Near the knee of the skeleton were fragments of a cord-marked bowl of about three quarts capacity, not together, but spread out at some distance one from the other. This bowl, when pieced together, showed a base-perforation. Below the upper margin, on either side of a crack, were two perforations placed to permit the passing through of a cord or sinew to hold together the parts on either side. Below the skeleton and the two vessels first described was a continuous layer of decayed wood or bark.

Burial No. 49, 22 feet N., just beneath the surface was the skeleton of a male,



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partly flexed on the right side, heading S. With it were hematite and a rude pendant wrought from a section of the columella of a marine univalve, grooved at one end for suspension.

Burial No. 50, Vessels D and E, 24 feet N., just beneath the surface, was a badly broken vessel of the ordinary type with a perforated base. The rim had been ploughed away. Within were fragments of bones of an infant so young that the milk teeth had not erupted. Above this vessel was an inverted bowl in fragments, undecorated save for a row of small knobs beneath the exterior margin.

Burial No. 51, 25 feet N. by W., nine inches down, a skeleton of a male, flexed on the right side, head S. by E. Associated was a nest of small pebbles, doubtless formerly included within a tortoise shell.

With a number of burials not especially noted was decayed wood or bark. In the mound, loose in the sand, was a somewhat fragmentary undecorated tobacco pipe. Sherds, undecorated, cord-marked and with check and complicated stamp, were present. A portion of an undecorated vessel which, while whole, had also seen service as a hone, showed five grooves, a part of one of which had been on the missing portion.

ABORIGINAL ENCLOSURE AT SAPELO HIGH POINT, SAPELO ISLAND, MCINTOSH COUNTY.

On Sapelo High Point, near the northwest end of Sapelo Island, overlooking Sapelo Sound and, at periods of storm, washed by the waters of Big Mud river (the southernmost fork of the sound) which had laid bare a section of the walls, is an almost circular aboriginal fortification or ceremonial enclosure. This enclosure (see plan, Fig. 48), which we examined by permission of Amos Sawyer, Esq., upon whose property it is, has a diameter, including the walls, of somewhat over 300 feet. The walls have an average height of from 5 to 7 feet, and a thickness of about 50 feet at the base. They are flattened on top where at present they have an average width of from 10 to 15 feet. They are covered with forest trees, and are composed exclusively of shells, mainly those of the oyster, with the usual midden refuse intermingled, such as fragments of bone, bits of earthenware, and the like.

Those most familiar with the history of Southern Georgia have failed to find any allusion to this work in chronicles or histories, nor does any local tradition attach to it.

That the work is aboriginal is, in our opinion, beyond the shadow of a doubt since a fortification made by Europeans would be of sand found on the spot and not from shells gathered here and there from small deposits at a distance. On one side of the mound only are shells within sight, and these consist of circular deposits not over 18 inches in height, from which no shells have been taken. There is no question then but this is one of those symmetrical works of the aborigines made by piling shell through a period of time to form some definite shape such as a great ridge on Barbour's Island not far from Sapelo, or at Enterprise, Florida, or the great oblong mound of shell lying in the swamp near Volusia, Florida, with no shell surrounding it, a full description of which we have given in the *American Naturalist*.¹

¹ "Certain Shell Heaps of the St. Johns River, Florida," January, 1893.

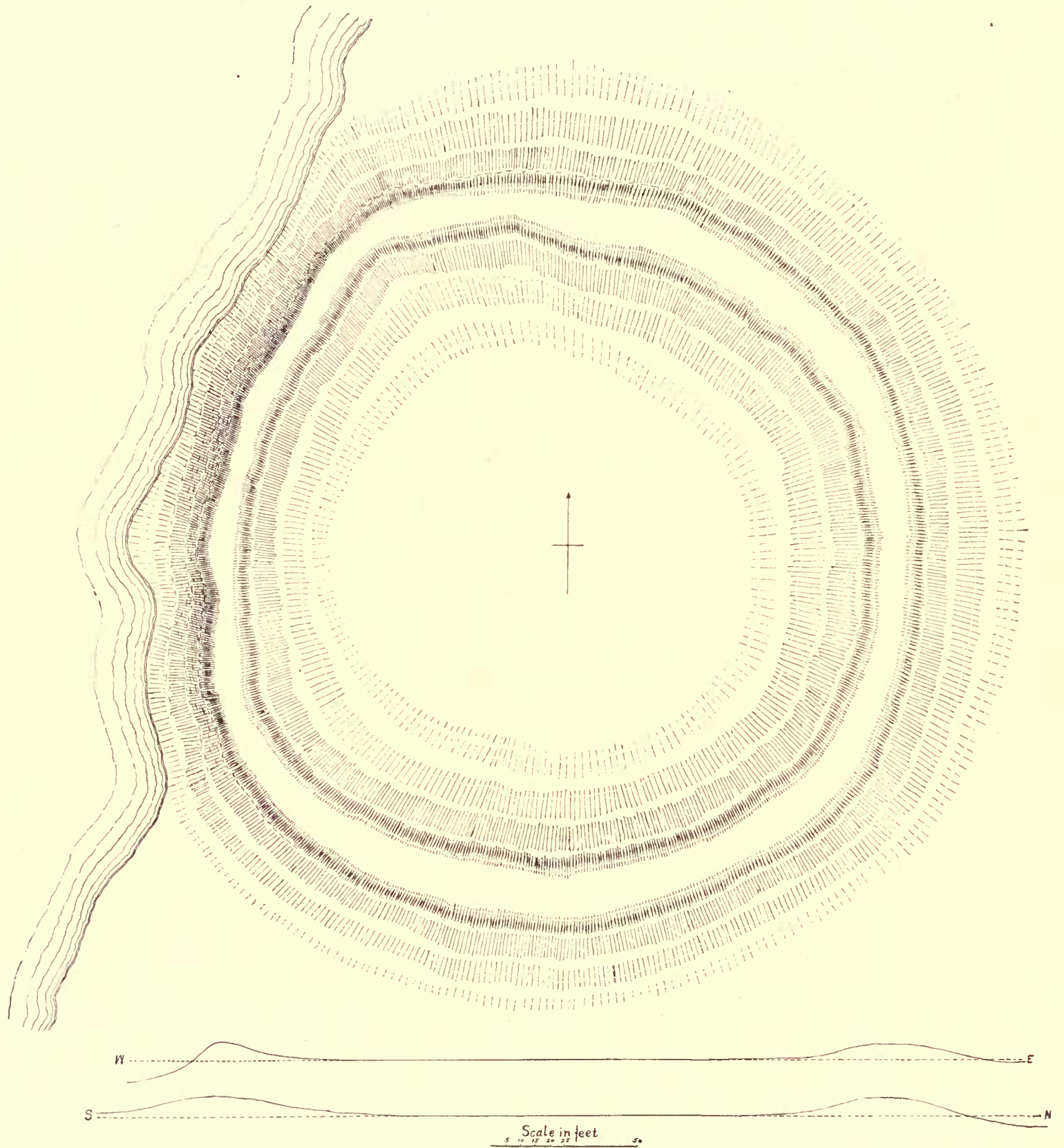


Fig. 43.—Plan of "Indian fort," Sapelo Island.

Excavations made within the enclosure gave varying results. At one point yellow, undisturbed sand was reached about 1 foot beneath the surface. Another excavation went through loam and midden refuse to a depth of 2.5 feet. Earthenware in fragments, shattered bones of the deer and a fragment of a temporal bone from a human skull were met with.

In a description of this enclosure, appearing in a report of the Smithsonian Institution,¹ reference is made to two circular enclosures in the vicinity. One is at present indistinct and has by no means the height assigned to it. The other escaped our attention.

Near the center of Sapelo Island is a mound of considerable size, the property of a Mr. Keenan, or Kennon, with whom we were unable to come to terms.

The Island of Blackbeard, called after the famous pirate of that name, lies to the northeast of Sapelo. We are indebted to the courtesy of Dr. Edward Giddings for permission to make any investigation we saw fit upon the island. Unfortunately, we were unable to locate any aboriginal works upon it though "Money Old Field," a tract formerly under cultivation, seemed to offer a likely situation. This field has been fairly riddled by seekers after mythical treasure, and it is owing to this foolish idea of buried gold that scientific investigators meet with hindrance from the ignorant.

MOUNDS AT BAHAMA, MCINTOSH COUNTY.

Bahama,² situate at the union of Barbour's Island river and South Newport river, has a wide expanse of cultivated fields, many of which, by the presence of numerous low shell heaps, give evidence of aboriginal occupation. A careful search upon two occasions was accorded to this promising site with but meagre result. Two small mounds, each but little above the general level, were met with. These mounds were not completely demolished, though the central parts were dug out, with considerable additional trenching. In each case no interments were discovered save in a central pit.

In one mound the pit, filled to the surface with oyster shells, contained a confused mass of human remains, including three crania unaffected by fire. With these bones were fragments of calcined human remains and one piercing implement of bone.

In the second mound, upon which only scattered oyster shells were visible, was a pit about 3.5 feet deep, roughly circular and about 7 feet across at the top. The sides of the pit, which converged, were coated with a layer of oyster shells, about 6 inches thick. On the base was a deposit of remains similar in character to those in the other mound, including six crania. A certain amount of hematite was in association.

¹ 1872, page 422 *et seq.* "Mounds in Georgia," William McKinley.

² The post-office at this point has, we believe, lately been given the name Lacey.

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MOUNDS AT LAUREL VIEW, LIBERTY COUNTY.

Laurel View is a high bluff on the south side of the Medway river. About 1 mile south of the bluff was a very symmetrical mound of white sand, 7 feet high and 38 feet across the base. It was on the property of Mr. McClosky of Augusta, Georgia. Prior to our visit a large trench had been dug completely through the mound and a portion of one side had been dug away. The remainder of the mound was totally demolished by us. A number of pockets of calcined human bones—

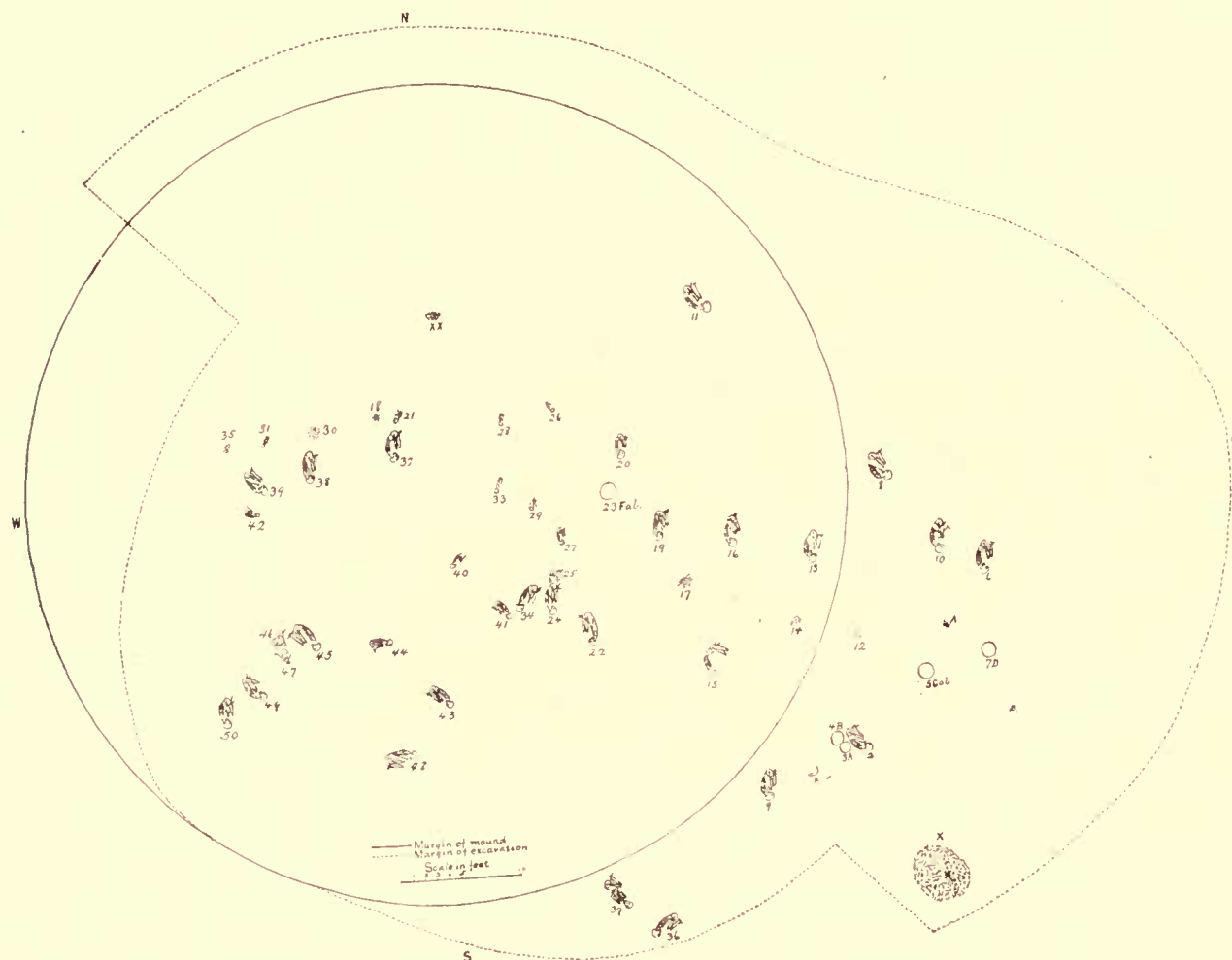


Fig. 49.—Diagram of mound near South-end Settlement.

about twenty—some associated with pink sand, were met with, also several solitary skulls very badly decayed.

A chert arrowhead lay loose in the sand and another was found unassociated with a cranium. A piercing implement of bone, of the ordinary type, lay with calcined remains.

About 100 yards northwest of the mound just described was a small one, intact as to previous investigation but much reduced in height by the plow. Its altitude

was 22 inches; its diameter of base, 30 feet. It was totally demolished, being dug through at a depth considerably lower than the level of the surrounding territory.

Human remains were met with at eight points, some at a depth of 3 feet. At one point was a solitary skull unaffected by fire. Seven pockets of calcined bones comprised the remainder of the human remains in the mound, with the exception of one femur showing no trace of fire, which lay immediately beneath one of the masses of calcined bones.

Several local streaks of bright sand colored with hematite were present in the mound and scarlet sand was occasionally with human remains.

Five or six sheets of mica, with one of the pockets of burnt bones, were the only artifacts present in the mound.

ST. CATHERINE'S ISLAND, LIBERTY COUNTY. MOUND NEAR SOUTH-END SETTLEMENT.

About three-quarters of one mile in a northerly direction from the South-end Settlement, in a field long under cultivation in former times but fallow at the time of our visit, was a rather symmetrical rounded mound 3 feet in height and 68 feet across the base, the outline of which was almost exactly circular, though, as the reader may see by consulting the diagram (Fig. 49), burials and artifacts were by no means included beneath the slope of the mound but extended to the east and south-east in perfectly level ground.

There had been no previous investigation.

The mound was dug through, including considerable outlying territory. Throughout the mound proper there ran, commencing at the beginning of what we took to be the original slope (for the external lower portions of the rise seemed to have been ploughed down from above), a dark band not on one level, as in many mounds we have investigated, but extremely irregular, often continuing a considerable distance into the pits which were numerous in certain portions of the mound. In default of a better theory, we believe that these pits were dug and but partly filled previous to the erection of the mound; that the field continued to be a dwelling site, and that the deposit of offal, debris, charcoal and the like, created a black surface layer in the depressions as well as on the level ground.

The mound was composed of dark loamy sand resting upon undisturbed yellow sand. Local layers of oyster shells were present, and the central portion of the mound was made up of a deposit of oyster shells about 2 feet thick—not midden refuse but loose as though brought there at one time and deposited. This deposit extended in some directions about 10 feet from the center, in others 20 feet, while to the N. W. it continued, tapering off in thickness, to the very verge of the mound. From the highest point of the mound to the level of the black base-line, was a perpendicular distance of just 3 feet.

The following is a detailed description of burials to be used in connection with the diagram.

Burial No. 1, 51 feet, E. S. E., from the center of the mound proper, beneath perfectly level ground, lying at the bottom of a pit, 2.5 feet from the surface, were fragments of a human skull badly decayed.

Burial No. 2, 42 feet S. E. by E., on undisturbed sand, at the bottom of a pit of undetermined limits, 32 inches from the surface, was the skeleton of an adult, much decayed, apparently flexed on the right side, heading S. E. With the bones were: a pebble-hammer; a lot of red paint made from red oxide of iron, as was shown by chemical determination; a flake of chert; a small bit of a soapstone pot and twenty-three quartz pebbles each about the size of a pea, lying closely together—the remains of a rattle.

Burial No. 3, Vessel A. To the S. W. of Burial No. 2, in contact with its base, resting on undisturbed sand, 36 inches from the surface, entirely intact, was a vessel of the ordinary type (see introductory remarks as to this type at the commencement of this Report). Height, 15.5 inches; maximum diameter of body, 11.5 inches; diameter of mouth, 13.5 inches. Within this vessel, which was unprotected by an imposed vessel or by fragments, were a number of human bones of an adult, probably representing an entire skeleton. Long bones together were upright against the side, while the cranium lay face down with ribs and other bones beneath, as shown sectionally in the frontispiece, in which, however, all the long bones are not distinguishable, certain ones being in rear of others. The skull and long bones are represented exactly as found, never, in fact, having been removed from the vessel, but treated in place with numerous coats of shellac to impart durability. The fragmentary smaller bones and the beads were removed with the sand and subsequently replaced, but not exactly in their former position. Most of the beads lay on top of the mass of bones at the base of the vessel.

Burial No. 4, Vessel B. To the north of, and in contact with, Vessel A, was an imperforate one of similar type somewhat crushed. Within it were the bones of an adult, not in anatomical order and very much decayed. The vessel was sent to the Ontario Archaeological Museum.

Burial No. 5, Vessels Ca., b., 44 feet E. S. E., in a pit of uncertain limits, having its base 3.5 feet from the surface and extending 22 inches into undisturbed sand, was a vessel of the ordinary type, imperforate as to the base, having the rim badly crushed. It contained the much decayed bones of an adult, probably male, not in anatomical order, with 34 large shell beads. Capping this vessel, inverted, was an imperforate bowl, undecorated save for an encircling row of knobs some distance apart, about 1.5 inches below the rim. The material, gritty ware, was fairly good in this case and had resisted pressure with the exception of a part of the rim and a portion below it, which were recovered. Diameter of body, 16 inches; of mouth, 14.5 inches; height, 9.5 inches. Ca. and Cb. were sent to the Peabody Museum, Cambridge, Mass., where they have been carefully put together.

Burial No. 6, 46 feet E. by S. was a pit 4.5 feet long, having its base 38 inches from the surface. It extended 17 inches into undisturbed sand and was filled with oyster shells and black loam apparently from a local superficial layer. On the base was a skeleton, flexed on the right side, head S.

Burial No. 7, Vessel D., 48 feet E. S. E., just beneath the surface, upright, with the rim and upper portion broken by the plow, was a vessel of the ordinary type, having

a large intentional perforation of the base. The vessel was partly filled with oyster shells, though none was present on the surface at that part of the mound. On the base of the vessel was the skeleton of a child three or four years of age, flexed to such an extent that the head was almost in contact with the legs.

X. 55 feet S. E., a layer of charcoal and sand, the upper margin 6 inches below the surface, 4 inches thick at the start and 4 feet 2 inches across. It extended inward 5 feet 3 inches, tapering off somewhat in thickness.

Burial No. 8, 38 feet E., in the bottom of a small pit, 26 inches from the surface and extending into undisturbed sand, was the skeleton of an aged female, flexed on the right side, head S. E.

Vessel E, 39 feet S. E. by E., 2.5 feet from the surface, was an imperforate undecorated boat-shaped vessel, entirely intact. At either end was a small perforation for suspension. This vessel apparently contained no remains of any sort, nor did it seem to be in the vicinity of a burial. Maximum diameter of mouth and length, each 7 inches; maximum diameter of body, 9 inches; minimum diameter of mouth, 4.1 inches; minimum diameter of body, 5.3 inches; height, 4 inches.

Burial No. 9, 38 feet S. E., on undisturbed sand, on the side of a large pit of undetermined limits, was a skeleton of uncertain sex, much decayed, flexed on the right side, head S.

Burial No. 10, 42 feet E. by S. This skeleton of a female, flexed on the right side, head S., lay on undisturbed sand, 1.5 feet down. Oyster shells from the surface lay with the loam around it. Beneath the chin was a shell pin of ordinary type.

Burial No. 11, 27 feet N. E. by E., on the bottom of a pit, 3 feet 9 inches from the surface, 2 feet of which was into undisturbed sand, and having a diameter of 5.5 feet where it entered the undisturbed sand, was a badly decayed skeleton, probably male, flexed on the right side, head S. E.

Burial No. 12, 37 feet E. S. E., 2 feet 8 inches down, just above the bottom of the pit, were traces of bones in powder. Three bits of chert and several small flakes of mica lay with them.

XX. 15 feet N., a pocket of charcoal in the sand, 15 inches across at the start and 3 inches thick, tapering into the mound 9 inches.

Burial No. 13, 32 feet E. by S., a flexed skeleton of a female, on the right side, head S., let into undisturbed sand, 2 feet from the surface.

Burial No. 14, 32 feet E. S. E., 1 foot 6 inches from the surface, were a few crumbling fragments of bone, having with them two small polished chisels of stone; one graceful arrow point of chert and a nest of small pebbles formerly belonging to a rattle.

Burial No. 15, 27 feet S. E. by E., 2.5 feet from the surface, on the bottom of a pit let 8 inches into undisturbed sand, was the skeleton of a male, on the right side, partly flexed, the knees being at right angles to the body, head S. With the remains were: a nest of small pebbles, several small fragments of a soapstone vessel and three undecorated earthenware tobacco pipes of ordinary type, one against the skull, the others loose in the sand, 13 inches and 15 inches, respectively, above the

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bones. One was partly filled with carbonized tobacco. These two pipes may have been contributions from bystanders during the filling of the grave.

Burial No. 16, 25 feet E. by S., a grave 5.5 feet long, extending 2 feet to undisturbed sand. On the bottom, 3 feet 9 inches from the surface, was a skeleton of a male, on the right side, head S. With it were: a small undecorated tobacco pipe of earthenware; a discoidal stone about 2 inches in diameter and 1 inch in thickness and a small ball of resinous material.

Burial No. 17, 22 feet E. S. E., 28 inches down, lying on the line of undisturbed sand, with no especial grave discernible but in generally disturbed material, was a pile of human bones in disorder with long bones on top of, and along side, the skull.

Burial No. 18, 8 feet N. W. by N., 4 feet down, in a small pocket were the greatly decayed remains of a very young infant, so crushed together that no determination as to position was possible. Associated were a number of shell beads.

Burial No. 19, 19 feet E. by S. A grave extending 1 foot 10 inches into undisturbed sand, the base 3 feet 7 inches from the surface, with a maximum diameter of 6.5 feet. On the bottom was the skeleton of a female, flexed on the right side, head S. On the trunk was hematite. Under the arm was a number of beads roughly wrought from sections of columellæ, each about 1 inch in length.

Burial No. 20, 16 feet E. by N., 4 feet 10 inches from the surface, on the bottom of a grave 6 feet across where it entered undisturbed sand into which it extended 2 feet 8 inches, was the skeleton of a child about 6 years of age, flexed on the right side, head S.

Burial No. 21, 7 feet N. N. W. A grave having its base 2 feet 3 inches from the surface, the lower 1 foot extending into a layer of oyster shells. On the bottom of the grave, which had a length of 22 inches, was the skeleton of an infant, badly crushed, with the head S. W. Shell beads were in association.

Burial No. 22, 17 feet S. E., on the base of a grave, 2.5 feet from the surface and extending about 1 foot 9 inches into undisturbed sand, was the skeleton of a male, flexed on the left side, head S. With it were large shell beads and an undecorated earthenware tobacco pipe of ordinary type lying near the skull.

Burial No. 23, Vessel Fa., b. Let into the yellow sand, with its base 3 feet 4 inches from the surface, was a burial jar (Fa.) of the usual type, imperforate, upright and very badly crushed. Within it were bones, probably belonging to a female, the long bones on end, side by side, near the skull, the other bones beneath. This jar, about 18 inches high, had been capped by an inverted bowl (Fb.) of black ware, with a decoration of small knobs, similar to the one previously referred to. This bowl, also crushed, was sent with the other vessel to the Museum of Natural History, New York.

Burial No. 24, 13 feet S. E., 3 feet from the surface, in a pit of undetermined limits, was a skeleton of a female, flexed on the right side, head S.

Burial No. 25, disturbed by the burial of No. 24, a little to the north of it on the same level, was the skeleton of a child, interred with an imperforate shell drinking eup, into which certain of the bones had been crushed.

Burial No. 26, 12 feet N. E. by E., was the skeleton of an infant, 1 foot 9 inches down, head S. E. The bones were too badly crushed for determination as to position, etc.

Burial No. 27, 11 feet E. S. E., on the bottom of a pit having a diameter of 2.5 feet where it entered the clear yellow sand into which it extended 1 foot 2 inches, and 3 feet 10 inches from the surface, was the skeleton of a child about three years of age, flexed on the right side, head S.

Burial No. 28, 8 feet N. E., 4 feet 10 inches down, let 14 inches into undisturbed sand, was an infant's skeleton somewhat disturbed, probably by the digger.

Burial No. 29, 8 feet E. by S. was another badly-decayed skeleton of an infant, disturbed in excavation. It lay 5 feet 3 inches from the surface in a deep pit.

Burial No. 30, 12 feet W. N. W., in the superficial layer of oyster shells, somewhat disturbed by the plow, was a deposit of calcined fragments of human bones, the only evidence of the practice of cremation present in the mound. Scattered throughout the deposit were numerous shell beads of different sizes, including thirteen fine specimens some over 1.5 inches in length, probably wrought from columellæ of the conch (*Fulgur*). These beads were in a much better state of preservation than others in the mound, which we attribute to their being among oyster shells. Above the deposit was an inverted, imperforate drinking cup of shell (*Fulgur perversum*) and on the outer edge a discoidal stone of about 2 inches diameter.

Burial No. 31, 15 feet W. N. W., an infant's skeleton much decayed, 3 feet 3 inches from the surface in a small pit extending 1 foot 3 inches below the base of the mound.

Burial No. 32, N. W. by N., 5 feet, lying on the undisturbed sand, 5 feet from the surface, at one end of a large pit running 26 inches beneath the base, was the skeleton of a male, flexed on the right side, head S.

Burial No. 33, 5 feet E, in a pit, 5 feet from the surface, were the badly-decayed remnants of the skeleton of a child. Lumps of charcoal lay near by.

Burial No. 34, 12 feet S. E., a skeleton of a female, flexed on right side, heading S. W., in a pit, 3.5 feet from the surface.

Burial No. 35, 18 feet W. N. W., a skeleton of an infant, just beneath the surface, disturbed by the plow. A shell pin was in association.

Burial No. 36, 41 feet S. S. E., on the bottom of a small pit, 32 inches from the surface, were the remnants of a skeleton in the last stage of decay. Apparently it was flexed on the right side, head S. W.

Burial No. 37, 38 feet S. S. E., a skeleton of a female, with trunk on the back, knees flexed to the right, head S. E.

Burial No. 38, 11 feet W. N. W., a skeleton of a male, on bottom of a pit extending into yellow sand, flexed on the right side, head S.

Burial No. 39, 16 feet W. by N., 3.5 feet down, in a small pit was the skeleton of a female, flexed on the right side, head S. E.

Burial No. 40, 6 feet S. by E., in a pit, 4 feet 10 inches down, was the skeleton

of a child, head S. W., too much decayed for exact determination as to position, but a flexed burial on the right side was indicated. At the neck were beads of shell.

Burial No. 41, 12 feet S. E. by S., 3.5 feet down, with the skull resting on the mouth of an imperforate shell drinking cup, was the skeleton of a child from six to seven years of age, flexed on the left side, the head S. E. Small shell beads were at the neck and larger ones at the wrist.

Burial No. 42, 16 feet W., on the base, flexed on the right side, heading E., was the skeleton of an infant about 2 years old. Shell beads were on the legs and neck, a shell pin at the back of the head and a shell drinking cup nearby.

Burial No. 43, 18 feet S, 2 feet 8 inches down, in a large pit was the skeleton of a female, flexed on the left side, head S. E.



Fig. 50.—Pendant of soapstone. Mound near South-end Settlement. (Full size.)

Burial No. 44, 13 feet S. S. W., in a pit extending 1 foot into undisturbed sand, 3.5 feet from the surface, was the skeleton of a child about 5 years of age, flexed on the left side, head E. In association were: shell beads; two fragments of soapstone, from a pot or pots, one wrought into a rude pendant, roughly incised and grooved (Fig. 50); lumps of hematite; a rough arrowpoint; a bone piercing implement, badly decayed.

Burial No. 45, 16 feet S. W., in a pit, 4.5 feet from the surface, was the skeleton of a male, flexed on the left side, head S. E. This pit was filled with a mixture of oyster shells and surface loam.

Burial No. 46, in the same pit, southwest of, and in contact with, No. 45, on the same plane, was a number of bones not in anatomical order, probably belonging to a female. A femur lay partly on the skull, while some of the long bones were out of position and reversed.

Burial No. 47. In contact with No. 46 were a cranium, a femur and a humerus, belonging to a male.

Burial No. 48, 22 feet S. by W., a skeleton badly decayed on the bottom of a pit, 4.5 feet from the surface, heading E. As nearly as could be made out, the skeleton was flexed on the left side.

Burial No. 49, 22 feet S. W., a skeleton of a female on the bottom of a large pit, 3 feet 8 inches down, flexed on the right side, head S. E. Immediately above the bones was a thin local layer of oyster shells.

Burial No. 50, 26 feet S. W., a skeleton of a female, flexed on the right side, head S., on the bottom of a pit, 3 feet 3 inches from the surface.

A number of sherds, undecorated, cord-marked, and adorned with a complicated stamp, were met with throughout the mound.

Among the oyster shells was a piercing implement of bone.

Loose in the sand were several fragments of pebble-hammers and one rude arrowhead of quartz.

In caved sand, probably from a skeleton, were three small polished stone chisels.

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In the mound near the South-end Settlement we note the absence of a great central pit and the presence of cremation at but one point; also that the great majority of burials were flexed on the right side and headed in a southerly direction, quite in keeping with the usual custom. All urn-burials of uncremated remains, with but one exception, were of adults, coinciding with the custom as practised on Sapelo Island. On the other hand, the reader will recall that infants alone were thus buried at Creighton Island, and will see further on the urn-burial of infants at Ossabaw Island.

ST. CATHERINE'S ISLAND, LIBERTY COUNTY. MOUND NEAR MIDDLE SETTLEMENT.

In a large field formerly under cultivation, but at present covered with scrub and timber of small size, about one-half mile in a southwesterly direction from the Middle Settlement, is a mound which has been ploughed over in former times and has been dug into to a considerable extent. Its height is 5 feet; the diameter of its base, 54 feet. It was trenched in various directions, and portions of the center were dug out without result. It was composed of yellowish-brown sand, unstratified, and may have been used for domiciliary purposes.

ST. CATHERINE'S ISLAND, LIBERTY COUNTY. MOUND IN KING'S NEW GROUND FIELD.

This mound, or what remained of it after years of cultivation, lay in a field within sight of the ocean, about one mile and three-quarters in a southeasterly direction from the main landing at St. Catherine's Island. Numerous low shell deposits were in the vicinity, though on the surface of the mound were scattered oyster shells only.

The mound had a height of 22 inches above the general level, which altitude agreed with observations taken at the completion of a cross-section.

Beginning far out in the level ground, trenches were run in, in all directions, until evidence of disturbance in the sand was met with. The usual great outlying pits, filled with rich, black loam, were present, but containing no burials, so far as our excavations went.

Through a point taken as the center of the mound proper, a straight line was drawn extending 51 feet to the northwest and 45 feet to the southeast. Connecting these two terminal points an irregular semi-circumference was taken, having a maximum distance from the center of 57 feet, as shown in diagram (Fig. 51), which included, it is believed, all the outlying pits and burials belonging to the southern and western half of the mound. This portion was carefully dug through to a depth at times of over 6 feet. The eastern and northern parts of the mound were not investigated. Throughout portions of the mound ran a black band from 6 inches to 1 foot in thickness, whose upper surface, as a rule, agreed with the general level of the field. But this band was sometimes absent over undisturbed sand, while, on the other hand, it often seemed thicker and darker over pits and graves. We have no solution to offer for this.

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Though the usual great central pit was represented in this mound by a very moderate deposit of bones, yet in no other mound have we found so many grave-pits of such size as in this one.

Beginning 40 feet W. S. W., from the center, was a pit extending in 15 feet and having a breadth of 25 feet¹ and a maximum depth of about 6 feet. In this grave-pit were Burials Nos. 1, 7, 8, 12, 13, 15 and 22. The black band of which we have spoken was distinctly present above this entire pit at a depth of about 2 feet below the surface of the mound, while at either side at the same level, over undisturbed sand, it was entirely wanting for some distance.

There were present a few local layers of oyster shells and one mainly of fresh-water mussel shells (X), 13 inches by 20 inches by 10 inches thick. Its upper margin was 9 inches below the surface.

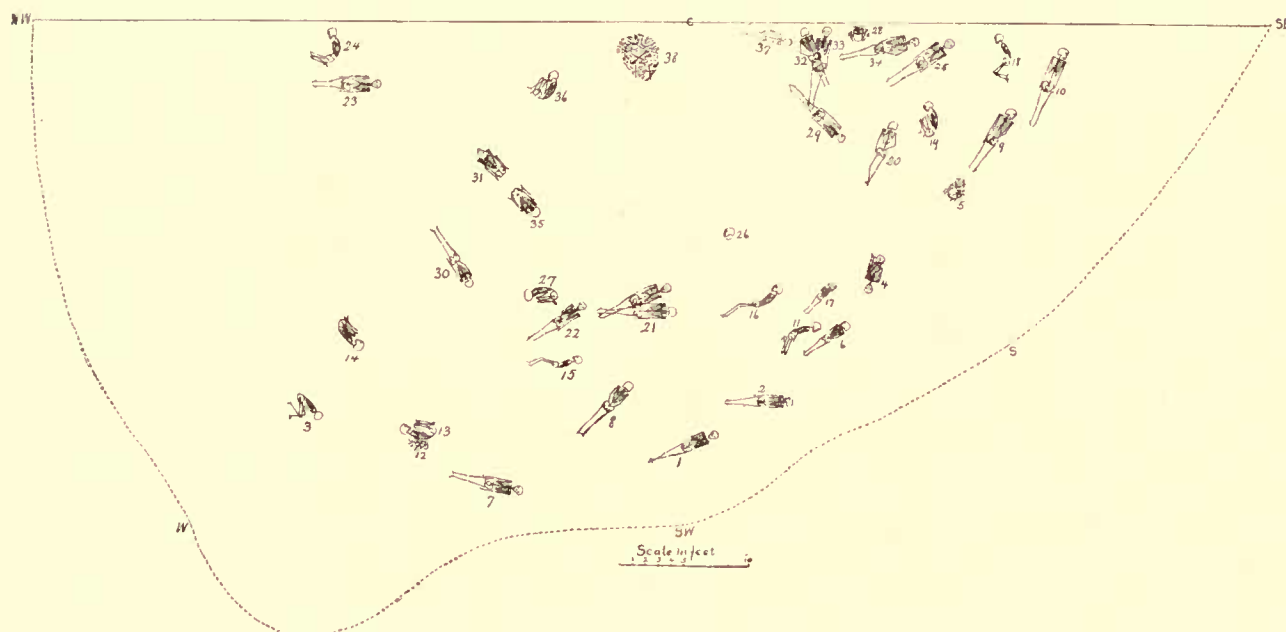


Fig. 51.—Diagram of one-half of mound in King's New Ground Field.

Sherds found by us were coarse and either undecorated or cord-marked. The complicated stamp was absent.

We give detailed descriptions of burials in connection with the diagram, omitting, as a rule, the size of pits:—

Burial No. 1, 33 feet S. W. from the center, 2.5 feet down, skeleton of female, head E. S. E., at full length on back, 5 feet 10 inches as it lay with feet partly extended.² Right humerus parallel to body, with forearm up and across chest. Left humerus along trunk, with left forearm flexed upward with hand to shoulder. Right ankle crossing left.

¹ These and kindred measurements are, of course, approximate.

² These measurements of skeletons at length do not indicate individuals of unusual size. The bones were not so closely in contact as in life, the shifting of the sand causing more or less separation.

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Burial No. 2, 30 feet S. W. by S., 2 feet 8 inches down, skeleton of female at full length on back, head S. E., face to the right, 5 feet 4 inches as it lay with feet partly extended. Right arm and forearm parallel to body. Left upper arm along body with forearm crossing to pelvis. A few long bones lay loose in the sand about 1 foot above this burial.

Burial No. 3, 42 feet W., 2 feet 9 inches down, skeleton of aged male, head S., in semi-reclining position on left side. Incisor stumps only remaining in lower jaw. Alveolar process of other teeth absorbed. This especially marked in upper jaw. Signs of inflammatory disease in tibia, fibula and clavicle.

Burial No. 4, 25 feet S. by W., 2 feet down, head W. S. W., trunk on back, legs drawn up, knees somewhat to the left. A few bits of earthenware, perhaps by accident, lay with the bones.

Burial No. 5, 25 feet S. by E., 4 feet 4 inches to the bottom of a pit filled with black loam and oyster shells, extending 2 feet 6 inches into undisturbed yellow sand. Over this pit the black band continued, though dipping somewhat. Three feet 8 inches down in this grave was a bunched burial, probably of a male. Long bones were on either side of the skull, while two clavicles, together, lay somewhat apart from it. Certain bones were missing. The spinal column and ribs were in order, indicating partial union by ligaments. One ulna and one clavicle sent to Army Medical Museum, Washington, D. C., had false joints, results of former fractures.

Burial No. 6, 27 feet S. S. W., 3 feet 10 inches down, skeleton of a child between 8 and 10 years old, at length on face, chin toward left shoulder, 4 feet 4 inches as it lay, with feet extended, head E. by S. Both upper arms parallel to body; right forearm crossing under pelvis; left forearm not found, probably thrown back by digger.

Burial No. 7, 39 feet W. S. W., 4 feet 2 inches down, skeleton of female at full length on back, head S. E. by S., 5 feet 8 inches from head to heel as it lay. Upper extremities parallel to body.

Burial No. 8, 33 feet S. W. by W., 3 feet 10 inches down, skeleton of male at full length, face down, head E., 5 feet 6 inches from head to foot. Right and left arms parallel to body, forearms passing under pelvis.

Burial No. 9, 25 feet S. S. E., 4 feet 8 inches down, skeleton of male at full length on back, 5 feet 10 inches long with feet extended, head E. by N., chin to left shoulder. Right upper extremity along side of body. Left upper arm along thorax with forearm crossing to pelvis.

Loose in the sand, about 6 inches above No. 9, was the femur of an adult.

Burial No. 10, 28 feet S. E. by S., 6.5 feet down, on the bottom of a pit, 7 feet by 10 feet and extending 2 feet 10 inches into undisturbed sand, was a skeleton of a male at full length on the back, measuring 6 feet 6 inches as it lay, with feet extended, head E. N. E., chin turned toward left shoulder. Arms parallel to body. Sand colored with hematite lay near the skull. The black basal band lay above this pit.

Burial No. 11, at the same level, but a little farther in than skeleton No. 6,

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was a female skeleton on the left side, with the thighs partially, and the legs completely, flexed. The right upper extremity was parallel to the body, the left was down and under. The skeleton measured 3 feet 10 inches as it lay.

Burial No. 12, 38 feet W. by S., 5 feet down, a number of human bones not in anatomical order.

Burial No. 13, just below No. 12, on the bottom of the great pit, lying on undisturbed sand, was an ordinary flexed burial of uncertain sex, on the left side, head N. W., 5 feet 9 inches down.

Burial No. 14, 36 feet W., 2 feet 4 inches down, on the bottom of a well-defined pit apparently dug from the surface and filled with black loam and oyster shells, though oyster shells on the surface at the time of opening the mound were few and scattering, was a flexed burial of a male on the right side, head S. S. W.

Burial No. 15, 29 feet W. S. W., 4 feet 5 inches down, the skeleton of a child, about 10 or 11 years old, measuring 4 feet 1 inch as it lay, on the right side, the thighs somewhat drawn up, the knees bent, head E. S. E. Right upper extremity along body, the left crossing to pelvis.

Burial No. 16, 23 feet S. W. by S., 2 feet 9 inches down, measuring 5 feet 3 inches as it lay, with feet partly extended, was the skeleton of a woman on the right side with thighs bent slightly forward, legs down from thighs. Right upper arm a little out from body, with forearm returning to trunk. Left upper arm parallel to body, with forearm crossing the pelvis. Head E. by S.

Burial No. 17, 24 feet S. S. W., 5 feet down, skeleton of a child about 5 years old, full length on back, chin toward left shoulder, measuring 3 feet 4 inches as it lay, with feet somewhat extended. Right upper arm along chest, forearm removed by digger. Left humerus along chest, forearm crossing to pelvis.

Burial No. 18, 25 feet S. E. by S., 4 feet down, skeleton of female on right side, partly flexed, head N. E. by N. Right upper arm out a little with forearm returning toward pelvis. Left upper arm parallel to body, with forearm crossing to pelvis.

Burial No. 19, 20 feet S. S. E., 3 feet 10 inches down, female flexed on right side, head N. E.

Burial No. 20, 18 feet S. by E., 4 feet down, skeleton of female, full length, face down, measuring 5 feet 3 inches from head to heel, head E. N. E. Right arm akimbo. Left arm parallel to body. Left heel resting on right ankle.

Burial No. 21. 23 feet S. W. by S., 3 feet 8 inches down, were two burials on the same plane, diverging from the knees with the heads 2 feet apart. One, a male, lay at full length on face, and measured 6 feet 3 inches as it lay with feet extended, head S. E. Upper extremities parallel to body. The other, a female, head E. S. E., at full length on back, measured 5 feet 11 inches, with outstretched feet.

Burial No. 22, 28 feet W. S. W., 4 feet 9 inches down, skeleton probably female, full length on back, 5.5 feet long with feet extended, head E. by S. Right upper arm along body with forearm crossing pelvis. Left upper extremity parallel to trunk.

Burial No. 23, 30 feet N. W. by W., 4 feet 9 inches down, skeleton of male, at full length on back, head S. E., 5 feet 4 inches from head to heel. Upper extremities parallel to body.

Burial No. 24, 23 feet N. W., 3 feet 9 inches down, skeleton of female, partially flexed on the right side, with head N. E. by E.; thighs at right angle to body, legs flexed sharply back on them.

Burial No. 25, 19 feet S. E. by S., 5 feet down, skeleton of female, at full length on back, 5 feet 10 inches long with feet outstretched, head E. by S. Upper extremities parallel to body.

Burial No. 26, 17 feet S. W. by S., 2 feet down, beneath the outer margin of a local shell layer, was a skull with the inferior maxillary wanting and a portion of one rib. The local shell layer was 7 inches thick, and extended inward a number of feet.

Burial No. 27, 24 feet W. S. W., 3 feet 4 inches down, skeleton of male, flexed on the right side, measuring 2 feet 10 inches as it lay, the head pushed up at right angle to the body by lack of space in a pit. Head N. W. On the glabella was the mark of a severe blow.

Burial No. 28, 13 feet S. E. by S., skeleton of uncertain sex, 2.5 feet down, in a sort of sitting position, facing S. W.

Burial No. 29, 15 feet S. by E., 4 feet down, skeleton of female, at full length on back, head S., arms parallel with body, measuring 6 feet as it lay, the feet fully extended.

Burial No. 30, 26 feet W., 4 feet down, skeleton of female, at full length on face, 5 feet 2 inches from head to heel; head S. by W. Right upper extremity parallel to body. Left humerus parallel, forearm crossing to pelvis.

Burial No. 31, 19 feet W. by N., 1 foot 6 inches down, flexed skeleton of female, in crouching position, head N., face looking upward.

Burial No. 32, 11 feet S. S. E., skeleton of female, at full length, face down, head N. N. E. Legs and feet cut off by digger. Right upper extremity along body. Left humerus a little out with forearm crossing under pelvis.

Burial No. 33, 3 feet below No. 32. Skeleton of female, full length on back, head N. E. by E., 6 feet 6 inches as it lay. Arms parallel to body.

Burial No. 34, 15 feet S. E. by S. Skeleton of female, at full length on back head E. S. E., measuring 6 feet 2 inches, slanting into a pit with the head 1 foot 9 inches below the feet.

Burial No. 35, 19 feet W. Skeleton of male, in crouching position, head S., 1 foot 9 inches down.

Burial No. 36, 18 feet W. N. W., 1 foot 6 inches down, skeleton of adolescent, much flexed on right side, head E. On the skull were eight parallel rows of small shell beads, in close contact. Under the chin were small perforated marine shells (*Olivella*). The epiphyses of this skeleton were unattached. Both humeri showed considerable perforation.

Burial No. 37, 8 feet S. E. by S., skeleton of very young child, at full length,

head S. E., too badly crushed for farther determination. With it was the base of a cord-marked vessel of clay.

Burial No. 38, 6 feet W. by N., at the start just beneath the surface and slanting down to a depth of 1 foot 5 inches, was a confused mass of human bones about 7 inches thick, 4 feet wide and tapering inward a distance of 2 feet 9 inches. At one extremity of this deposit were a few fragments of calcined human bones, so near the surface that probably the major portion had been scattered by cultivation. With this deposit were: hematite; a few shell beads; two small, imperforate clay bowls, the smaller inverted within the larger; and a marine shell (*Pecten nodosus*) in two fragments.

In this mound, so far as investigated, though burials at length predominated, we note a considerable diversity of forms, a contrast to a neighboring mound in the Greenseed Field.

The paucity of artifacts is notable.

ST. CATHERINE'S ISLAND, LIBERTY COUNTY. MOUND IN THE GREENSEED FIELD.

This mound, in a field long under cultivation, about 1.5 miles in a southerly direction from the main landing, was but little, if any, above the general level. A few scattered oyster shells were lying upon the surface. In order to include any possible pit or outlying burial, a circle with a diameter of 84 feet was dug through which included considerably more than that part of the territory devoted to interments, the most remote of which proving to be 31 feet from the center. Evidence of human handiwork was apparent at a considerably greater distance. As in the case of certain other mounds, a black band, apparently a basal line, was present at places, occasionally cut through by pits, and again following the line of excavation down almost to the upper margin of the bones.

In this mound, which extended some distance below the surface, were no grave-pits let into undisturbed sand and, with two or three exceptions, separate graves in the body of the mound were not determinable.

The mound was composed of yellowish-brown sand with practically no shell except in a central pit, roughly bowl-shaped, having a maximum diameter of about 9 feet. This shell deposit, beginning less than one foot below the surface, with a thickness of about 18 inches, attained a depth of nearly two feet in the center of the pit, measured from its upper surface to the surface of the mound. The thickness of the deposit at this point was about 2.5 feet. Beneath this mass of shell was Burial No. 28, which, with other interments, is shown on the diagram (Fig. 52).

The usual outlying pits, in this case two in number, were present in this mound. Both were filled with black loam and scattering oyster shells. One began 42 feet from the center, was 21 feet across and extended inward 18 feet. Its maximum depth was 3 feet 7 inches. The second pit began 47 feet out, was 23 feet across and extended inward 15 feet. Its average depth coincided with that of the other. As usual, no burials were present in them.

In the sand of the mound were two arrow heads and a number of rude sherds.

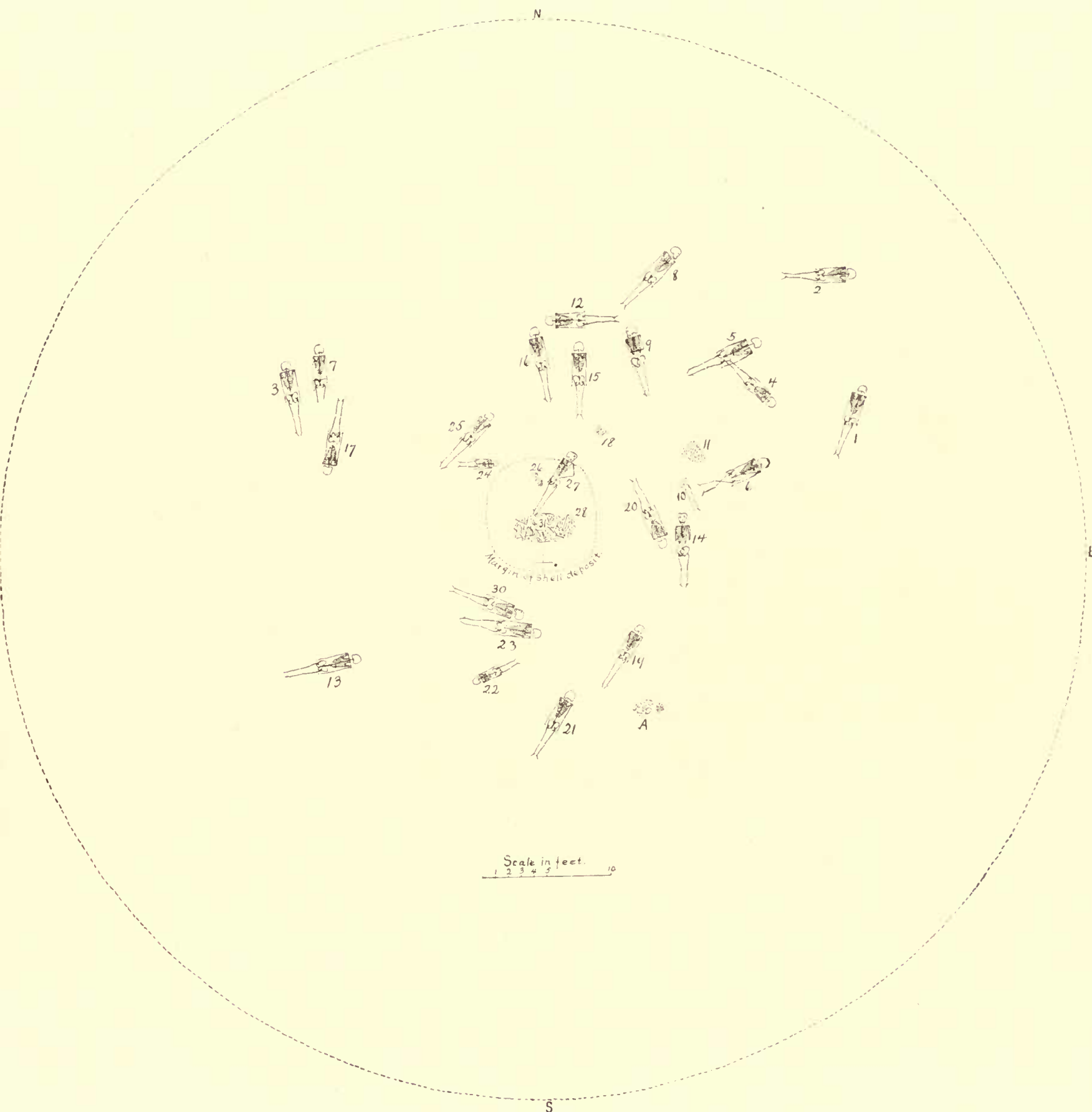


Fig. 52.—Diagram of mound in Greenseed Field.

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Two, from one vessel, however, were of good quality. No example of the complicated stamp was met with.

Human remains were encountered at 31 points. Of these, 25 were skeletons from which comparatively full data were obtained. The bones of four infants, badly crushed, were present in addition, and two layers of bones, some calcined, others unaffected by fire.

Of the 25 skeletons: 7 were of males; 5 were of females; 8 were uncertain; 2 were of adolescents; 2 were of children; while the skeleton of one adult was not determined owing to decay.

Twenty-three lay full length, face down, while two lay at full length on the back. The faces of the prone skeletons occasionally were turned to the side. As a rule the upper extremities were parallel to the body.

There seems to be no uniformity of direction in which the skeletons lay. The upper portion of one skeleton was missing through aboriginal disturbance. The other 24 headed as follows: E., 2; E. by N., 1; E. N. E., 2; N. E. by E., 1; N. E., 2; N. E. by N., 2; N. N. E., 1; N., 3; N. by W., 3; W., 1; W. S. W., 1; S. by W., 1; S. S. E., 1; S. E., 1; E. S. E., 1; E. by S., 1.

Burial No. 11, 15 feet N. E. by E., 3 feet 3 inches down, was a layer of calcined fragments of human bones, 23 inches across at the start and 6 inches thick. Eight inches in it had tapered to a width of 16 inches, though keeping the same thickness. It converged and disappeared 15 inches from the start. Uncremated bones were mingled throughout.

Burial No. 28. On the undisturbed yellow sand beneath the central shell deposit was a layer of bones of numerous individuals, inextricably mixed, having a thickness of about 8 inches. It extended in 4 feet 9 inches, and was about 28 inches across. At the western extremity were a few fragments of calcined bones and numbers of tubular shell beads, the largest 2 inches in length. In addition, were a piercing implement of bone, and several considerable portions of lower jaws of large carnivores, having their lower parts, including much of the roots of the teeth, ground away, thus widening and squaring the bases, as we have already described in this Report, and shall have occasion to refer to again in relation to specimens from a mound on Ossabaw Island. Professor Putnam informs us that jaws similarly treated—human and of lower animals—from the mounds of Ohio are in the Peabody Museum, Cambridge, Mass.¹

It has been suggested that this method of treatment originated in a desire to loosen the teeth to facilitate extraction, but this seems hardly likely, for, as a rule, teeth treated this way are present in the jaws when found, and we have never seen single teeth pierced for suspension, whose bases showed evidence of grinding. Jaws treated in this way have been considered by some to have been used as ornaments.

There is in the collection of the Academy of Natural Sciences a rough wooden effigy or mask, from Alaska, representing the head of a dog or of a wolf. Set in this mask are jaws imitated in bone, squared off at the base somewhat like the

¹ See also "Primitive Man in Ohio," Moorehead, page 227, *et seq.*

jaws from the mounds, and, as the wide-spread prevalence of aboriginal customs is well known, we think it not unlikely that the jaws from the mounds, in former times, saw service in masks of wood, which have disappeared through decay. Professor Cushing lately found in Florida numbers of wooden masks with other aboriginal articles of wood preserved beneath mud, and it is our opinion that the aborigines of the sand mounds inhumed numbers of articles of wood which have not lasted until the present time. In fact, our own researches in Florida mounds have brought to light wood preserved by contact with copper.

A few beads, hematite and fragments of uninteresting vessels, represented all additional articles met with in the mound.

ST. CATHERINE'S ISLAND, LIBERTY COUNTY. MOUND NEAR THE LIGHT-HOUSE.

In the border of the woods, in view of the sea, about one-half mile in a southeasterly direction from the landing, near the site of the projected light-house, was a fairly symmetrical mound entirely of sand, having a height of 3 feet, a diameter at base of 56 feet.

Much of the mound was dug through. At places were bits of decayed human bones near the surface, and, near the center, just below the surface, a pocket of calcined fragments of human bones belonging to at least two adults and one adolescent.

About 6 feet from the center, in a grave beneath the base, was a badly-decayed skeleton on its back with knees flexed against the thighs. Near it lay another.

One arrowhead of chert lay loose in the sand.

ST. CATHERINE'S ISLAND, LIBERTY COUNTY. LOW MOUNDS AT THE NORTH-END.

In pine woods, about 1 mile in an easterly direction from the main landing are two mounds about 50 yards apart, the larger having a diameter of 42 feet, a height of 3 feet; the smaller, a diameter of 36 feet, a height of 14 inches. There had been no previous examination. Each of these mounds was excavated as to the central portions and was thoroughly trenched. A few fragments of a decaying human cranium were met with in the smaller mound, while the investigation of the larger was without result.

In the vicinity of these mounds was a somewhat larger one which, being a valued land mark, we did not touch.

Careful attention was paid to numerous low shell-heaps studding the island of St. Catherine's. In some, results were negative, while from others came sherds incised and with the complicated stamped decoration in use in the best class of the burial mounds of the coast.

OSSABAW ISLAND, BRYAN COUNTY. MIDDLE SETTLEMENT. MOUND A.

About half way from either extremity of the western side of Ossabaw Island, on a small creek about five miles from the main channel, are a few cabins tenanted exclusively by colored people, and known as the Middle Settlement.

Near this settlement are a number of aboriginal mounds on property controlled by Mr. C. H. Harper of Rome, Georgia.

In a field long under cultivation, at the southern outskirts of the settlement, was a low mound, probably much reduced in height by the plow, which, in addition, had been impaired for complete archaeological investigation by the hauling away of a considerable quantity of oyster shells from the central portion. The depression thus made was clearly apparent, and nowhere extended through the layer of oyster shells with which all but the marginal portion of the mound was covered. However, as no artifacts or burials were found by us entirely in the shell layer, and as the marginal portion of the mound seemed to be intact, it would appear that no material injury had been done. Nevertheless, the colored man who had superintended the removal of the shell previous to our work, referred to skeletons and earthenware pots containing bones, found by him, so the result of our investigation must not be regarded as complete.

The mound was dug through at a depth much below the general level, during the latter part of November, 1896.

The mound, with a height of 18 inches and a diameter of base of about 45 feet, was composed of a rich loamy sand of a dark brown color, extending much below the level of the surrounding territory to undisturbed bright yellow sand. There was no mistaking the artificial portion of the mound. The thickness of the highest remaining part was 28 inches, or 18 inches above the general level and 10 inches below it. The deposit of oyster shells, to which reference has been made, was of irregular thickness, averaging, perhaps, 16 inches. Throughout this interesting mound were great numbers of sherds and many vessels of earthenware of poor material—clay mixed with coarse sand—gritty ware, as it is called. Owing to the inferiority of the material comparatively few were recovered in good condition though nearly all had been interred apparently intact—save perforation of the base in some cases—and not broken or with essential portions missing, as they were often buried by the thrifty Florida Indians. The ordinary form of mortuary ware encountered in this mound had the rounded base and almost cylindrical body contracted slightly at the neck beneath a flaring rim, often with a beaded margin, to which we have often referred as the ordinary type.

Besides numerous sherds there were found in the mound, loose in the sand, two large beads of shell, one pebble-hammer and a mass of stone about two-thirds the size of a clenched fist, probably a portion of a hammer-stone.

We proceed to a detailed description in conjunction with the diagram (Fig. 53).

Burial No. 1, 24 feet S. of a point supposed to occupy a central position on the surface of the mound, 1 foot from the surface, was the skeleton of a child about 5 years of age, head E.

Burial No. 2, 22 feet S. by E., skeleton of a female, head S., cranial sutures open, well defined Inca bone. Cranium preserved in good condition (A. N. S. Cat. No. 2,164). Body on back with lower extremities flexed to the right. A small layer of charcoal, with minute fragments of calcined bones intermingled, lay over the lower portion of the trunk. This skeleton was 1 foot 10 inches from the surface.

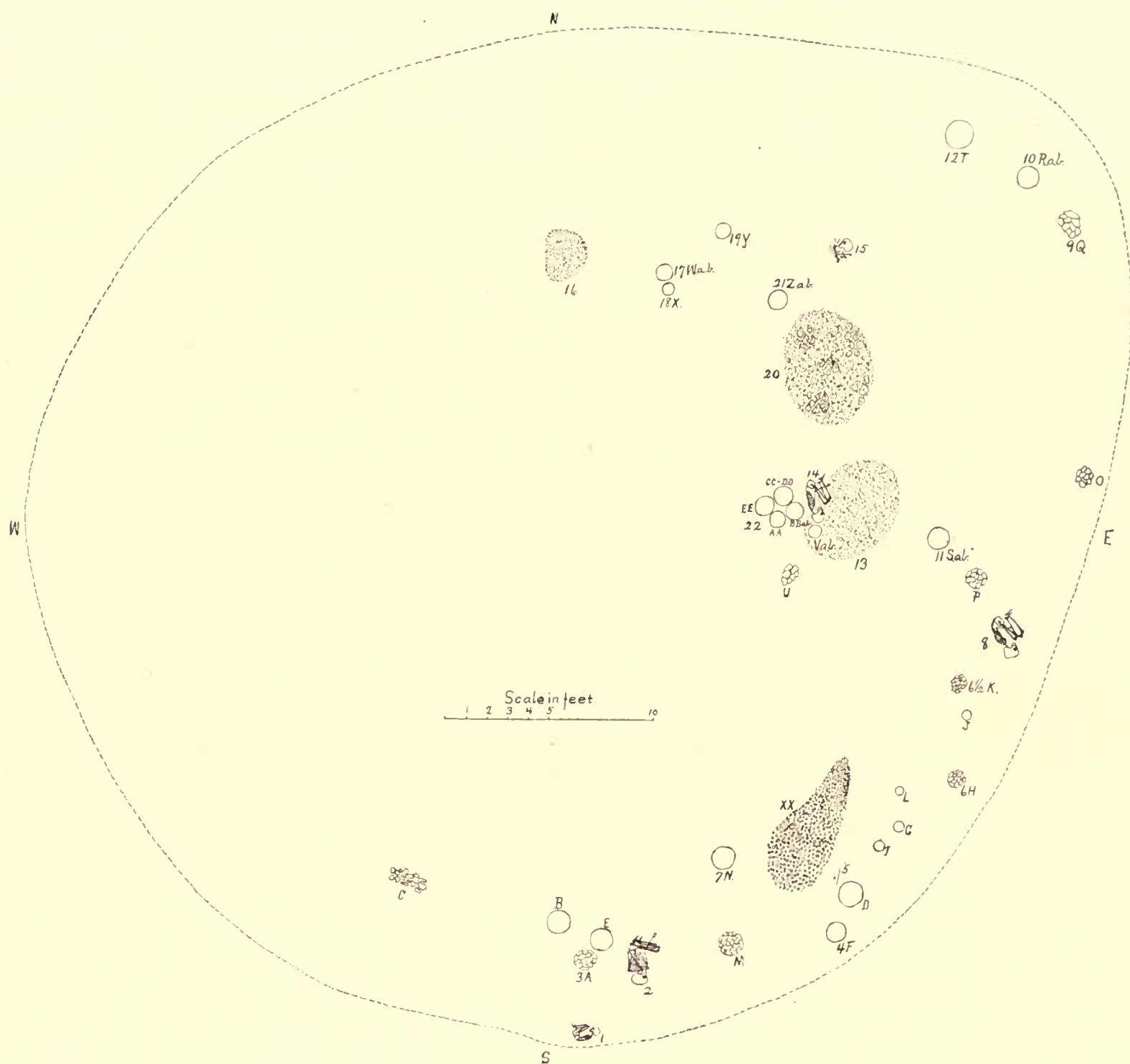


Fig. 53.—Diagram of Mound A.

Burial No. 3, Vessel A, 21 feet S., 1 foot from the surface to its upper margin, upright, as were all the mortuary vessels in this mound, was a bowl of about four gallons capacity, crushed into fragments. The vessel, imperforate, was filled with sand. On its base was the skeleton, or parts of the skeleton, of a child about six years of age, unaffected by fire, which apparently had been doubled and thrust in. The pelvis and bones of one leg were not discovered.

Vessel B, 19 feet S. Just below the surface was a vessel of the ordinary type, having an intentionally-made perforation in the base. No covering protected the vessel and no bones or remnants of bone were discovered, though beyond question, in our opinion, the skeletal remains of a small infant had disappeared through decay.

Vessel C, 18 feet W. of S.¹ About 1 foot from the surface was a layer about 2 feet long, composed of scattered fragments of large vessels.

Vessel D, 23 feet S. E., 19 inches down (all measurements of depth in our account of this mound are given to the upper margin of objects), was a vessel of the ordinary type though with unusually distinct decoration. Its base had been intentionally perforated. Portions crushed from the rim have been, with one small exception, recovered and fastened in place. No skeletal remains were found in the sand with which this vessel was filled, and doubtless here again the work of decay had been complete. Approximate measurements: height, 17 inches; diameter of mouth, 14 inches; maximum diameter of body, 12 inches (Plate IX).

Vessel E, 20 feet S., 20 inches from the surface. This vessel is not farther referred to in our notes and was probably in a very fragmentary condition.

Burial No. 4, Vessel F, 24 feet S. E., vessel of the ordinary type, 12 inches from the surface, containing on the bottom, which was perforated, the bones of a child, in no apparent order and greatly decayed. This vessel was badly broken. Nearby in the sand was a small chisel of polished volcanic rock—*Dolerite* or *Diorite*.

Burial No. 5, just north of Vessel D, loose in the sand, were a patella and a fibula of an adult.

Vessel G, 22 feet S. E. A globular vessel of about 1 gallon capacity, having the bottom knocked out. Incised decoration surrounds the upper portion. Parts of the rim are missing.

Burial No. 6, Vessel H, 23 feet E. S. E. A large vessel 16 inches down, crushed into small fragments. With it were a few bits of calcined human remains.

Vessel I, 22 feet S. E. Two feet from the surface was a globular vessel with flaring rim and incised decoration (Plate XIII, Fig. 2). An attempt to knock out the base had involved a part of the side and of the rim. Many portions were missing. Approximate measurements: diameter at mouth, 5.5 inches; maximum diameter, 7 inches; height, 6.5 inches.

Vessel J, 22 feet E. by S., a globular, undecorated, imperforate vessel, 2 feet down. Rim broken off and missing. Maximum diameter, 5 inches.

¹ West of south and corresponding terms, though not points of the compass, are used by us to allow a somewhat wide latitude in indicating position on the diagram.

Burial No. 6½, Vessel K, 21 feet E. by S., 2 feet 5 inches down, a vessel crushed to small fragments, among which lay bits of calcined human bones.

Vessel L, 21 feet S. E., 2 feet down, just below a local layer of oyster shells, was an imperforate, undecorated dish, with a maximum diameter of 4.5 inches, a height of 2.1 inches. This little vessel, a flattened cone in shape, was entirely unassociated.

Vessel M, 22 feet S. by E., a large undecorated vessel in small fragments.

Burial No. 7, Vessel N, 18 feet S. by E., a somewhat broken vessel of the usual type, with perforated base, containing the bones of an infant, unaffected by fire, apparently in anatomical order. Just above the skull (the bones lay at the bottom of the vessel) was a large fragment of earthenware not sufficient in size, however, to prevent the entrance of sand. This vessel was sent to the Museum of the University of Pennsylvania.

XX, 21 feet S. E., a layer of oyster shells calcined to a white powder, 3 feet by 7 feet and 4 to 5 inches thick. At one point were bits of charcoal. The outer margin of this layer was 20 inches from the surface. A gradual slope carried its terminal margin to a level 1 foot higher.

Burial No. 8, 23 feet S. of E., skeleton of a young person, flexed on the right side, head S.

Vessel O, 26 feet E., a vessel of the ordinary type, extremely rotten and fragmentary.

Vessel P, 21 feet S. of E., an imperforate vessel of the common type, but of rather better and thicker material than usual, though crushed to fragments. This vessel, which had doubtless held an infant's skeleton (though no remnants were apparent) was capped by a number of large fragments which had formed parts of an undecorated bowl. These, with the fragments of Vessel P, were sent to the Peabody Museum, Cambridge, Mass., where they have been carefully put together.

Burial No. 9, Vessel Q, 29 feet N. E. by E., 1 foot 4 inches from the surface, a vessel of the usual type, imperforate, containing decaying remnants of an infant's skull. The body of the vessel was crushed to small fragments.

Burial No. 10, Vessel Ra, 29 feet N. E. by E., a vessel of the usual type, 18 inches from the surface, 17 inches of which was the unbroken layer of oyster shells. It ran 14 inches into the undisturbed yellow sand (the reader will recall that the depth given is taken from the upper margin), where an excavation had been made to receive it. Its base contained a small, neatly cut perforation large enough to admit the first joint of the little finger. In the sand at the bottom there remained one deciduous tooth.

Above Ra, inverted, was a bowl of black ware (Rb) somewhat broken, the upper part having incised decoration; the lower, intricate stamped decoration (Plate X). Approximate measurements: diameter, 12.75 inches; diameter of opening, 12 inches; height, 5.75 inches.

Burial No. 11, Vessel Sa, 19 feet E., a vessel of the usual type, badly crushed and broken. At the bottom were fragments of human bone so decayed as to

resemble sawdust. Two bits, larger than the rest, belonged to a child of tender years. No fire had been used in connection with these remains, and the reader will bear in mind that when cremation had been employed, the fact will be distinctly stated. This vessel, lacking certain portions, was sent to the Davenport Academy of Natural Science, Davenport, Iowa.

Sa was capped by a bowl of black ware (Sb) undecorated, save for an encircling row of projections somewhat below the margin (Plate XI). It was practically intact. Approximate measurements: maximum diameter, 13.75 inches; diameter of aperture, 12.75 inches; height, 6.25 inches. From the upturned base of this bowl to the surface of the mound was a distance of 2 feet 2 inches.

Burial No. 12, Vessel T, 28 feet N. E., 1 foot 5 inches from surface, a vessel of the usual type, almost intact. In the sand at the bottom were minute fragments of bone with two deciduous teeth and the cap of another. A small hole had been knocked through the base. Approximate measurements: height, 18.5 inches; maximum diameter of body, 13.5 inches; diameter at aperture, 16 inches.

Burial No. 13, beginning 14 feet E., just below the surface was a layer of calcined human remains, at first 22 inches wide, gradually increasing to 5 feet. Its thickness, 2 inches at first, was 6 inches at its terminal limit. It extended in toward the center of the mound, a distance of 4.5 feet, where it was 2 feet below the surface. With the fragmentary bones were found two shell pins and one small bead of shell.

Vessel U, 12 feet E., portions of a vessel of black ware, 3 feet from the surface. Its only decoration was a row of knobs around and below the margin.

Vessel Va, 13 feet E., a vessel of the common type, was intact save for two small pieces missing from the rim. In the base was a small perforation, above which was the bottom of a pot tightly fitted in. Upper portions of this pot, which was incomplete, lay within it. Va was capped by large sherds seemingly belonging to one vessel, perhaps placed there in a less fragmentary condition and subsequently crushed by weight of sand. No human remains were found in Va, though there can be but little doubt as to their former presence.

Burial No. 14, in a grave, 3 feet from the surface, 3.5 feet in length, dipping 1 foot into the yellow sand, almost in contact with the vessel Va, which, however, was not within the limits of the grave, was the skeleton of a person about eighteen years of age, with epiphyses of femurs and tibiæ unattached and one wisdom tooth showing. The skeleton lay on the right side, the legs flexed, head S. The cranium (A. N. S. Cat. No. 2,165) was preserved in good condition. Above this grave the layer of oyster shells on the surface was intact.

Burial No. 15, 20 feet N. E., a bunched burial of the bones of a child about 6 years of age, 2 feet from the surface.

Burial No. 16, 12 feet N., a layer of calcined fragments of human bones, 16 inches from the surface. Its maximum thickness was 2 inches; its length, 2.5 feet; its breadth, 2 feet.

Burial No. 17, Vessel Wa, 14 feet N. by E., 1 foot 6 inches from the surface,

in the brown sand and just beneath the layer of oyster shells, was a gourd-shaped, undecorated vessel of black ware, intact save for a small crack on the side. This vessel was filled almost to the top with fragments of calcined human bones some of which at least had belonged to adults, and, in common with all we have encountered containing calcined bones, was imperforate as to the base. Approximate measurements: height, 8.5 inches; maximum diameter, 10 inches; diameter of orifice, 5 inches.

Superimposed upon the orifice of Wa, inverted, was a small vessel (Wb), with everted rim somewhat broken, though capable of almost complete restoration.

Burial No. 18, Vessel X, immediately behind Wa, 15 inches from the surface was a vessel of the ordinary type in use for infant inhumation, imperforate, filled to the top with calcined fragments of human bones. Approximate measurements: height, 15 inches; diameter of body, 11 inches; diameter of aperture, 13 inches. This vessel was sent to the Carnegie Museum, Pittsburgh.

Twenty feet E. of N. E., the brown sand of the mound made a dip into the undisturbed yellow sand to a depth of 21 inches. From the level of the yellow sand to the surface of the mound was 27 inches, so that the bottom of this excavation, which was beneath an unbroken layer of oyster shells on the surface, was 4 feet deep. At the very base of the excavation were several good-sized fragments of earthenware but no human remains or anything to suggest a reason for its construction.

Burial No. 19, Vessel Y, 17 feet N. by E., 14 inches from the surface was an imperforate vessel of the usual form with stamped ornamentation on the body but having the constricted portion and the rim undecorated. This vessel, which was filled with fragments of calcined human bones, was crushed to pieces though held in place by sand. It was pieced together with the exception of a few small bits. Approximate measurements: diameter of orifice, 9 inches; of neck, 7 inches; of body, 8 inches; height, 9.5 inches.

Burial No. 20, 13 feet E. N. E., a pocket of fragments of calcined human bones, 5 feet 9 inches by 4 feet 6 inches, from 2 to 5 inches in thickness. With the remains at several points were large pieces of earthenware representing perhaps a fourth of a vessel. They were distinctly not fragments of an entire vessel crushed through pressure.

Burial No. 21, Vessel Za, 16 feet N. E., an imperforate vessel of the common type having a height of about 1 foot, with rim and portions of the body crushed but lying beside it. It was filled with fragments of calcined human bones. Across the opening were large fragments of a portion of another vessel. Za was sent to the Peabody Museum, Cambridge, where it has been almost entirely pieced together.

Burial No. 22. Together, practically in contact, were four cinerary vases each filled to the top with fragments of charred and calcined human bones, with which were numerous shell beads showing no trace of fire, placed in an excavation made in the yellow sand (CC), and filled around with brown sand (BB) to the level of the rims, or rather to where the rims had been previous to breakage, and covered from

the tops up with oyster shells (AA), which dipped to the upper margin of the vessels as shown in Fig. 54. These vessels are represented by the following:

Vessel AA (Plate XII), of red ware, imperforate, with upright neck and slightly flaring rim. The usual complicated stamped decoration is present. This



Fig. 54.—Deposit of cinerary urns. Mound A. (Not on scale.)

vessel has been pieced together from a very fragmentary condition, with several portions wanting. Approximate measurements: height, 16 inches; maximum diameter, 14 inches; diameter of mouth, 10.5 inches. Over its mouth was part of the bottom of an earthenware vessel.

Vessel BBa, of the usual model, though of black ware, was capped with a dish of red ware (BBb). Both, though held in place, were in fragments.

Vessel CC was a large undecorated bowl of earthenware holding within it, in an upright position, a vessel (DD) of the usual type, covered as to its orifice with pieces of earthenware. Both vessels, though held in place, were very badly crushed.

Vessel EE, a vessel of the usual type, its mouth covered with fragments of earthenware. The rim was badly crushed and portions of it were not recovered. This vessel was sent to the Ontario Archaeological Museum, Toronto, Ontario.

Under perfectly level ground, adjacent to the mound and beginning at that portion of the margin included between N. E. and S. W. $\frac{1}{2}$ W., were outlying burials as shown in diagram Fig. 55. The ground seemed to have suffered a general disturbance at the period of the inhumations and individual pits were difficult to determine though several were unquestionably met with.

Vessel FF, 27 feet S., a vessel of the ordinary type, upright, its base 31 inches below the surface. It was badly crushed. Though no trace of human remains was present it had doubtless contained the skeleton of a very young infant. The fragments were sent to the Peabody Museum, Cambridge, Mass.

Burial No. 23, Vessel GG, 27 feet S. S. E., a vessel of the ordinary type, imperforate, with the entire upper portion crushed away. Minute fragments of bone were present.

Burial No. 24, 28 feet S. by W., 30 inches from surface,¹ extending somewhat into undisturbed sand, was the skeleton of a child three to five years of age, flexed on the right side, head S.

Vessel HH, 33 feet E. by N., an imperforate, undecorated vessel, globular as to its body, with constricted neck and flaring rim, apparently unassociated and intact

¹ Depths of vessels and of skeletons in the outlying part of Mound A, were taken from the under margins.

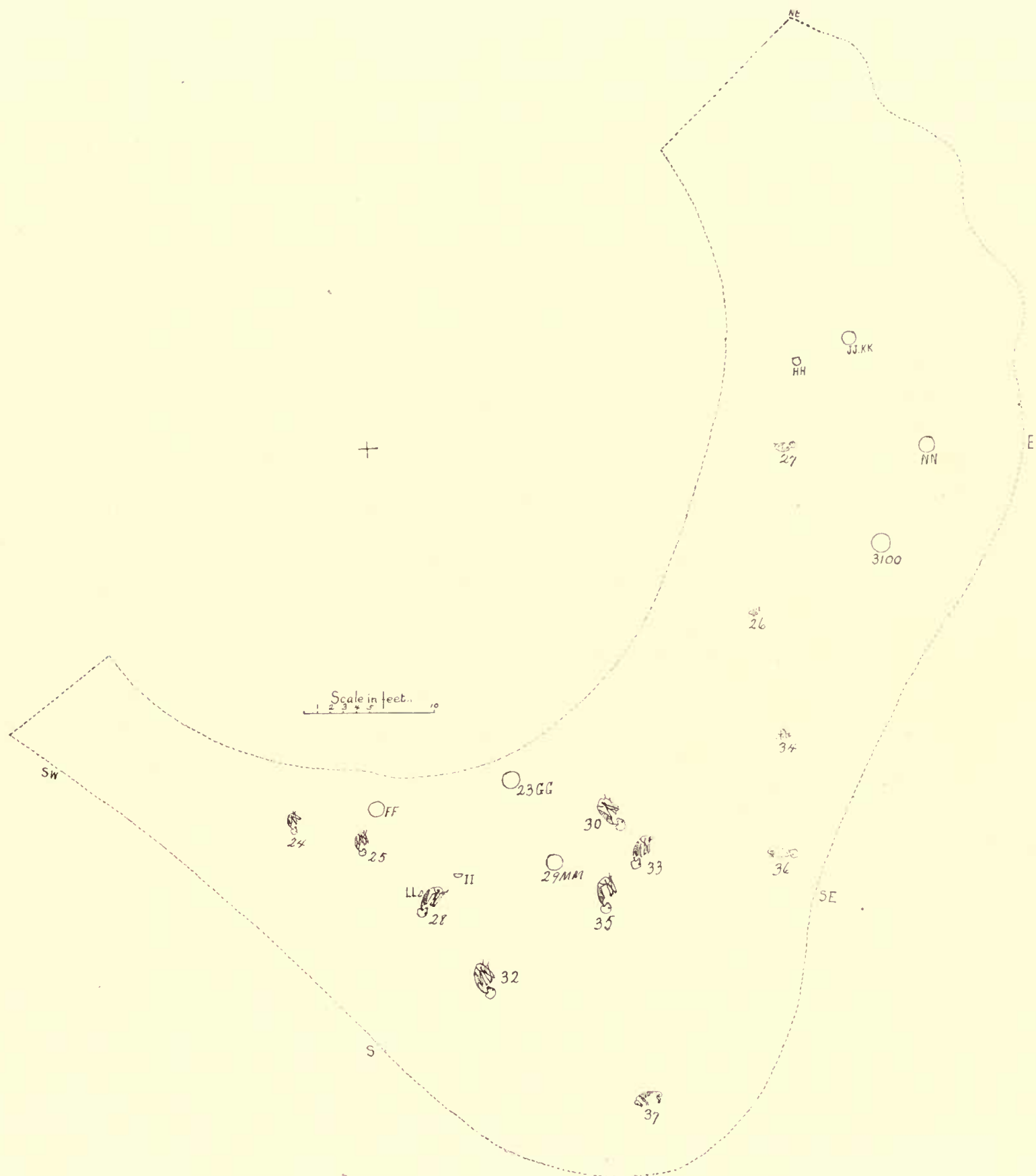


Fig. 55.—Diagram of outlying portion of Mound A.

but for a small breakage of the rim. Approximate measurements: diameter of mouth, 5.5 inches; of body, the same; height, 4.5 inches.

Burial No. 25, 29 feet S., 25 inches down, skeleton of child about five years of age, flexed on right side, head S.

Burial No. 26, 32 feet E. S. E., part of a skull and of a clavicle, near the surface.

Burial No. 27, 31 feet E., 2 feet 6 inches down. Remains of a child, very much decayed, apparently flexed on the right side, head E.

Vessel II, 33 feet S. by E., an imperforate bowl, apparently unassociated, with a maximum diameter at its mouth of 7.2 inches and a height of 3 inches, decorated with incised lines below the exterior margin (Plate XIII, Fig. 1). No trace of human remains was discovered.

Burial No. 27½, Vessels JJ and KK. Vessel JJ, a bowl with a faint stamped decoration, imperforate, in fragments but held in place by sand. Its outline was somewhat that of an inverted, truncated cone. Approximately it measured 12.5 inches maximum diameter and diameter of mouth. Its height was 7 inches. This bowl had been placed over the mouth of a vessel of the ordinary type (KK), but was not inverted as usual but let into the opening in an upright position. From the upper margin of JJ to the surface was 11 inches. KK, a vessel of ordinary type, 14 inches in height, was badly crushed. Its base, which had a perforation, was below the water level, 27 inches down. It contained deciduous human teeth.

Burial No. 28, 34 feet S. by E., a skeleton of a female, flexed on the right side, head S. W., 2 feet from the surface. With it was an imperforate bowl (LL) with handle projecting from upper margin at one side, and interestingly decorated, as shown in Plate XIV, Fig. 1. Approximate measurements: diameter of mouth, 6 inches; maximum diameter of body, 6.2 inches; height, 2.8 inches.

Burial No. 29, Vessel MM, 34 feet S. S. E., a vessel of the ordinary type, with base-perforation, the rim and part of the body ploughed away and lost. Human remains were represented by one deciduous molar.

Burial No. 30, 32 feet S. E. by S., skeleton of female, flexed on right side, head S. E. by S., 2 feet 10 inches down.

Vessel NN, 42 feet E., a vessel of the ordinary type, with base perforation, rim and part of body ploughed away. The infant's bones, which this vessel at one time doubtless contained, had disappeared.

Burial No. 31, Vessel OO, 39 feet E. by S., a vessel of the ordinary type with the upper portion ploughed away. On the base were bones in powder and the lower jaw of an infant. The base proper showed no perforation, but on one side vertically about 2 inches above the base, was a hole, carefully made, somewhat over 1 inch in diameter. This is a departure from the general rule.

Burial No. 32, 40 feet S. by E., in all probability the skeleton of a female. The glabella was practically wanting and the supra-orbital ridges were but slightly developed. The general frame, however, indicated a fairly muscular person—probably a powerful female. A number of small shell beads, one shell pin, and part of another, lay near the head.

Burial No. 33, 36 feet S. E. by S., 13 inches down, skeleton of adolescent, flexed on right side, head S. S. W.

Burial No. 34, 38 feet S. E. by E., human bones disturbed by plow.

Burial No. 35, 37 feet S. E. by S., 2 feet 11 inches down, skeleton of adolescent, flexed on right side, head S.

Burial No. 36, 43 feet S. E., at the bottom of a distinct pit, 2 feet 5 inches from the surface, were the remains of a skeleton too much decayed for determination.

Burial No. 37, 54 feet S. S. E., 20 inches down, skeleton of a dog.

An interesting feature in Mound A was the discovery of portions of a vessel of red ware of aboriginal type and decoration, interiorly glazed in places. Earthenware regularly glazed would indicate European contact. Professor Putnam writes as follows of these fragments:

"After consultation with Professors Jackson and Hill of the Chemical Department [Harvard], I am more than ever convinced that the glazing on a portion of the jar from the Georgia mound is entirely accidental. When you come to study the pieces you will find that the whole interior of the jar has apparently been coated with ashes mixed with water. Now suppose such a jar was heated on the inside by putting in hot coals of wood; the potash in the coating of ashes and the potash contained in the wood, mixed with the slight silicious matter in the clay, would make an accidental glazing.

"It does not seem possible that this glazing is formed by lead or salt, for the slight burning of the pottery is not sufficient to form a glazing of either of these substances; much more heat would be required.

"Professors Jackson and Hill were sure that it would be useless to analyze the glazing, as we should have to scrape off nearly all there is to get enough to make a good analysis, and we should probably get only negative results. I therefore consider that this was simply an accidental case of partial glazing caused by some special burning of the pottery. The fact that the glazing is confined to one portion of the lip of the jar and to a part just below the lip on the bulge indicates that the hot coals were in contact with that portion only. If the jar was inverted over hot coals for the purpose of heating the inside (as was evidently common in ancient times), it might easily have fallen over in the fire and the coals have tumbled into this portion of the jar."

The various forms of burial and their distribution in Mound A are worthy of attention. It will be noticed that in no part of the mound, outside of calcined remains, among which were parts of adult skeletons seemingly belonging to males, were skeletal remains of adult males—the skeletons being exclusively those of women, adolescents, children and infants—and that in one portion of the mound burial vases exclusively contained skeletons of infants, unaffected by fire, while in other portions cinerary urns were present filled with fragments of calcined human skeletons. Again we see pockets of calcined human remains and skeletal remains of woman and of children unaffected by fire and not included in vessels of earthenware.

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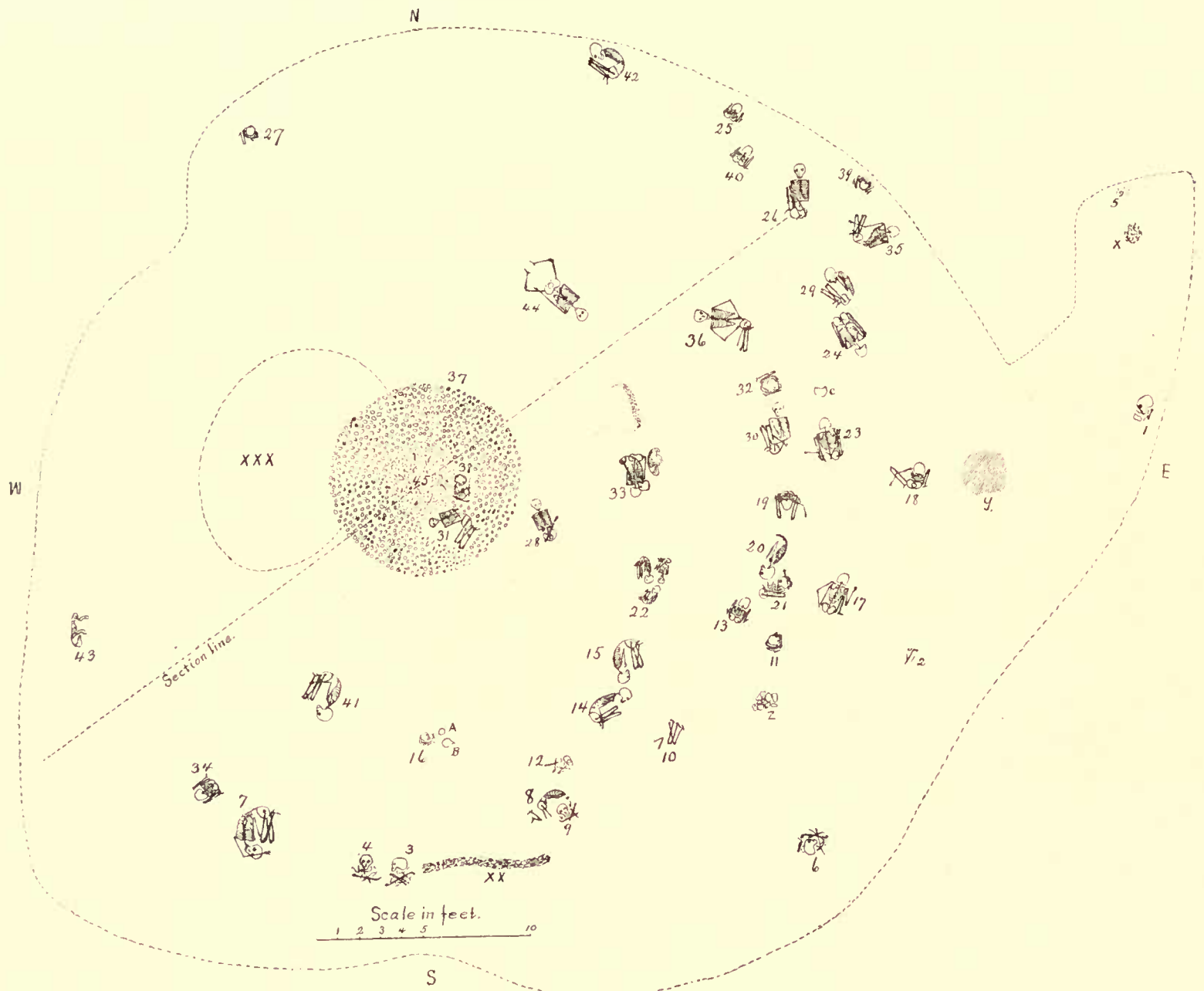


Fig. 56.—Plan of Mound B.

About 68 yards in a N. E. direction from Mound A is the remnant of a shell heap nearly all of which, above the general level, has been carted away for lime. A small portion still remaining shows the height of the heap to have been somewhat over 2 feet. The diameter, difficult to determine at present, was probably about 50 feet.

This shell heap was trenched around the margin and in several directions toward the center. No human remains were encountered nor any indication that the heap had been used for sepulchral purposes. Sherds were abundant. One, with an average diameter of 4 inches, showed a number of grooves made by sharpening pointed tools. From different parts of the mound came three discs of earthenware cut from fragments of vessels, each about 1.5 inches in diameter.

OSSABAW ISLAND, BRYAN COUNTY. MIDDLE SETTLEMENT, MOUND B.

This mound, in a cultivated field, lay somewhat over one-half mile in a N. E. direction from the Middle Settlement.

Its height above the level of the field was a trifle over 7 feet, and a measurement taken from the surface at the center of the mound to the base-line, when the mound was half dug through, showed a corresponding altitude. The diameter of the mound at the base, we took to be about 46 feet, but as portions of the margin were covered with a thick deposit of oyster shells, it is not unlikely that in places the extreme outlying portions escaped us.

The mound, covered with undergrowth and small live-oaks, showed no sign of previous investigation, although a considerable excavation made into the shells of the margin, to obtain material for lime, was apparent.

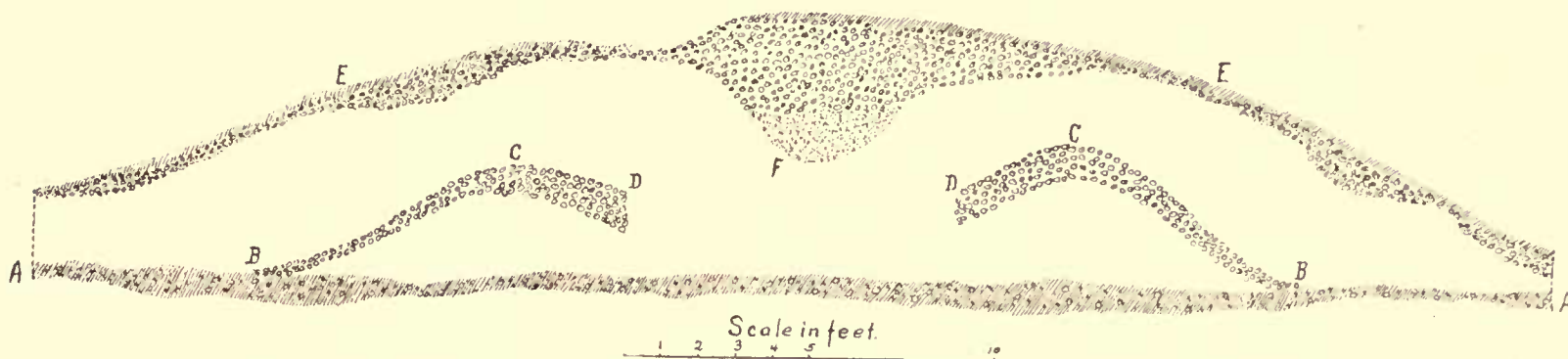


Fig. 57.—Section of Mound B.

The mound, with the exception of certain marginal portions, was dug through as shown in the diagram (Fig. 56) at a level much below that of the surrounding field that no grave or pit might pass unnoticed. At the level of the field there ran through the mound a dark layer, AA (see section, Fig. 57), varying from a few inches to one foot in thickness, composed of crushed oyster shells, small bits of charcoal, and earth blackened by admixture of organic matter. This we took to be the original surface of the ground upon which the aborigines were living previous

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to the inception of the mound. Beneath, and sometimes through, this layer there ran down at places into the clear yellow sand, masses of dark disturbed sand filled with organic matter and bits of charcoal, of which portions of the mound were composed. These evidently had been pits, and while the purpose of those containing human remains was evident, the cause for the digging of others containing no skeletal remains is unexplained.

Rising from the base-line at BB was a layer of oyster shells (CC) varying in thickness from 2 or 3 inches to 1 foot. This layer, after a downward slope, terminated abruptly at DD, when within 4.5 feet of the center of the mound, up to which point, however, it had been a continuous layer. The shells of this layer lay loosely together and were not crushed and packed, leading to the belief that they had been placed there intentionally at one period and were not midden refuse due to surface habitation. Beneath this layer (CC) the sand reaching to the base-line was of a yellow color much resembling that below the base though it contained in addition occasional oyster shells and particles of charcoal, not present in the sub-basal sand. Above the layer CC, and dipping to the base-line between the terminal points of the layer, was sand of a dark brown color extending to the superficial layer of oyster shells (EE) which covered the entire mound. This layer (EE) varied greatly as to thickness, at some places disappearing almost entirely, at others attaining a thickness of from 1 to 2 feet. It was filled with midden refuse, bones of lower animals, sherds, charcoal, etc., and was unquestionably a gradual deposit made by the use of the mound as a dwelling site. Around certain portions of the margin of the mound, where doubtless the shell had been carried and thrown, the deposits had a thickness of almost 4 feet and extended below the surface of the field, which we accounted for under the hypothesis that sand removed for the construction of the mound had left hollows subsequently filled by shell. Above the upper layer of oyster shells was a deposit of black surface loam, several inches in thickness. The pocket of shell (F) shown in the diagram, is referred to in our detailed description as Burial No. 37.

From a careful study of the mound it was suggested to us that its original construction had been a circular ridge of light sand, about 3 feet in height, sloping up on all sides from the level of the field, and enclosing a sort of basin, and that this ridge had been intentionally coated with oyster shells. That the central portion corresponding to the area between the terminal points of the stratum (CC) had been subsequently dug out, thus accounting for the abrupt termination of the shell stratum, and that later the entire ridge and basin had been covered with sand, brown in color or made so through percolation, extending on all sides considerably beyond the surface of the ridge, and that the mound thus formed had for a period been used as a place of abode. The reader, however, must bear in mind that conclusions of this sort are by no means final.

Several small local layers of hematite were present near the base.

Throughout the mound, but principally in the midden refuse, were fragments of earthenware vessels. These, with several exceptions found at the base, were of

gritty ware, while all were either undecorated, cord-marked, basket-marked, or stamped with the well-known square impression. To the best of our knowledge, none bore any variety of the complicated stamped decoration present in the low neighboring mounds.

In various parts of the mound were pebbles of different sizes, and from the midden refuse of the base, unassociated, came a bone pin with incised decoration around the head. A disc of earthenware, irregularly circular, with a diameter of about 3.5 inches and a thickness of .5 of 1 inch, lay by itself 7 feet from the surface. This disc had been fashioned and baked and not cut from part of a vessel as were certain earthenware discs present in other mounds of the coast. Though, owing to the considerable quantity of oyster shells in the mound, one might have looked for human remains in a fairly good state of preservation, their condition was not such as to warrant their removal, the crania in particular being decayed and crushed. No fractures were noticed in the bones or any pathological condition of importance.

We shall now proceed to a detailed description of certain features present in the mound and of the interments. Unless otherwise stated, depths of skeletons are given from the surface to the uppermost portion of the skeleton, a measurement of which we disapprove, preferring the vertical distance to the plane upon which the remains were deposited, a method which we have followed in most of our other descriptions in this Report.

1.—34 feet E. from center, 6 inches from the surface, in the shell debris, which at that part covered the slope of the mound to a considerable depth, were the skull of an adult, part of a clavicle, and portions of a pelvis and of a humerus.

2.—24 feet E. by S., just below the surface, in the shell, were a portion of a femur and two fragments of smaller long bones. With these was a bit of chert,

while near by, though perhaps having no connection with them, lay a tobacco pipe of soapstone, absolutely intact, still bearing marks of the maker's tools (Fig. 58).

3.—18 feet W. of S., bunched burial of adult male, 22 inches from the surface.

4.—1.5 feet W. of No. 3, bunched burial of adult male, 3.5 feet down.

5.—35 feet E. by N., 3.5 feet down, just beneath the marginal shell layer, were a fragment of scapula and six phalanges scattered over a small area. The mound had suffered no disturbance at this point.

6.—24 feet S. E., a grave dug through the superficial shell layer into the yellow sand of of the field at a point where the upward slope had just begun. From the surface of the shell

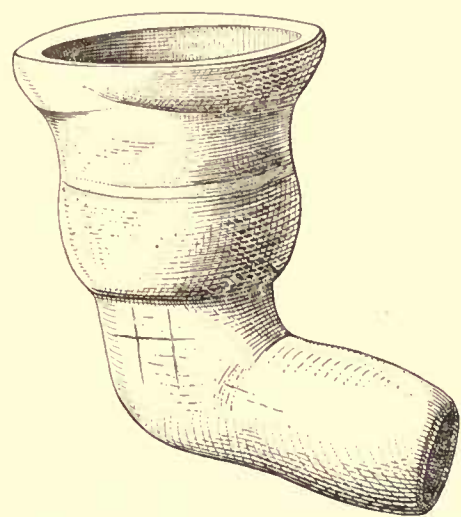


Fig. 58.—Tobacco pipe of soapstone. Mound B. (Full size.)

layer to the bottom of the grave-pit was 4 feet. The pit proper, whose depth was

23 inches, was filled with brown sand mixed with oyster shells showing that at least a certain portion of the superficial shell deposit was present when it was dug. Above the pit were 17 inches of shell deposit surmounted by 8 inches of black surface loam. At the bottom of the grave was a bunched burial of an adult, probably female.

X.—35 feet E. by N., a fireplace 2 feet 4 inches down.

XX.—18 feet S., a fireplace 10 inches from surface—a narrow band of charcoal 6 feet in length.

7.—19 feet S. by W., 2 feet from surface, skeleton in anatomical order, probably female, head S., body on right side and badly twisted, knees drawn up toward side of head, legs flexed on thighs, left arm over head, right arm down along body with forearm flexed upward. With this skeleton was a bit of chert. The black base-layer at this point was 5 inches thick and 3 feet 3 inches from the surface.

8.—17 feet S. by E., 2 feet down, below the unbroken surface of loam and of oyster shells was a portion of a flexed skeleton, the skull, with the exception of half of the mandible, being absent. Upper part of trunk to the east on left side. Upper portion of each humerus absent, but remaining portions of upper extremities in anatomical order and in proper relation to remainder of skeleton present. Fragments of clavicle and ribs in sand near upper part of trunk. Vertebrae of trunk in order, also pelvis and bones of lower extremities, with exception of parts adjacent to, and comprising, knees, which were absent. About 1.5 feet distant were half of a lower jaw, a piece of a rib, and of a clavicle, doubtless belonging to the skeleton which had been dug through at a period prior to the formation of the shell deposit for the burial of No. 9.

9.—1 foot immediately below No. 8 was a bunched burial of an adolescent, lying on the black base-line.

Y.—27 feet E., a layer of sand, cherry colored through admixture with hematite, 3 feet 10 inches from the surface. This layer was about 3 inches above the black band marking the base of the mound, was from .5 of 1 inch to 1 inch in thickness, had a length of 1 foot 10 inches, and extended inward 2 feet.

10.—16 feet S. E., 10 inches down, lower extremities flexed in anatomical order, part of one humerus and two-thirds of the bones of its lower arm. All other portions of the skeleton absent, doubtless a comparatively recent disturbance.

Z.—19 feet E. S. E., 3.5 feet down, just below the black base-line, was a nest of fragments of various vessels, filling a little pocket.

11.—18 feet E. by S., 2 feet from surface, lying on the black base-line, with surface layer of oyster shells unbroken, was a skeleton of a female in a sitting position, facing S. of E. The head was forced down between the thighs and legs as shown in Fig. 59. Behind the skeleton was a marine mussel shell filled with powdered hematite.

12.—15 feet S. S. E., bones probably belonging to a female, in caved sand.

13.—16 feet E. by S., a grave containing an adult skeleton of uncertain sex, in a crouching position, trunk bending forward on thighs, and supported by the lower

extremities of legs and heels. Above the bones were 18 inches, vertically, of oyster shells and around them 25 inches, vertically, of brown sand mingled with oyster shells.

14.—14 feet S. E., a grave extending through the black line of the base and filled with brown sand. Surface to bottom of grave, 7 feet; to bones, 6 feet; to broken line of base, 4 feet; diameter of grave, 4 feet. A flexed burial on left side, head N. E., as nearly as could be determined. Unusual decay. Sex undetermined.

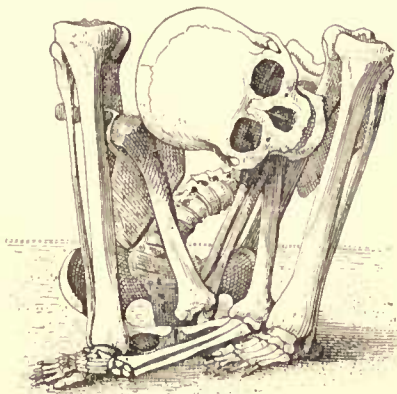


Fig. 59.—Burial No. 11. Mound B. (Not on scale.)

15.—13. 5 feet S. E., flexed skeleton of male on right side, 6 inches from surface, head S.

16.—12 feet S., just below the upper layer of oyster shells and immediately above the second layer to which reference has been made, 2 feet from the surface, were the crushed

bones of an infant. With them were an imperforate, undecorated vessel of about one pint capacity, having a portion missing from the side and rim (A), and an undecorated imperforate cup (B), elongated at one end and terminating in an extension for a handle, resembling in shape and size a type found in Florida. Its capacity is somewhat less than one pint.

17.—20 feet E. by S., a grave having its base 5 feet 4 inches from the surface and extending 1 foot 4 inches into undisturbed sand below the base. The mouth of this grave was impossible to determine. The superficial shell layer above it was intact and there was no unusual admixture of oyster shells. It was therefore of a period prior to the making of the shell layer. At base of grave was the skeleton of a male, head N., flexed, with body facing down. Thighs flexed up along body with legs flexed back upon them. Right elbow in toward body; left, somewhat extended.

18.—23 feet E., a grave, from surface to bones, 5 feet 4 inches; to bottom of grave, 6 feet 3 inches; depth below broken base of mound, 2 feet 3 inches. Thickness of unbroken surface layer of shell at this point, 2 feet. In the grave, in a semi-sitting position, facing S. W., was the skeleton of an adult male with right arm extended from the side; left arm along side, forearm crossing body. Right thigh, with leg flexed against it, at right angle to body; left thigh, with leg bent against it, flexed upon body.

19.—17 feet E. of S., skeleton of male in sitting position, head S. and pressed forward, chin on chest. Thighs at right angle to body, with legs flexed back parallel to them. Feet against pelvis. Right arm along chest, forearm across body; left arm out from side with forearm crooked from body. This skeleton lay in a pocket filled with oyster shells, 15 inches down.

20.—1 foot S. of No. 19, upper portion of skeleton of male, about 1 foot below

the surface, head S. Trunk above pelvis and cranium alone remained, the rest having been cut away by Burial No. 19.

21.—A burial, 3 feet below No. 20, lying on the black basal layer, was much massed together, the greater part of the bones being in anatomical order, others, however, being out of place. An astragalus and its os calcis, separated, lay on the skull. The left humerus was across the skull with no forearm bones in connection. The mandible was separated from the cranium. This burial (sex not determined) had evidently been partially held together by ligaments when, after previous exposure, it was interred in the mound.

22.—12 feet E. by S., crushed skeletons of three children with shell beads and a few small shells (*Olivella*) longitudinally perforated. The remains lay in the surface shell layer 1 foot down.

23.—19 feet N. of E., 3 feet down on the black base-layer, a skeleton of a male in the position of one who, crouching, had fallen forward. Right arm along side, forearm across and under body; left arm along side, forearm extending from body. Thighs flexed sharply along side of trunk, with legs flexed back along thighs, throwing feet under pelvis.

C.—1 foot N. of No. 23, on same level was a large portion of a cord-marked bowl filled with black loam many shades darker than the surrounding black sand, and containing the bottom of a vessel stamped in small squares. This base had a sort of projection at one end, possibly made intentionally and may have served as a dish.

24.—21 feet N. of E., skeleton of adult male, 3 feet from surface, practically in the same position as No. 23, head S. E., 3 feet from surface.

25.—23 feet N. E., a grave filled with oyster shells, running through the brown sand to base of mound, a vertical distance of 3 feet. This grave may have been dug while the shell layer was in process of formation. The surface showed no depression. Resting on the base of the grave was the skeleton of an adult male, in a sitting position, facing N. E.

26.—A grave 23 feet N. E., 4 feet in depth from the surface and 2 feet 6 inches from the bottom of the shell layer. The grave went through and extended beyond the black line of the base, a distance of 14 inches. On the bottom was a skeleton of uncertain sex, head N., an ordinary flexed burial.

27.—19 feet N. by W., a grave two feet across. Surface of mound to bottom of grave which extended 10 inches below the base line, 4 feet 9 inches. This grave, filled with brown sand without oyster shells, contained skeleton, probably female of about 20 years of age, in a sitting position, facing S. W.

28.—6 feet S. of E., skeleton of uncertain sex, 1 foot down in shell, head N. A portion of this skeleton fell in caved sand.

29.—22 feet E. by N., skeleton of female, head N.; an ordinary flexed burial, 4 feet beneath surface on the base of a grave composed of dark brown sand, which ran into the yellow sand 9 inches below the bottom of the black base layer, which, at this place, was 9 inches thick.

30.—17 feet E., a skeleton of an adult male, 3 feet from the surface, on back,

head N., arms along side, forearms across body, thighs flexed up to right, legs parallel to thighs. In association were a core of chert, and part of a *Fulgur*, filled with sand dyed a bright red with hematite.

31.—3 feet S. E., 1 foot down, in shell, flexed skeleton of a male on back, head W.

32.—17 feet N. of E., 2 feet 3 inches down, skeleton of adult male, seated, leaning back, head facing W. and forced over on chest, legs drawn up, right humerus extended from side at right angles to body, forearm flexed and parallel to side of body, left humerus against body with forearm across trunk.

33.—10 feet E., 9 inches down, 2 skeletons: female below, on face, head S.; male on plane above. Caving sand interfered with detailed examination. Beneath these skeletons, which were covered by an unbroken layer of shell, was the skeleton of a dog. Not far distant from No. 33, was a layer of charcoal and oyster shells showing marks of fire, 4 to 5 inches in thickness, covered by fragments of calcined human bones. This layer, 28 inches in length, caved previous to a complete examination.

34.—18 feet S. S. W., 2 feet down, skeleton of youth facing S. S. W., in a kneeling position, leaning forward.

35.—25 feet E. by N., 2 feet 9 inches down, skeleton of female, on face, head E., thighs turned to left side, projecting from body, legs flexed sharply on thighs, right arm along body, forearm crossed on body, left arm extended out, running between thighs.

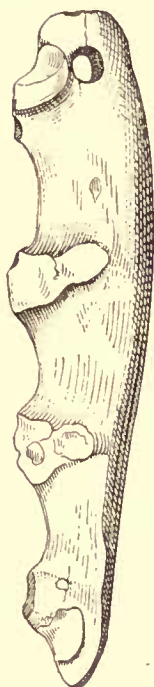
36.—A grave, 17 feet E. by N., 16 inches below upper margin of base-line, at that point about 9 inches thick. Surface to skeleton, 5 feet. Skeleton of male on back, head W., arms akimbo, the thighs flexed to right angle to body and turned to right, legs sharply flexed back on thighs.

37.—A grave at center of mound having the shape of an inverted cone with rounded apex, 4 feet in height. Diameter of opening 9 feet. At the bottom a layer of calcined human bones having a maximum thickness of 1 foot 6 inches. Among the calcined bones were a great number of shell beads of various sizes and shapes and a curious pendant of shell (Fig. 60), which, unlike the beads, showed exposure to fire. In addition, were many imperforate teeth of a dog or of a wolf and a number of human phalanges unaffected by fire. This grave was filled with oyster shells and it was impossible to say at what stage of the shell deposit above it was constructed. It is shown on the cross section.

Fig. 60.—Pendant of shell. Mound B. (Full size.)

38.—At the center of the mound, 1 foot 8 inches down, in the shell covering grave 37, was the skeleton of an adult male disarranged by caving of surrounding oyster shells.

39.—25 feet E. by N., 4 feet 8 inches down, in a semi-sitting position much resembling that of skeleton No. 11, was a male skeleton facing S. With it were: a cannon bone of a deer; a bit of chert; a few shell beads; a portion of a



pebble and a tooth of a fossil shark, 4.25 inches in length with portions cut from either side of the base for convenience in hafting (Fig. 61). Portions were split from either side of the point showing hard usage. We have before met with large fossil teeth of sharks in mounds of Florida and of Georgia, but none bore marks of service or of workmanship of any kind. We have seen also small teeth of fossil sharks, which came from mounds of the St. Johns River, Florida.

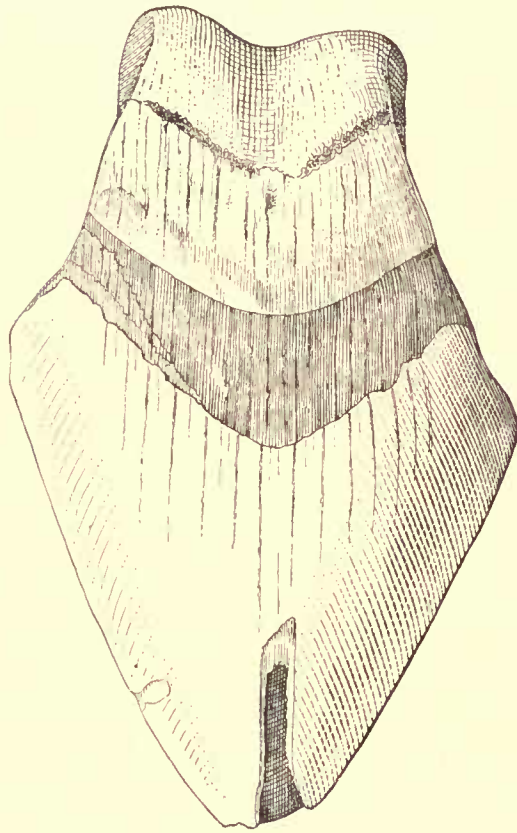


Fig. 61.—Tooth of fossil shark, used as an implement.
Mound B. (Full size.)

These teeth had a perforation at the base and were used either as pendants or as knives, like sharks teeth of the present geological period—found by Mr. Cushing during his recent investigations—which were pierced and fastened to small handles.

40.—22 feet N. E., a grave, in which was a skeleton sitting in about the same position as No. 13, facing N. E. Right humerus along body, right forearm flexed on humerus, left humerus along body with forearm across and outside of legs. Back of the skeleton, on the pelvis, with the spinal column directly in front, was a cord-marked bowl or a large part of one, crushed to fragments. This grave, the bottom of which was 4 feet from the surface, extended through the black base-layer of the mound, there 8 inches thick, and continued 1 foot beyond. The grave was filled with brown sand containing some oyster shells, and it is probable that it was made at a time when the surface layer of oyster shells was in process of formation.

41.—12 feet S. by W., skeleton of male on left side, head S. Right humerus across body, forearm extended. Left humerus under body, forearm partly flexed. Thighs flexed on body, legs back and parallel to thighs.

42.—22 feet N. by E., 3 feet down, skeleton probably male, much flexed on right side, head N. W.

43.—18 feet W. by S., 4.5 feet down including 1 foot 3 inches below the line of the base of the mound, was the skeleton of a dog.

44.—11 feet N. E., 6 feet from the surface, was the skeleton of a woman, lying on back in an unusually extended position for this mound. Head S. E. Thighs out from body and raised to an angle of 45 degrees. Legs down at same angle. Right humerus along body, forearm across trunk; left humerus and forearm parallel with body. This skeleton measured 3 feet 9 inches as it lay.

45.—In the center of the mound, on the base, was a fire place approximately 3.5 feet by 3 feet, with a mass of calcined human bones and bones unaffected by fire, having an average thickness of about 7 inches. Much of the material, at least, had not been calcined on the spot, as bones showing no trace of fire, lying on the fire place, had above them a layer of calcined fragments. A great number of shell beads showing no trace of fire lay scattered through the remains. Numerous fragments of earthenware were present.

XXX.—A little W. of the center was a layer of calcined earth and lime presumably from oyster shells, showing intense and prolonged heat. Its length was 11 feet; its breadth about 6 feet. It had an average thickness of about 1 foot. This curious layer, whose upper surface was 6 feet from the surface of the mound, upon careful examination seemed not to have been subjected to fire upon the spot, since oyster shells, bits of deer horn, bones of lower animals, etc., showing no trace of fire, were scattered through it.

This mound differed considerably in shape and in contents from a number of neighboring mounds which were lower and which contained various forms of urn-burial. In it moreover, as we have stated, earthenware with complicated, stamped decoration was absent. It is possible that Mound B was of a different period from that of some of its neighbors.

OSSABAW ISLAND, BRYAN COUNTY. MIDDLE SETTLEMENT, MOUND C.

In the verge of the woods bordering the field to which reference has been made, about 300 yards in a northerly direction from Mound B, was one of much the same type as Mound B, having a height of 8 feet. It had undergone but little previous investigation. The center of the mound, a peak of shell, was easily discernible.

The diameter of the mound was difficult to determine, as it did not rise directly from a general level but in a series of irregular slopes caused by occupation of the surrounding territory as a dwelling site, resulting in a deposit of oyster shells and debris. Portions of the outlying territory were thickly covered with oyster shells while other parts, consisting of dark loamy sand, had oyster shells and sherds to a depth of several feet.

The lower portions of the mound had been under cultivation in former times as deep furrows were plainly visible, though at the time of our investigation (1897) the mound was thickly covered with undergrowth and with small trees. It being impossible to determine just where the mound proper merged with midden refuse, a diameter of 68 feet was selected, which, on the side where oyster shells were absent, brought the circumference somewhat beyond the apparent base of the mound. We are of opinion, however, that in the case of this mound, certain outlying burials escaped us.

At the base of the northern portion of the mound was a thick deposit of oyster shells presumably having no direct connection with the mound but thrown there during the period of occupation of the territory as a dwelling site. Much of this was not included in our investigation.

The entire northern half of the mound was dug down leaving a cross-section almost E. and W. Subsequently the central portion of the remaining half was dug out. The remainder of the mound was not investigated.

Upon the light yellow undisturbed sand beneath the mound, but below the outer portions only, was a dark band, averaging 1 foot in thickness, composed of black loam, fragments of oyster shells and bits of charcoal. Farther in, this band was replaced by a layer of oyster shells from 6 inches to 1 foot in thickness which continued through the mound. This black band and shell deposit we regarded as marking the original level of the ground. The deposit of oyster shells, however, divided in places and, coming together again, enclosed masses of dark yellow sand, about 1 foot in thickness and 3 to 4 feet in length. Supposing the layer of shells to be the base line, we are at a loss to account for the presence of the sand.

While the height of the mound was but 8 feet above the immediately surrounding level, the perpendicular distance from its apex to the upper margin of the black band was 10 feet. This apparent discrepancy, we suppose, may be accounted for under the hypothesis that a deposit of midden refuse, made subsequent to the completion of the mound, had surrounded it to a height of 2 feet and over.

The body of the mound was composed of yellow sand darkened by the presence of much organic matter. This sand was irregularly streaked in places and contained here and there local layers of shell, and of sand reddened with admixture of the oxide of iron.

Though there was no general deposit of oyster shells covering the surface, as was the case with Mound B, a great central pit, filled with oyster shells was present with an out-cropping through the immediately central parts of the mound. The dark yellow sand of the body of the mound was covered with an irregular layer of rich black surface loam.

We have referred to a deposit of shell contiguous to the mound. This deposit joined the mound and included that part of the margin lying between E. by N. and N. N. E., and had a breadth of 27 feet converging from a small beginning at either end to a depth of 7 feet 10 inches. Four and one-half feet in from the margin of the mound as taken by us, the deposit had a breadth of 12 feet, and, instead of solid shell, as before, was from the surface down:

Shell	3 feet 7 inches	Dark sand	3 inches
Brown sand. . .	1 foot 2 inches	Light brown sand . .	6 inches
Shell	1 foot 6 inches	Undisturbed sand.	

The black band, to which we have referred, cut through by this curious combination, was visible at either side, its upper margin being 2 feet 6 inches below the surface. The deposit disappeared a few feet farther in from the point where the measurement was taken.

Sherds were of frequent occurrence. With the exception of 2 or 3 from the immediate surface, all were undecorated or cord-marked—the latter predominating. The reader will recall that in Mound B also no ware with the complicated stamp was discovered.

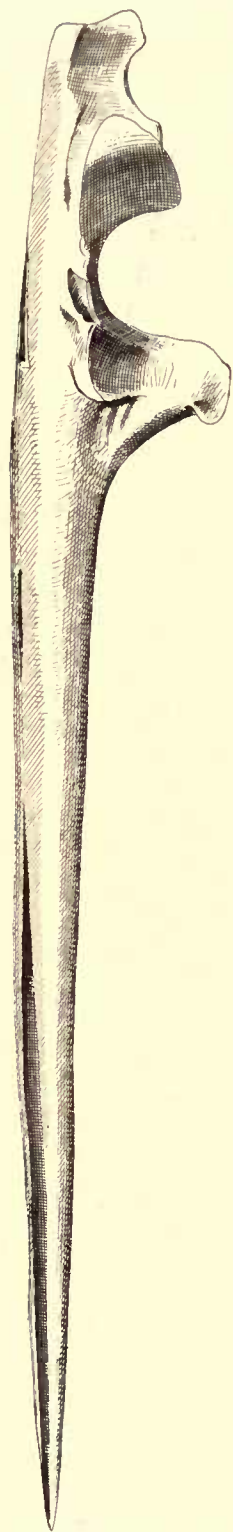


Fig. 62.—Piercing implement of bone. Mound C. (Full size.)

Several sherds were singly or doubly grooved, showing use as hones.

One fragment of earthenware from a large vessel had a thickness of .9 of 1 inch.

An imperforate vessel of about 1 quart capacity with a rough checked-stamp decoration came from caved sand.

In caved sand was an undecorated vessel in shape somewhat like a modern gravy-boat. The bottom had been intentionally knocked out. Length, 7.3 inches; width, 4.7 inches; height, 3 inches.

A globular, undecorated vessel lay in caved sand. Diameter at mouth, 4.3 inches; maximum diameter, 5.5 inches; height, 4.3 inches.

Two bowls, one badly crushed, were in caved sand.

Throughout the mound were several deposits of fragments of pots, placed upon each other. As usual, these nests were composed of pieces belonging to different vessels.

A number of pebble-hammers and fragments of pebble-hammers were found separately in midden refuse and unassociated with human remains.

From the basal layer came a silicified astragalus of a large mammal, which had seemingly been in use as a hammer as portions from one end were split off, as by blows.

Mostly from the midden refuse came numerous fragments of bone pins, while at a considerable depth in the sand was found an ulna of a lower animal, fashioned into a highly polished piercing implement 7.8 inches in length (Fig. 62).

In the surface loam was a section of a long bone .7 of 1 inch in height, with diameters of .6 of 1 inch and .8 of 1 inch respectively. On either side, between the upper and lower margins is a groove. The bone is polished, and at one place slightly stained with copper. This object may be of a period later than that of the mound.

Apparently not in immediate association with remains, together, were ten agricultural implements of shell (*Fulgur carica*).

Though human remains in Mound C were, as a rule, fairly well preserved, no unbroken crania were met with. No evidence of disease was present on the bones and but one fracture was found, that of an ulna which had united with much less deformity than has been the case with some fractures we have met with. Though careful notes of all burials were taken, yet, owing to similarity of form to interments in Mound B, we deem it unnecessary to go into detail.

Mound C, like Mound B, was riddled with pits in which lay a majority of the skeletons. Burials were noted to the number of 92, though this figure conveys no idea of the exact number of individuals represented, since at times only portions of the skeleton were present, while on the other hand, several skeletons, buried in conjunction, have been included as one interment. Pockets of calcined human bones were five times encountered, two being met with south of the cross-section while digging out central portions of the mound.

As was the case in Mound B, no urn-burials of any sort were present.

With thirteen burials were artifacts: pierced *Olivella* shells; bone pins; shell beads; fresh-water mussel shells; pebble-hammers; sandstone hone; shell drinking cup; small imperforate bowl; two conchs (*Fulgur carica*), pierced for use as implements.

Occupying a central position in the mound was a pit, roughly circular, clearly dug down from the surface where it had a diameter of about 13 feet. Eight feet below the surface it had converged to a base about 3 feet across. The pit had been filled with sand mingled with midden refuse and had been capped with a solid

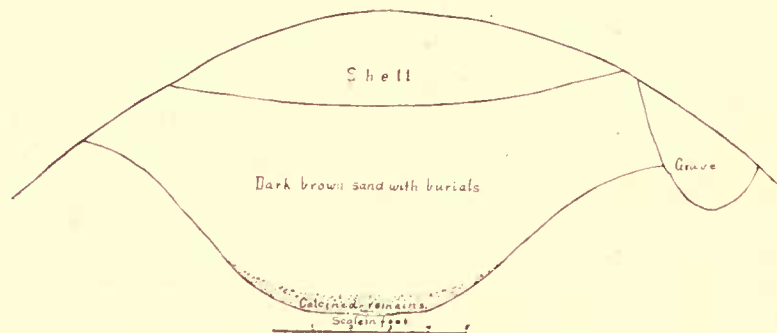


Fig. 63.—Section of central pit. Mound C.

deposit of oyster shells having a maximum thickness of 2.5 feet. The upper eastern portion of the pit had been cut through by a grave (see diagram of pit Fig. 63), and at different points the pit itself contained skeletal remains placed there at the time of the filling. On the bottom of this pit and extending up on the sides, was an irregular deposit of fragments of calcined human bones, having an average thickness of about 5 inches and a diameter of 7 feet measured across between the margins extending upward (Burial 82). Mingled with the calcined fragments was a curious medley as follows: a great number of shell beads of various shapes, some tubular, one having a length of about 3 inches, mostly unaffected by fire but some showing calcination; 8 pearls, pierced, one showing traces of fire; 8 chert spalls together; 14 chips of chert together; 53 quartz pebbles, intimately associated, each about the size of a pea; great numbers of sherds, including one circular in shape, with a central perforation; a considerable number of bone pins, one 7.5 inches long with a perforation (Fig. 64). In addition to this diverse collection was the body of the lower jaw of some carnivore, and parts of other jaws, with the lower portions ground away as we have described in the account of the mound at Greenseed Field.

OSSABAW ISLAND, BRYAN COUNTY. MIDDLE SETTLEMENT, MOUND D.



Fig. 64.—Piercing
implement of
bone, Mound
C. (Full size.)

This mound, in the same cultivated field as Mound B and distant from it about two hundred yards in a southwesterly direction, had a height at the time of our visit (December, 1896) of 3 feet 9 inches. It was evident from the appearance of the mound that long cultivation had materially decreased the height of central portions, carrying down the material to its marginal parts. As the beginning of the slope is no sure indication of boundary among the low mounds of the sea-islands of Georgia, especially those long subject to the plow, pits were dug and tentative trenches run in from a considerable distance out, in a vain endeavor to locate the presence of that dark layer corresponding to the original surface, so frequently present. Finally, taking a certain thickening of the surface soil as an indication, a circle with a diameter of 82 feet was drawn; the highest portion of the mound, a peak of shell, forming the center.

The mound was sliced down with the utmost care, those digging, where it seemed necessary, going as much as 8 feet below its surface. Of the many mounds it has been our fortune to investigate, none has offered more difficulty in the description of the limits of its component parts. The undisturbed sub-sand was light yellow, at times almost white. Above this came darker yellow sand somewhat discolored by the presence of organic matter and showing a certain amount of disturbance discernible by the presence of streaks, bits of charcoal, etc., but no distinct dark line marking the base was anywhere apparent. Over this layer came a final one of dark brown sand, which, like the disturbed yellow layer, locally varied in thickness so that no general data were obtainable. Moreover, the dark brown layer and the yellow layer below it, so merged together that a line of division was indistinguishable even to the most careful and most experienced observers. At the central portion of the mound was a layer of shell at first beneath the surface and having at the beginning but the thickness of a single shell, increasing gradually toward the center and merging with a second layer of shell which made its appearance several feet farther in, all around, until, at the immediate center of the mound, it appeared at the surface and extended to a considerable depth below the base, forming the great shell pit shown in the cross-section (Fig. 65). This shell layer had probably an average diameter of 30 feet. The portion exposed at the surface was about 15 feet in diameter as shown in the cross-section. The shells comprising these layers, while mainly of the oyster, included also those of the clam, the conch (*Fulgur*), various marine mussels, the "cockle" (*Cardium*) and numerous smaller salt water shell-fish.

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The mound, as the detailed description will show, was riddled with pits, the lower parts of which were clearly distinguishable when extending into undisturbed sand. The parts of the pits in the body of the mound, having been filled with the sand removed during their excavation, resembled so closely the sand surrounding them, that the exact limits were impossible to define. These pits, it was quite evident, were of the period of the mound, many showing no admixture with the dark sand of the upper layer or of shell, though a layer or layers of shell often lay above them. Some, however, showed dark sand in places, but these also at times were underneath undisturbed shell and were doubtless made prior to the completion of the mound. In almost no case could we distinguish the exact beginning of a pit.

Skeletal remains, so numerous in this mound (we have reference to those outside the mortuary vessels), were in a fairly good state of preservation compared to many we have encountered elsewhere, though with one exception, which is particularly noted in the detailed description, no crania were saved, owing to their crushed condition.

In following the detailed description, whose numbering corresponds with that of the diagram (Fig. 66), the lay reader must not confuse the three forms of urn-



Fig. 65.—Section of central portion of Mound D.¹

burial present in this mound; namely, skeletal remains of infants, unaffected by fire; the remains of single individuals, which had undergone cremation, and urns filled with a confused mass of fragments of calcined human bones belonging to individuals of all ages. Where fire had been employed it is distinctly stated.

Two arrowheads or knives of chert, several bits of chert and pebble-hammers, some fragmentary, lay loose in the sand, as also the lower part of a broad chisel of ferruginous shale, having a thin section and a sharp cutting edge.

Burial No. 1, a pit, or grave, located 24 feet W. by N. from the point taken as the center of the surface of the mound, as are all other similar measurements of superficial distance in our detailed account, was in a portion of the mound where the central shell layer had not begun, the shell layer X shown in the diagram and in Fig. 67, which gives an accurate idea of the grave, being of a purely local character. In the bottom of this grave, which extended into the undisturbed

¹ The "yellow sand" in the section is undisturbed sand.

yellow sand, one immediately above the other, were the skeletons of two males, similarly interred, heads N., flexed on right side. With one was an undecorated bone pin or piercing implement which fell to pieces during removal.

X.—A local shell layer extending above these burials. It began 34 feet a little N. of W. and extended inward 13 feet. Its thickness at the outside margin was 2 feet (all such measurements are approximate) increasing to 28 inches above the grave from where it tapered sharply to 2.5 inches at its inner limit.

Burial No. 2, Vessel Aa, 24 feet E. by S., a practically intact vessel of the common type, with base perforation, upright as usual. Its base was 12 inches above the undisturbed yellow sand which, at this point, was 3 feet 4 inches from the surface. The height of the vessel is 16 inches, its upper margin therefore was 1 foot from the surface.

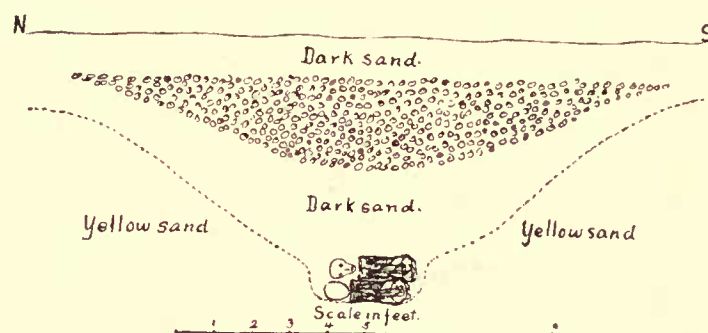


Fig. 67.—Section of grave 1. Mound D.

About half-way down, inside of Aa, was an inverted, imperforate bowl of black ware having stamped complicated decoration (Ab). Portions of the rim were broken and missing. On the bottom of Aa, were the skull of an infant in fragments and other bones, including several ribs. These vessels were sent to the National Museum, Washington, D. C.

Burial No. 3, upon a local shell layer (XX) 30 feet S. by E., 22 inches down, was the flexed skeleton of a child just starting on its second dentition. Head S.

XX.—A shell layer beginning immediately under No. 2, extending inward 6 feet 10 inches. Breadth at outer margin, 4 feet, 3 feet at termination; 1 foot 8 inches thick at the beginning, decreasing to 6 inches, increasing to 1 foot and then tapering away.

Vessel B, 35 feet S. E., a vessel of the ordinary type, 14 inches in height, resting on undisturbed yellow sand 2 feet 10 inches from the surface. The base had a portion intentionally knocked out. The entire side was crushed in and broken into small fragments. Over the opening had been placed several large pieces of earthenware, but with that lack of care distinguishing the makers of the mounds at Ossabaw from those of the Walker mound, these pieces had been allowed to slide over somewhat during the filling in of the pit, thus permitting the entrance of sand. No bones were noted in this vessel, but beyond question the remains of an infant had disappeared through decay.



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Vessel C, 36 feet S. E., a layer of fragments of earthenware vessels, 22 inches by 3 feet 8 inches, 18 inches below the surface. It was made up of overlapping sherds of large size, at times single, and again double, and not of several vessels placed on their sides and crushed by the weight of sand, since cord-marked pottery lay with that having the complicated stamp, and when a fragment was imposed upon another, it often occurred that the convex portion of an upper sherd fitted into the concave portion of a lower, which could not be the case were two sides of a previously entire vessel brought into apposition through breakage. No remains or artifacts lay in the neighborhood of this layer.

Vessel D, 33 feet S. E., the lower portion of a vessel of the ordinary type, with perforated base, having the rim and upper part of the body crushed into small fragments. The vessel had been let down somewhat into the undisturbed yellow sand. From base of vessel to surface, 3 feet.

Burial No. 4, 33 feet S. W., portions of a skeleton with unattached epiphyses, partly in anatomical order, 3 feet 9 inches from the surface, below a local shell layer. A considerable portion of this skeleton was missing, presumably through a later burial (No. 11) placed below it, which was, however, aboriginal and contemporary with the mound, as shown by the undisturbed shell layer above. A diseased humerus from this burial was sent to the Army Medical Museum, Washington. With the bones was a mass of red pigment, which chemical tests showed to be an iron paint ore, probably hematite, and not cinnabar, which would have indicated European contact.

XXX.—A layer of oyster shells having its S. E. corner over Burial No. 4. In thickness it varied from 10 inches to 7 inches to 4 inches. Its outer margin was 8 feet 10 inches across. It extended into the mound a distance of 6 feet 8 inches, where it had a terminal breadth of 5 feet. The upper surface of this layer was 1 foot 10 inches from the surface of the mound.

Burial No. 5, a grave 33 feet W. of S. W. This grave, 3 feet from the surface to the base, 26 inches in diameter, ran 9 inches into the clear yellow sand on which the skeleton lay. The burial was that of an adult female, head E., on left side and so flexed that its major diameter was but 25 inches. Decay was noted in several of the molars, a condition not infrequent in this mound.

Burial No. 6, Vessel E, 31 feet S. S. E., a vessel of the usual type, inverted. The body and base so badly fractured that it was impossible to arrive at any conclusion as to a perforation in the base. Within the vessel were a few fragments of the bones of a child, including two phalanges of the toe, unaffected by fire. In addition, were some calcined shells and a fragment of a calcined shell with a central perforation. This vessel had been placed in a pit, the base of which, 3 feet 4 inches from the surface, was 8 inches below the line of the clear yellow sand, and was 3 feet 6 inches across at the point of entrance into the yellow sand.

XXXX.—29 feet S. E., a layer of decayed or fire-blackened wood, 1 foot in thickness, 3 feet 9 inches across, extending inward about 3 feet where it had a breadth of about 1 foot. It lay at the bottom of a pit filled with brownish sand. No human remains or artifacts were in association.

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Burial No. 7, 29 feet W. by S., a circular pit, with a diameter of about 30 inches, whose base was 36 inches from the surface, the upper 22 inches being surrounded by disturbed brownish sand, the lower 14 inches extending into undisturbed yellow sand. About 6 inches from the base was a portion of a thorax, one scapula and the head of a humerus.

Vessel F, 25 feet S. E., a vessel of the ordinary type, lying on its side on undisturbed yellow sand, there 2 feet from the surface. No bones were discovered and the vessel was too much crushed to furnish exact data of any sort.

In the outer S. E. portion of the mound, unassociated with human remains, were six fresh-water mussel shells, one within the other, four badly crushed. The remaining two showed no perforation.

Burial No. 8, 21 feet E. by S., probably a grave, but the line of demarcation impossible to determine. On the base, 2 feet 4 inches down, was a skeleton, head E., and turned to the left, trunk on face, knees to left, legs flexed back on thighs. Arms parallel to sides of body, forearms flexed up. This skeleton, of an individual about 5 feet 5 inches in height, was of a slender male or of a strongly built woman.

Burial No. 9, 27 feet S. W., in a pit, 2 feet 6 inches from the surface, above No. 16, were a few scattered bones including phalanges, two bits of radius, one patella, two ossa innominata.

Burial No. 10, 28 feet S., a skeleton of a child lying on undisturbed yellow sand, there 3 feet 9 inches from the surface. The bones were inadvertently dug into and disarranged. No pit was apparent—by no means conclusive proof of its non-existence in the case of this mound.

Burial No. 11, 32 feet S. W., a grave beneath Burial No. 4 and under the shell layer XXX, having its base 5 feet 4 inches from the surface. The most careful endeavor failed to define the limits of this grave which contained a skeleton of a male on left side, head N. E. with one knee under the head and one against the forehead.

Burial No. 12, Vessel G, 26 feet S., a bell-jar shaped vessel, imperforate, with faint checked stamp, inverted on the yellow sand, there 3 feet 6 inches from the surface. A small section of the rim was missing. Several cracks were filled with a quick-setting cement which was allowed to dry while the vessel was in place. The vessel contained the calcined bones of a child lying on sand which extended up inside about two-fifths of the height of the vessel, which is 12.5 inches. Its diameter of mouth, which is also its maximum diameter, is 12.5 inches.

Burial No. 13a, b, c, 26 feet S., three skeletons of dogs buried singly within a few feet of each other.

Burial No. 14, 22 feet W., a pocket of calcined human remains and charcoal, 31 inches down, 9 inches across at the start, and about 3 inches thick. It tapered inward a distance of about 13 inches. Among the fragmentary bones were a number of shell beads, some calcined and others unaffected by fire.

Burial No. 15, 25 feet S. W., a grave, surface to bottom of pit, on which skeleton lay, 4 feet 6 inches. It extended 1 foot 6 inches into clear yellow sand. Its limits

in the disturbed sand above were not distinguishable. It contained a flexed skeleton of male on right side, head N. E.

Burial No. 16, 2 feet 9 inches directly below No. 9, or 4 feet 10 inches from the surface to the bottom of the pit on which the bones lay, a flexed burial of a female on left side, head S. E.

Burial No. 17, Vessel H, 14 feet S. E. by E., the lower portion of an imperforate vessel of the ordinary type, just below the surface. Portions had been broken off and scattered by the plow. It had been filled with a mass of calcined human remains, some of which from the upper part, lay scattered about.

Burial No. 17a, a skeleton of a dog some distance below Vessel H.

Burial No. 18, 21 feet S. of W., on the line of the clear yellow sand, there 4 feet 3 inches down, lay a skeleton of uncertain sex at full length, face down, head S. by E. The skeleton measured 6 feet and .5 of an inch as it lay, but the parts were not in immediate contact. No grave was noticeable.

Burial No. 19, 23 feet S. by W., a pocket of calcined fragmentary human bones

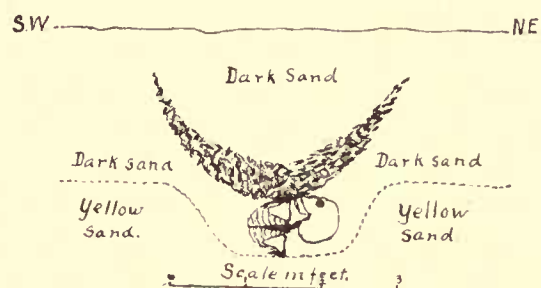


Fig. 68.—Section of grave 21. Mound D.

on the line of the clear yellow sand just 3 feet from the surface, about 6 inches across at the start and 4 inches thick, broadening to 10 inches and tapering to a point 10 inches from the start. With the calcined fragments were shell beads unaffected by fire.

Burial No. 20, 3 feet E. of No. 19, apparently a grave extending 12 inches into the clear yellow sand and having its

base 3 feet 6 inches from the surface. It contained the skeleton of a male, an ordinary flexed burial on the right side, head S.

Burial No. 21, 25 feet S., a pit extending 1 foot into the yellow sand, its base 3 feet from the surface (Fig. 68). At the bottom lay a skeleton of a young person about 10 years of age, flexed on the right side, head S. Above the skeleton was a layer of charcoal about 6 inches thick, mixed in places with burnt sand and shell, extending up the sides of the pit to a level about 1 foot 6 inches above. The diameter of the pit which was apparently circular, was, where the charcoal terminated, 3 feet 4 inches. The jaw and other parts of the skeleton lying in contact with the charcoal were charred or calcined, while other portions lying away from it showed no mark of fire.

Burial No. 22a, 14 feet S. E., a grave 7.5 feet long by 2 feet wide, running 17 inches into the undisturbed yellow sand, its base 4 feet 3 inches from the surface, containing skeleton of a woman at full length, face down, head N. by E., arms along side, measuring 5.5 feet as it lay.

Burial No. 22b, over the feet of Burial No. 22a, in disturbed sand, 3 feet 2 inches from the surface, a flexed burial of a young adult female, head N. E. Right knee up at right angle to the body, leg parallel to the thigh; left knee in contact with

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the head. Right arm and forearm down along body; left arm along body, with forearm across body.

Burial No. 22c, 30 inches from the surface, above pelvic portion of Burial No. 22a. Male, face down, head S. E. Knees and legs to the left. Arms along body with forearms under it.

Burial No. 22d, above Burial No. 22b, but just beneath surface, skeleton of an adult male, disturbed by the plow, lying on back, head W., knees to the left.

Burial No. 22e, 10 feet E. by S., on the line of undisturbed sand, a flexed skeleton of a female, face down, head S. A pebble-hammer lay in association.

Above these burials, with the exception of No. 22d, the central shell layer first made its appearance, at first but an inch or two in thickness, increasing over the burials to 14 inches where its upper margin was 8 inches below the upper surface of the mound.

Burial No. 23, 21 feet W., 2 feet 8 inches down on clear yellow sand with a thin layer of oyster shells above it, was the skeleton of a female, face down and under the body, head W., a knee on either side of the head with arms between body and thighs.

Burial No. 24, 35 feet N. by E., skeleton of a dog, 2 feet 7 inches down.

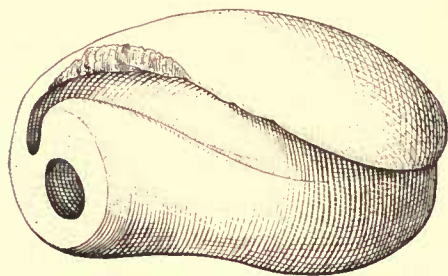


Fig. 69.—Massive bead of shell. Mound D.
(Full size.)

Burial No. 25, 17 feet E. of S., flexed skeleton of female, face down, head W., 2 feet 10 inches from the surface on the line of the undisturbed yellow sand. No grave was apparent.

Burial No. 26, 21 feet W. of S., a pocket of calcined fragments of human bones and charcoal, 3 inches thick at the start, lying on the line of undisturbed sand, 3 feet 8 inches down. This layer at the start was 1 foot 10

inches across, broadening 18 inches inward to 27 inches, with a maximum thickness of 8 inches and tapering from that point to its end, 2 feet 11 inches from the start.

Burial No. 27a, 16 feet S. by E., a pit with charcoal, much resembling No. 21, having its base 4 feet 2 inches from the surface. At its base was a skeleton of uncertain sex, flexed, trunk face down, head E. Though the skull lay in the charcoal, it bore no marks of fire.

Burial No. 27b, about 10 inches above No. 27a, was a flexed skeleton of a male, on right side, head W.

Burial No. 28, Vessel I, 19 feet S., just beneath the surface was a vessel crushed to fragments by the plow, with calcined pieces of human bones which the vessel had contained.

Burial No. 29, 18 feet S., flexed skeleton of male on back, on undisturbed sand, 3 feet 3 inches from surface, head S. W.

Burial No. 30, Vessel J, 14 feet S., undecorated vessel broken into fragments by the plow, containing calcined bones of a child and many small shell beads with 33

massive beads,¹ some at least wrought from the columella of *Fulgur carica* and still showing traces of the attractive natural carnelian color, the largest having a length of 2.25 inches and a diameter of 1.4 inches (Fig. 69). Two similar beads lay in the sand near by. With the shell beads were 16 pearls,² perforated, but otherwise in good condition, the largest having a diameter of 10.7 mm. by 9.6 mm.

Burial No. 31, 17 feet S. by W., skeleton of female on line of clear yellow sand, there 3 feet 6 inches from surface, head S. Trunk much twisted. Pelvic portion on back, upper trunk twisted to left. Left shoulder under and toward opposite side. Left arm and forearm along body. Right arm and forearm under body. Right thigh at right angle to body and projecting upward, leg flexed back against it. Left thigh along body with leg against thigh.

Burial No. 32, 20 feet S. W., skeleton of young person on yellow sand 3 feet 9 inches from surface, on right side, head E., body partially flexed, knees at right angles to body with legs flexed back on thighs.

Burial No. 33, 21 feet W. by N., skeleton of a child, flexed on left side, head W., lying on clear yellow sand in a grave the boundaries of which were not exactly distinguishable.

Burial No. 34, 22 feet W. by N., skeleton of an adolescent, lying on yellow sand 6 feet from surface, flexed on back, head N., next to Burial No. 1 and probably in same pit.

Burial No. 35, Vessel K, 19 feet S. W., an undecorated bowl of black ware, crushed by the plow, but partially held together by sand. Nearby were human bones and fragments of bone unaffected by fire, probably scattered by the plow. Their connection with the bowl, which apparently contained no human remains, could not be established.

Burial No. 36, 16 feet S. by W., skeleton of male, on undisturbed sand 4 feet from surface, flexed on right side, head N.

Burial No. 37, Vessel L, 18 feet S. W., a vessel of the ordinary type with top and upper body crushed by the plow, half filled with calcined human remains and imperforate, as are all vessels we have found holding calcined remains.

Burial No. 38, 13 feet S., skeleton of female, flexed on right side, head W., lying on the level, 2 feet below the surface.

Burial No. 39, 31 feet N. by W., a grave having its base 6 feet 2 inches from the surface, and extending about 4 feet into undisturbed sand. Its diameter at the line of the yellow sand was 8 feet 8 inches, lessening to 2 feet 9 inches, one foot above the base upon which lay a skeleton of a male, flexed on right side, head S. E. A bit of cord-marked pottery—possibly of accidental introduction—lay near the foot.

Burial No. 40, 14 feet S. by W., skeleton of a dog, 3 feet from surface.

Burial No. 41, 20 feet S. W., a pit extending 14 inches into yellow sand and having its base 4 feet 4 inches from the surface. On the base lay a skeleton of a female, flexed on left side, facing back, head S.

¹ See "Art in Shell," Plate XXXIV, Report Bureau of Ethnology, 1880-1881.

² As to pearls in Southern mounds see Antiquities of the Southern Indians, C. C. Jones, Chapter XXI.



Fig. 70.—Piercing implement of bone. Mound D. (Two-thirds size.)

Burial No. 42, skeleton of a dog, immediately above No. 41.

Burial No. 43, 18 feet S. W., 3 feet 6 inches from surface in same pit as No. 41, were a single skull and one tibia, about 3 feet distant. These bones had probably been disturbed by the introduction of the burial below.

Burial No. 44, 10 feet S. by W., skeleton of a female lying on a shell layer 2 feet 10 inches from the surface. The head, which would have been N. E., was bent over and crushed on the pelvis. The lower trunk lay on the back, the upper was bent over. The right arm lay along body with forearm flexed along thigh. The left arm was alongside of body with forearm across pelvis. The thighs extended laterally at right angles to opposite sides of the body. Legs were flexed back against them.

Burial No. 45, 6 feet S. E., several scattered human bones in the great central shell pocket. Other bones were scattered at various points throughout.

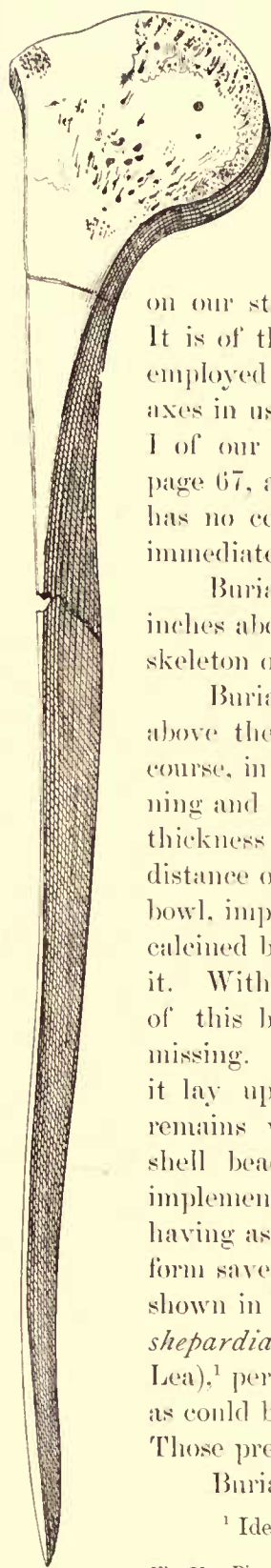
Burial No. 46, 16 feet W. by S., on the line of the yellow sand, there 3 feet 10 inches from the surface, was a skeleton of a female, at full length, measuring 5 feet 8 inches as it lay, on back, head S., face E., right arm along side, forearm crossing to pelvis; left arm along body, forearm flexed back with hand to shoulder.

Burial No. 47, 26 feet N. by E., on the yellow sand, there 2 feet from the surface, isolated cranium wanting face bones and lower jaw.

Burial No. 48, 13 feet S. W., 3 feet 6 inches down, skeleton of animal, probably dog, which fell into small bits upon removal.

Burial No. 49, 9 feet S. W., a fireplace composed of a layer of charcoal and blackened sand, 4 inches thick at start and 1 foot 8 inches across. One foot inward it was 25 inches across and 5 inches thick, lessening from that point to its termination 26 inches from its outer margin. It was 18 inches below the surface of the mound.

Burial No. 50, 2 feet S., in the great central shell pocket, 4 feet from the surface, was a deposit of calcined human bones, 3 inches thick at the beginning and 13 inches in breadth. Sixteen inches inward it was 25 inches across and about 4 inches thick. It extended inward 2 feet 9 inches. With the calcined bones was no charcoal, and fragments of bones of lower animals lying among them showed no trace of fire. The cremation, therefore, had not been carried into effect on the spot. With the remains was an interesting pointed implement 11.3 inches in length (Fig. 70), wrought from a split bone of a lower animal, with a carefully incised decoration on the handle, a part of which is missing. An interesting feature is a former fracture repaired by the use of bitumen. With the piercing implement was what may have been



a portion of a neatly carved handle of another bone implement; a small bone implement that crumbled to pieces, and half a rude chert arrowhead or knife.

Twenty-five feet N. by E., and 2 feet from the surface, which at this part had no layer of oyster shells and seemed encumbered to a considerable extent with sand plowed from higher portions of the mound, was an axe of steel. This axe, which was not greatly rusted and is now doing duty on our steamer, had a certain amount of wood remaining in the eye. It is of the form at present known as the "turpentine axe" and is employed for "boxing" pine trees. It bears no resemblance to those axes in use among later Indians, one of which is figured by us in Part I of our Report on the "Mounds of the St. Johns River, Florida," page 67, and, in our opinion, was a recent addition to the mound, and has no connection with the period of its construction. It was not immediately associated with human remains.

Burial No. 51, 7 feet S. W., 6 feet 8 inches from the surface, or 4 inches above the base of the great central pit, beneath the shell, was a skeleton of a male, flexed on left side, head N. E.

Burial No. 52, just E. of the head of Burial No. 51, about 10 inches above the bottom of the pit, was a layer of calcined human bones (of course, in small fragments) having a thickness of 4 inches at the beginning and a breadth of 1 foot 7 inches. One foot from the beginning its thickness was 5 inches, its breadth 2 feet. It extended inward a distance of 26 inches. At the eastern outer corner was an undecorated bowl, imperforate, of about one pint capacity, filled with fragmentary calcined bones which possibly had entered from the layer contiguous to it. With these was a molar of a bear. Partially covering the opening of this bowl was a somewhat larger one from which a portion was missing. On either side of the bowls was hematite and a thin layer of it lay upon the upper surface of the layer of bones. With the remains was a small cord-marked bowl in pieces, containing a few shell beads. In addition, unaffected by fire, were three piercing implements of bone, two of ordinary type, the other, 8.3 inches long, having as a head the articular portion of the bone—a common enough form save that a certain portion had been removed from either side as shown in Fig. 71. Near these was a mass of fresh-water mussels (*Unio shepardianus*, Lea; *Unio dolabriformis*, Lea; *Unio roanokensis*, Lea),¹ perhaps fifty, nearly all hopelessly decayed and crushed. So far as could be determined each one bore a double perforation for suspension. Those preserved show no variation from living forms.

Burial No. 53, 25 feet E. of N., a grave having its base 4 feet 9

¹ Identified by Professor Pilsbry.

Fig. 71.—Piercing implement of bone. Mound D. (Full size.)

inches from the surface and extending 2 feet 8 inches into the yellow undisturbed sand. The diameter of this grave, 2 feet 1 inch beneath the surface, where it first became apparent upon entering the clear sand, was 8 feet. It converged to a base upon which lay a skeleton of a male, flexed on right side, head N. E. The superficial layer of shell began at this point.

Burial No. 54, 30 feet N. of E., a layer of charcoal, blackened sand and calcined shells, 8 inches thick, 20 inches long, extending inward 18 inches. The upper margin of this layer was 3.5 feet from the surface.

Burial No. 55, 25 feet E. by S., a part of a skull and a sacrum, 2 feet 4 inches from the surface. One foot 2 inches lower and about 2 feet farther inward was a skeleton flexed on its right side, lacking the skull but having the sacrum in place.

Burial No. 56, 17 feet N. W., 3 feet 9 inches from the surface, skeleton of young person with epiphyses unattached, flexed on right side, head N. E.

Burial No. 57, 17 feet N. by W., 3 feet from the surface on undisturbed sand lay a skeleton of a male, on the right side, flexed, the knees out, head E. This skeleton showed a fairly well-united fracture of the lower end of the fibula.

Burial No. 58, 19 feet N. by E., in a pit having its base 5 feet from the surface, beneath a superficial layer of 2 feet 4 inches of shell, which began over No. 53, was a skeleton of uncertain sex, at full length, face down, measuring 5 feet 6 inches as it lay, head E., arms parallel to body. Above the skeleton, beginning at the surface, were :

Dark sand	1 foot 3 inches
Shell layer	2 feet 4 inches

The pit beginning immediately under the shell was filled with 1 foot 5 inches of disturbed yellow sand. As no oyster shells were mingled with the sand filling the grave, it is evident that the grave was completed before the beginning of the layer above it, and not dug through it.

Burial No. 59, 14 feet N. W., 3 feet 4 inches from surface, skeleton of male with bones disarranged through inadvertence of diggers.

Burial No. 60, 16 feet N. W., a grave filled with brown sand, having disturbed yellow sand on either side. From surface of mound to base of pit, 3 feet 3 inches. On undisturbed sand, flexed skeleton of female, head N. W., shoulders on back, lower trunk turned to the left, knees to the left.

Burial No. 61, 21 feet N. E., a pocket of calcined human bones and charcoal, 3 feet 4 inches from the surface to its lower margin, 10 inches thick, 20 inches across and extending inward 10 inches. Near this fireplace was the lower articular portion of the femur of a bear, neatly severed by a cutting tool. A similar specimen was taken from Mound B, Darien.

Burial No. 62, Vessel Ma, 17 feet E. by S., a vessel of the ordinary type, having its upper margin 9 inches below the surface, crushed to fragments by the plow, which, however, were subsequently recovered and pieced together. Height, 18 inches; diameter of mouth, 13.5 inches; diameter of body, 11.5 inches. Upright, within vessel Ma, was an undecorated bowl of black ware, slightly flaring (Mb). Approxi-

mate measurements: maximum diameter, which was at the mouth, 8.5 inches; height, 5 inches. Within Mb, was a third vase (Mc) of black ware, having a globular body and flaring rim with decoration around the margin consisting of raised circles enclosing projections. Diameter at mouth, 5 inches; of body, 5.1 inches; height, 6 inches. Within Mc were a few calcined fragments of the bones of an infant. Both Mb and Mc, though badly broken, have been pieced together with practically no missing parts. Above and around Ma were pieces of earthenware belonging to at least two vessels, which may have served as a covering before the advent of the plow.

Burial No. 63, 13 feet W. by N., 2 feet 6 inches from the surface, in a grave which had its base on the undisturbed sand 4 feet 6 inches down, was a seated skeleton, facing N., with head crushed down on the pelvis. Both arms were parallel with the body, the forearms crossing on the pelvis. The thighs, with legs flexed back on them, projected up on either side. Sex uncertain.

Burial No. 64, immediately beneath No. 63, flexed skeleton of female, trunk to the left, head N. and facing in that direction.

Burial No. 65, isolated skull of a child in contact with the cranium of No. 64.

Burial No. 66, with the pelvis against No. 65 and the cranium of No. 64 was a skeleton of a young person, head S., upper trunk on back, head over on chest, legs flexed and turned to the right. Right arm along body with forearm beneath thighs. Left arm a little out and down, with forearm across pelvis.

Burial No. 67, along the bottom of the grave in which were Nos. 63, 64, 65 and 66, was the skeleton of a woman, face down, at full length, 5 feet 8 inches long as it lay; head N., arms and forearms parallel to trunk.

Burial No. 68, 10 feet N. by W., scattered human bones, 4 feet from surface.

Burial No. 69, 9 feet W. of N., skeleton of young person, flexed on right side, head S. E., 3 feet down. In association were a number of *Olivella* shells pierced for stringing.

Burial No. 70, on the same plane, and about 1 foot N. of No. 69, was the skeleton of a child about 5 years of age, flexed on the left side, head N. With it was a cord-marked bowl imposed upon a basket-marked cup, each of somewhat less than one pint capacity and imperforate as to its base. At the bottom of the cup were traces of red pigment.

Burial No. 71, just E. of the cranium of No. 70 were parts of the skull of an infant and a few fragmentary bones.

Burial No. 72, 11 feet N. W., 3 feet down, flexed skeleton of child from three to five years of age, badly crushed, head N.

Burial No. 73, Vessel N, 11 feet E. by N., just beneath the surface, an upright urn-shaped vessel with a faint diamond-stamped decoration, of poor material and completely rotten. It contained the calcined remains of a child. Though in such bad condition this vessel was cemented in place, pieced together and allowed to dry before removal and was thus recovered in fairly good condition. Approximate

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measurements: height, 11 inches; diameter of mouth and maximum diameter of body, each about 8.75 inches (Plate XV).

Vessel O. Immediately behind Vessel N, on its side, facing it, was an imperforate bowl intact, with complicated, stamped decoration (Plate XIV, Fig. 2). Approximate measurements: diameter of mouth, and maximum diameter of body, each, 8.2 inches; height, 6 inches. No human remains were found in association, within or without.

Burial No. 74, 14 feet E. of N., skeleton of a dog.

Burial No. 75, 11 feet S. of E., 4 feet 9 inches down in a pit shown in the cross-section of the mound, a flexed skeleton of a child, head E.

Burial No. 76, 10 feet E., skeleton of a dog, 3 feet from the surface, at the bottom of a small pocket, beneath a local shell layer. This small pit had been dug through the shell layer, or through part of it, during its formation, as the pit had been filled with shells from the layer. However, a layer of calcined human bones (Burial No. 77) entirely intact, lay above the pit containing the dog, which was therefore not an intrusive burial.

Burial No. 77, 10 feet E., 6 inches from surface, a pocket of calcined human bones, 5 inches thick, circular, with a diameter of about 7 inches.

Burial No. 78, 11 feet E., 3 feet 8 inches from surface, in disturbed sand, skeleton of a child, flexed on right side, head S.

Burial No. 79, 18 feet N. E., 6 feet 9 inches from the surface, at the bottom of a pit and let into the clear yellow sand, was the skeleton of a male, at full length, face down, head N. W., with arms and forearms parallel to body. The cranium was saved (A. N. S., Cat. No. 2,166).

Burial No. 80, 11 feet E. by N., on the clear yellow sand on the slope of the pit ending with Burial No. 79 was a skeleton in a sitting position leaning forward, facing W., head forced down to pelvis, right arm along body, forearm crossing above pelvis, left arm along body, forearm forward at right angle. Thighs with legs against them, parallel to body.

Burial No. 81, 7 feet N. by W., 3 feet 8 inches down, just beneath the shell layer, in disturbed yellow sand, probably part of a large grave, the exact boundaries of which were not traceable, was a skeleton on right side, head N. W. A few scattered bones of another body, probably disturbed by the burial of No. 81, lay about.

Burial No. 82, Vessel P, in the central shell pocket, 3 feet W., 3 feet 6 inches down, crushed but held together by the shell, on its side, with a certain portion missing, was an imperforate cord-marked pot of poor material, approximately measuring 5.5 inches in height and 6 inches across its opening, where it had its maximum diameter. In it were the bones of an infant, unaffected by fire.

Burial No. 83, 8 feet E., nearly on the bottom of a pit, 3 feet from the surface, was the skeleton of a female on left side, head S. W., very much twisted as shown in Fig. 72. Beneath the cranium was the shell of a fresh-water mussel.

Burial No. 84, 5 feet N. E., 3 feet 4 inches down in a pit the limits of which were not determined, was the skeleton of a male, on the right side, head E.

Burial No. 85, 1 foot N., skeleton of a dog.

Mound D furnishes a good example of the curious forms of burial prevalent on the Georgia coast. We do not think all the skeletons were intentionally arranged as found, believing some, at least, were forced into pits comparatively small in size

(for shovels in those early days were not so convenient as now, and digging was more onerous), and were twisted into positions more or less the result of chance. The burials at full length, usually at a great comparative depth from the surface, were unquestionably intentional as to their form, though the placing of the skeleton on its back or on its face may have been a matter of accident. In addition, we have layers of calcined human bones; uncremated infant skeletons buried in jars; incinerated remains of single infants in urns; and jars filled with incinerated remains, the result of a general cremation.

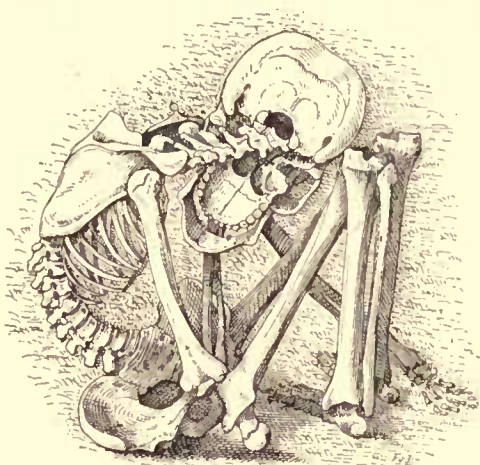


Fig. 72.—Burial No. 83. (Not on scale.)

One curious feature was the presence of numerous skeletons of dogs, which were not found in fragments, here and there a scattered bone, but interred in their entirety. These dogs, therefore, evidently had not served as food. Curiously enough, however, the dogs did not lie with or near human skeletons, as one would expect had they been slain and buried with their masters, but were accorded interment by themselves.

In no mound of the coast of Georgia have burials of dogs approached in number those in Mound D, though occasional ones—always represented by the entire skeleton—have been met with.

In Florida we found in a shell-heap on the Econlockhatchee creek, Orange County, a part of a canine jaw of considerable interest, which the late Professor Cope described and figured in the *American Naturalist*, July, 1893, in connection with certain references to prehistoric dogs in that number.¹

Later, another fragmentary canine jaw was discovered by us in a Florida shell-heap.

On the base of the Tick Island mound, Volusia County, Florida, we found the skeleton of a dog, the skull of which is now in the collection of the late Professor Cope and was described by him in a note in our "Certain Sand Mounds of the St. Johns River, Florida," Part II.

On the base of the Light-house mound near Fernandina, Florida, were two skeletons of dogs, one in very poor condition. The skull of the better preserved one is in the possession of Professor Putnam and references to it by Professors Cope

¹ "Certain Shell Heaps of the St. Johns River, Florida, Hitherto Unexplored," by C. B. Moore. Third paper.

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and Putnam may be found in our "Certain Florida Coast Mounds north of the St. Johns River,"¹ page 25 *et seq.*

Professor Putnam, in whose possession all our Georgia canine skulls now are (1897), after an extended comparative study, is convinced that there can be no doubt that a prehistoric dog existed, in type resembling the collie but with slightly broader jaws.

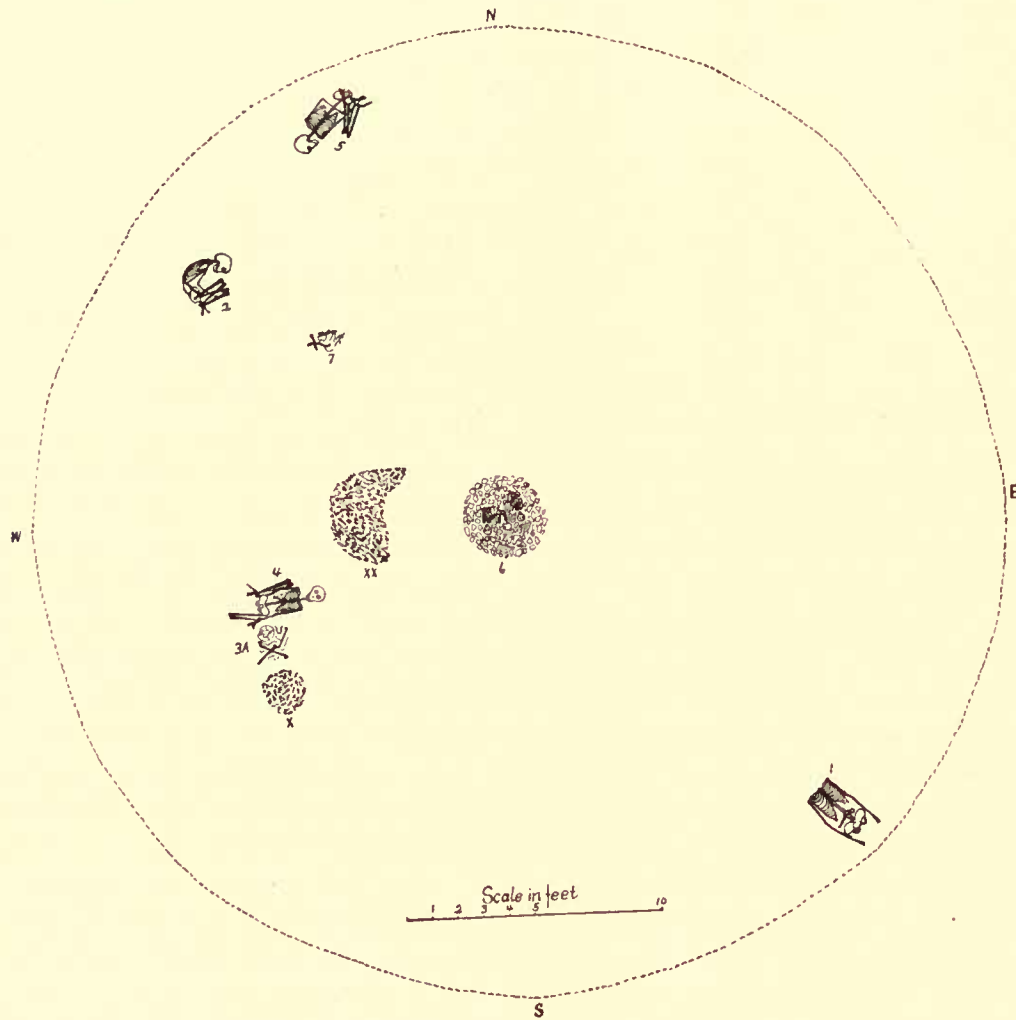


Fig. 73.—Diagram of Mound E.

Mr. Mercer has lately described a portion of a canine jaw found by him in a Maine shell-heap, with a note by Professor Cope.²

OSSABAW ISLAND, BRYAN COUNTY. MIDDLE SETTLEMENT, MOUND E.

This mound, in the same field and about 300 yards W. of Mound D, had been plowed over for so long a period that little could be determined as to its original

¹ Privately printed, Philadelphia, 1896.

² "An Exploration of Aboriginal Shell Heaps." Publications of the University of Pennsylvania, Vol. VI, page 123 *et seq.*

height. Its altitude at the time of the demolition of the mound by us was 14 inches; its diameter we judged to be about 38 feet.

Like many other mounds of its class it was composed of dark sand over undisturbed yellow sand, separated by a dark band, probably the original surface of the field. The line of the base showed marked irregularities, with several curious pits similar to those already referred to in other mounds. Oyster shells covered the central portion of the mound to a depth of about 1 foot 6 inches.

We give a detailed description of the skeletal remains in conjunction with the diagram (Fig. 73).

1.—16 feet S. E., a grave with the base 34 inches from the surface and 22 inches below the base line of the mound. In it was part of a skeleton in anatomical order, trunk on back and upper extremities in order, arms down along body, cranium missing but a few teeth lying on ribs, lower extremities missing with the exception of left foot which lay on trunk immediately above pelvis.

2.—15 feet N. W., a female skeleton, head N. E., flexed on left side, 10 inches down.

X.—12 feet S. of W., a fire-place 1 foot beneath surface, 20 inches long, with a maximum thickness of 2 inches, and extending inward 1 foot 7 inches.

3.—11 feet W. by S., 8 inches down, a number of loose human bones having in association fragments of a vessel of about 2 quarts capacity, crushed flat. The cranium was missing. This disturbance probably owed its origin to the plow.

4.—8 feet W. by S., a skeleton of uncertain sex, head E., trunk on back, left thigh extended, leg flexed back upon it, right thigh flexed toward body, leg drawn down upon thigh, arms and forearms parallel to body. This skeleton, one humerus of which showed an imperfectly united fracture,¹ was 15 inches from the surface.

5.—12 feet N. by W., a grave with base 37 inches from the surface, containing a skeleton with trunk on back, head S. W., thighs flexed on body and turned to the right, legs flexed against thighs, right arm and forearm parallel with body, left arm along body with forearm flexed at a right angle across body. From the bottom of the grave to the top of the black base-line was 25 inches. The pit was 3 feet 3 inches across at the top.

Fig. 74.—Bone pin with incised decoration. Mound E. (Full size.)

XX.—7 feet W., a fire-place about 2 inches thick, 1 foot 4 inches below the surface. Its outer margin had a length of 30 inches, broadening to 3 feet 9 inches about 1 foot 11 inches inward. From the left corner a small spur projected 9 inches farther in.

6.—2 feet W., a curious grave, 5 feet 6 inches in diameter at its apparent

¹ Sent to the Army Medical Museum, Washington, D. C.

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starting point beneath the black base layer of the mound and 3.5 feet across its base, extended toward the center a distance of 3.5 feet. The black basal layer of the mound continued unbroken above it, showing its completion previous to the inception of the mound. From the surface of the mound to the bottom of the grave was 5 feet 4 inches. From the bottom of the black band to the bottom of the grave was 3 feet 6 inches. In the grave, 4 feet 10 inches from the surface, were three skeletons of children all about five or six years of age. With them were many fragments of pots in layers and one small undecorated cup with a curious knob on the outside at the bottom. This cup, somewhat crushed, has been almost completely restored.

7.—Just beneath the surface were certain human bones, doubtless remains of a skeleton disturbed by a plow.

In the shell debris covering the mound was a bone pin 6 inches in length, encircled as to the upper part with incised decoration extending 2 inches down (Fig. 74).

OSSABAW ISLAND, BRYAN COUNTY. MIDDLE SETTLEMENT, MOUND F.

This low elevation, in the same field as Mound B and about 200 yards in a westerly direction from it, had long been under cultivation. Its highest portion, where superficial shell had a somewhat greater upward slope, was about 20 inches above the general level. The limits of the mound were not definitely fixed. A diameter of 76 feet was taken and the southernmost half of the circumference was carefully dug through.

The mound, which had absolutely no dark band running through it, was composed of black loam mixed with oyster shells. The usual grave-pits were present, the majority being filled with midden refuse, though several contained dark sand only.

Human remains, in an excellent state of preservation, were met with to the number of twenty. No urn-burials of any sort or pockets of calcined remains were found.

One skeleton of a dog was found, interred alone, as usual.

Cord-marked ware in the form of sherds, was present through the body of the mound but the complicated stamp was unrepresented save by two or three fragments from near the surface. One undecorated sherd had a thickness of 1.1 inches.

Four pebble-hammers lay separately in the sand. Three others, two of quartz and one of *Granulite*,¹ lay together, away from human remains. One had a length of about 6 inches.

Four rude piercing implements of bone came separately from the midden refuse in which also was found the tine of a stag-horn, severed by a cutting tool.

Burials were of the flexed variety; the majority of skeletons on the left side. The direction of the heads of eighteen was noted. Ten were to the E., two to the N. E., two to the S. E., two to the W., one to the N. and one to the S. W.

A little hematite lay with one burial. With another were two fresh-water mussel shells and a mass of rock, somewhat worked.

¹ All determinations of rock are by Dr. Goldsmith.

CERTAIN ABORIGINAL MOUNDS OF THE GEORGIA COAST. 131

OSSABAW ISLAND, BRYAN COUNTY. BLUFF FIELD, MOUND A.

The Bluff Field is a cultivated tract about 2.5 miles by land in a northeasterly direction from the Middle Settlement, and is under the same control.

Mound A, about midway between the extremities of the field, and perhaps 75 yards from the bluff, had a height of 2 feet 3 inches above the surrounding level. We gave to it a diameter of about 56 feet, which probably included more than the mound. The mound had been much plowed away but bore no trace of previous investigation, save several small holes dug by colored men.

The mound was completely dug through. It was composed of black loam with oyster shells scattered here and there and contained several local layers of shell. The central portion of the mound, with an average diameter of 24 feet, was a solid mass of oyster shells from the surface down to a thin stratum of black loam from 6 to 12 inches in thickness. Beneath was undisturbed grayish-white sand. At the center of the mound this mass of shell was 2 feet thick. Marginal pits filled with black midden refuse and containing no burials, were present.

Human remains in fairly good condition were met with at fourteen points—one deposit of calcined remains and thirteen skeletons. The skeletons, heading in all directions, were flexed on the right, on the left, or with trunk on back and lower extremities to the right or to the left. The calcined remains were a layer at the bottom of a pit extending 18 inches into undisturbed sand with fragments of charcoal above it. Completely covering the area where the pit entered the undisturbed sand, was a layer of four thicknesses of large cord-marked sherds.

Away from human remains was the skeleton of a dog, the principal parts of which were forwarded by us to Professor Putnam.

By the cranium of a child was a practically undecorated pot, imperforate, with inverted rim, in the shape of an inverted cone with rounded apex, or of an acorn with blunted point. Diameter of aperture, 4 inches; maximum diameter, 5 inches; height, 4.3 inches (Fig. 75).

Scattered sherds were practically unrepresented in the mound. A mass of stone, probably amphibolic gneiss, pitted, and used as a smoothing stone, lay loose in the sand.

On the surface, near Mound A, lay a rude implement, probably of amphibolic gneiss, about 4 inches in length, somewhat resembling in form a hoe-shaped implement, or spud. It is much chipped at the edge, having probably seen service as a hoe. It bears a longitudinal groove showing secondary use as a hone.

OSSABAW ISLAND, BRYAN COUNTY. BLUFF FIELD, MOUND B.

This mound, in the extreme S. W. part of the field, had a height of 19 inches. A certain amount had been ploughed away. No previous investigation was reported or noted.

A diameter of 40 feet was taken, and the circumference dug through, including we believe, considerably more than the mound. It was composed of black loamy

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sand with oyster shells scattered throughout. Toward the center the shells became more numerous but were not in a compact mass. From what seemed to be the center of the surface of the mound to undisturbed sand was 26 inches.

Sherds were of very infrequent occurrence, none bearing the complicated stamp.

The mound, in swampy ground, contained human remains at six points, all badly decayed.

Burial No. 1, 3 feet W. of center, just beneath the surface, was a small pocket of scattered fragments of calcined human bones with charcoal at either extremity.

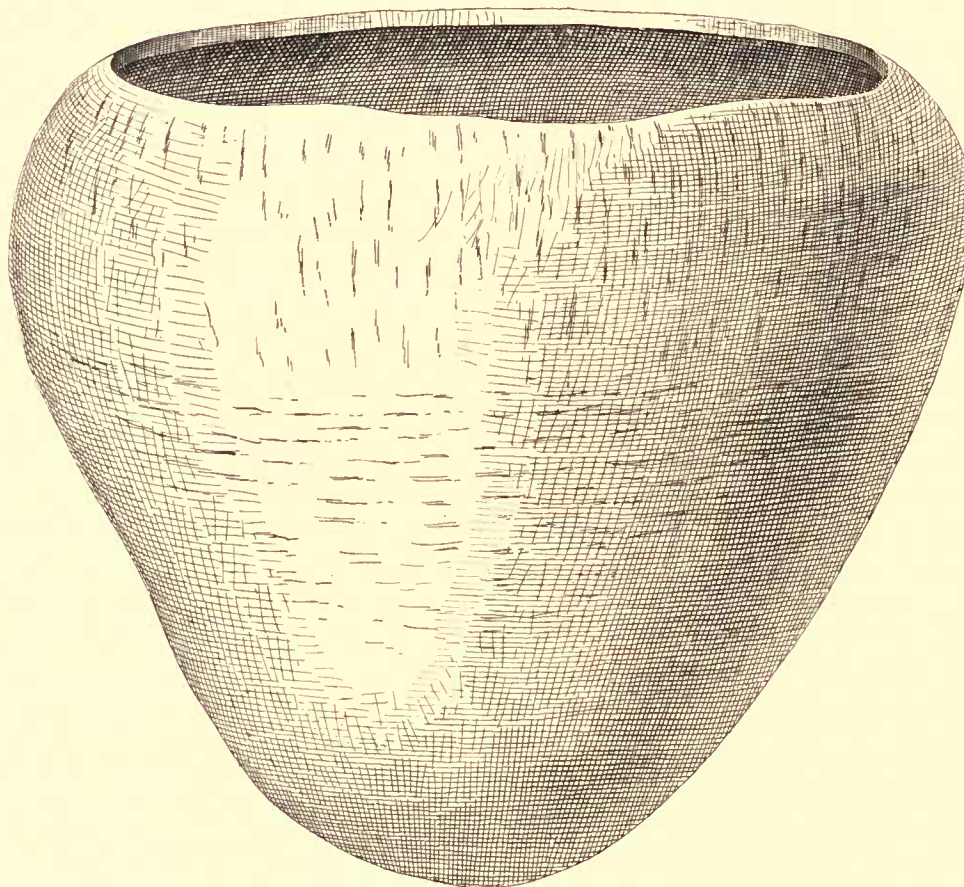


Fig. 75.—Vessel of earthenware. Mound A, Bluff Field. (Full size.)

Burial No. 2, in a central position in the mound, on the bottom of a pit 29 inches deep and extending 10 inches into undisturbed sand, was a deposit of calcined fragments of human bones, 14 by 18 inches, and 4 to 6 inches in thickness. At either side, and above this deposit, was charcoal. At its outer margin was a pebble-hammer of quartz and a small chisel of greenstone. A little farther in, resting on its imperforate base, was an undecorated bowl, with a slightly inverted rim, having a diameter at mouth of 5.3 inches, a maximum diameter of 6 inches and a height of 2.8 inches. Upright within this was a curious little imperforate, undecorated vessel. Diameter of mouth, 2.3 inches; maximum diameter, 3 inches; height, 2.4

inches (Fig. 76). Beneath the larger vessel was a tobacco pipe of earthenware, having the usual curious chipping on the stem, 3.4 inches in length; diameter of bowl, 1.3 inches (Fig. 77). On the upper surface of the deposit lay a neatly shaped arrowhead of chert.

Burial No. 3, 3 feet N. E., 3 feet from the surface, on the bottom of a pit extending 16 inches into undisturbed sand and having a diameter of 3 feet 4 inches

at its line of junction with the body of the mound, consisted of the bones of a small child in fragments through decay. Surrounding sand was tinged with hematite.

In contact with this skeleton was another, also of a young child, equally fragmentary, the legs extending up along the side of the pit. Above this skeleton was a layer of sherds three and four thick. Beneath both skeletons was charcoal.

Burial No. 4, 2 feet N., in a grave with its base 33 inches from the surface, and 2 feet in diameter where it entered the undisturbed sand, into which it ran 14 inches,

was the skeleton of a child about 5 years of age, flexed on the right side, heading W.

Directly N. on the same plane, were the skeletal remains of a child about 3 years of age, flexed on the back, heading W.

Burial No. 5, 6 feet N. W., 30 inches down, just let into undisturbed sand, was a skeleton of an adult female, flexed on the right side, head N. W.

Burial No. 6, 5 feet N. by W., 2 feet from the surface, was the skeleton of a young infant, unfortunately disturbed by one of our men in digging.

This mound calls to mind Mound A, of the Middle Settlement, in that the skeletons of adult males were excluded, and, as in Mound A, calcined remains were present. These remains included adult skeletons, but whether male or female we are unable to state. Another curious feature of this mound was the central position of burials.

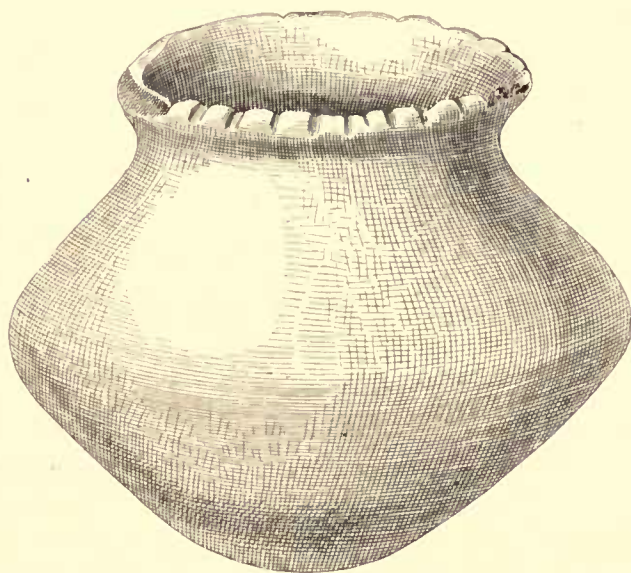


Fig. 76.—Vessel of earthenware. Mound B, Bluff Field. (Full size.)

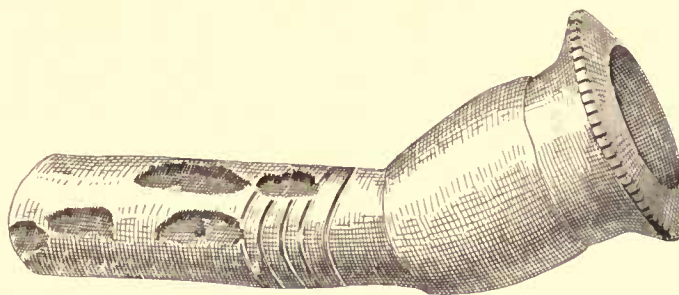


Fig. 77.—Tobacco pipe of earthenware. Mound B, Bluff Field. (Full size.)

OSSABAW ISLAND, BRYAN COUNTY. BLUFF FIELD, MOUND C.

This mound, in a portion of the field used for the cultivation of rice, lay in low ground which was drained by us before proceeding to investigate, and even then the presence of water was a hindrance. The mound, which had been much dug into by negroes living on the island, was about 150 yards N. of Mound B and had a height of 30 inches, which in no wise represented its original altitude. A diameter of 50 feet, which more than included the mound, was taken, and the circumference dug through with the exception of where a former trench had been excavated.

The mound offered no structural feature of interest. Sherds were fairly abundant, the majority decorated with the complicated stamp.

A mass of coral, about thrice the size of a clenched hand, lay unassociated.

With no interment, but doubtless belonging to one previously removed, were a number of shell beads.

A grooved pebble-hammer and one-half of a sandstone hone lay separately, loose in the sand. A portion of a tobacco pipe, with projecting knobs upon the bowl, came from midden refuse.

In the entire mound human remains were met with at but three points.

Burial No. 1, Vessel A, the lower portion of a large imperforate vessel with complicated stamp, the upper part plowed away, filled with calcined human bones. With them were: a chert nodule; an oblong piece of chert, showing a certain amount of chipping; a fragment of chert; and part of a lance head of the same material.

Burial No. 2, 5 feet W., 1 foot down, on the bottom of a small pit was a deposit of fragments of calcined human bones, 1.5 inches thick at the start, 18 inches across and extending inward 17 inches where it attained a thickness of 3 inches. Above a portion of this deposit were a number of good sized fragments from several vessels. The decoration on two sherds was of interest. On one (Fig. 78), in relief, was an encircled point, sometimes an emblem of the sun-god, also a symbol of the Mayas and found in Europe on the painted pebbles of Mas d'Azil.¹ The other is shown in Fig. 79.

Professor Holmes, "considering the locality," is "inclined to regard them as merely ornaments or parts of patterns."

Thomas Wilson, Esq., writes of them as follows:

"The signs or marks which you have found on the pottery in * * * * * Georgia, and about which you wrote me, have been noticed by me during my investigations of the Swastika sign. But I have never been able to find any connection between them and the Swastika, nor to find them in such association as to induce me to believe that they had either a symbolic or ideographic character, or were other than the mere decoration or ornamentation which we find in so many hundreds of other forms on the respective implements and objects of prehistoric times."

Professor Putnam takes a different view. He says:

¹ Of, and after, the period of the reindeer. "*Les Galets Coloriés du Mas d'Azil.*" *L'Anthropologie* (supplément). *Juillet-Août*, 1896. Pl. XI, Fig. 9.

"As to the circle with the dot, there can hardly be a doubt that it is a sun symbol. Of course in the minds of some persons this would simply be a circle with a dot in it, a mere decoration without any particular meaning; but I have long

been convinced that in the development of American art, after passing through the realistic stage, conventionalized forms were used, and at this period of development, symbolism became a marked feature in certain regions. Finally the spaces around the essential figure or symbol were sometimes filled up at the fancy of the artist; the main point in all higher decoration *being the expression of a thought* by a conventionalized form or sacred symbol.

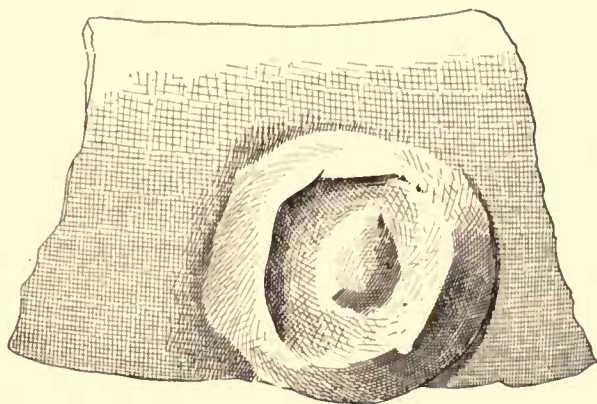


Fig. 78.—Sherd, Mound B, Bluff Field. (Full size.)

"The sun symbol, we may say, is cosmopolitan. It is widely expressed by a simple circle or a circle with a central dot. In this connection I call your attention to the paper by Mr. Willoughby and myself entitled 'Symbolism in Ancient American Art,' and a more recent paper following out the same line of thought, written by Mr. Willoughby and entitled: 'An Analysis of Decorations Upon Pottery from the Mississippi Valley.' The perusal of this paper will, I think, convince you that the decorations consisting of circles, crosses and scrolls are really the more or less conventionalized rendering of certain symbols. You will notice this circle and dot combined with the swastika-like figure of the four winds in Fig. 11 of Mr. Willoughby's paper, and you will find the sun symbol in various connections shown in many of the figures; also in some of the figures in our joint paper on 'Symbolism.'

"The peculiar Z-shaped figure with the two dots probably has the same meaning as the swastika, or being a half swastika as Mr. Willoughby says, it probably indicates a gentle wind or breath, in other words, life. This is the actual meaning of the symbol as used among some



Fig. 79.—Sherd, Mound B, Bluff Field. (Full size.)

of the Pueblo tribes. You will find this same Z-shaped figure in the center of a design, representing a woman, drawn by the Mokis, in Mallory's paper, page 705 of the Report of the Bureau of Ethnology, 1888-89. In this, however, the two dots are not represented. I know of only one other example like yours, and that is shown on a small human figure carved in ivory from a mound in Ohio. This figure is represented with some sort of decoration over the chest and on that decoration is carved the Z-shaped design with the two dots as shown on your potsherd."

Burial No. 3, Vessel B, 4 feet W. N. W., approximately the lower third of a large imperforate vessel, the remainder of which had been ploughed away. Within were fragments of calcined human bones and 26 barrel-shaped beads of shell, remarkably well preserved, the largest about .75 of one inch in length.

The Cabbage-Garden and the Long-Field, neighboring tracts, were carefully searched for mounds without success, though shell heaps were abundant. A number of these were investigated without results of especial interest.

SKIDDAWAY ISLAND, CHATHAM COUNTY. THIRD SETTLEMENT, MOUND A.

This mound, in a field long under cultivation, leased by Fanny Johnston, colored, in the Third Settlement, scarcely rose above the general level. Its diameter was estimated at 74 feet; a section line extending E. S. E. and W. N. W. was run through what seemed to be the center of the mound and the half to the south was dug through. There was no sign of previous investigation. The usual pits and graves were present.

In the half of the mound investigated, human remains were met with at twenty-seven points as follows: four pockets of calcined remains; four late disturbances; one not determined; eighteen skeletons.

Of the 18 skeletons: two were at full length on back; nine at full length on face; four were flexed on the left side; one flexed, face down; while one, with the trunk on back, had the legs partly flexed; one was in a sitting position, with the head crushed down on the pelvis.

Excluding the burial in a sitting position the skeletons headed: E., 1; E. by N., 2; N. E. by E., 1; N. E., 3; N. N. W., 2; N. W., 1; W. S. W., 2; S. W., 1; S. E. by S., 1; S. E., 2; E. S. E., 1.

The five flexed burials, however, headed between S. E. and W. S. W.

Sherds were rarely met with in the mound. None of complicated stamp was present.

Near a burial was part of a gracefully shaped hammer of quartzite and a pebble-hammer.

With another burial were six pebble-hammers of quartz, one smoothing stone and hematite.

Several fragmentary implements of stone and one bone piercing implement were met with.

A fact carefully noted by us, all through our investigation of the Georgia Coast,

CERTAIN ABORIGINAL MOUNDS OF THE GEORGIA COAST. 137

but not referred to until its close, namely, the utter absence of artifacts with burials at length, was again emphasized in this mound. Though as a rule, extended burials lay near the base, on it or below it, and often great pits had been made for their accommodation, yet associated artifacts were always wanting. As a rule, calcined deposits not enclosed in cinerary urns and masses of bones not in anatomical order were the most favored in respect to art-relics, though flexed burials were not entirely neglected.

SKIDDAWAY ISLAND, CHATHAM COUNTY. THIRD SETTLEMENT. MOUND B.

What the plow had spared of this mound lay in a cultivated field about 300 yards N. of Mound A. Its height was about 18 inches. Oyster shells were scattered on its surface and throughout the adjacent field. A diameter of 60 feet was taken and the eastern half completely dug through. Marginal pits filled with refuse were present. Local layers of oyster shells and the usual grave-pits were met with. One grave extended 4 feet below the surface.

Human remains, encountered at eleven points, included one aboriginal disturbance and three inadvertently dug into by men in our employ. The remaining seven are given in detail.

Burial No. 1, female in kneeling position, leaning forward, head N. E.

Burial No. 3, male in sitting position, facing N. Head crushed almost to pelvis.

Burial No. 5, 13 feet N. E., child from 3 to 5 years of age, in sitting position, facing E.

Burial No. 6, child about six years old, apparently flexed on right side, head S.

Burial No. 7, skeleton of uncertain sex in a sitting position, facing about S. S. W., tilted against one side of the pit.

Burial No. 8, skeleton of male, kneeling and crooked forward, head N. W.

Burial No. 11, skeleton of adolescent flexed on left side, head S. E.

Several pebble-hammers were met with.

Earthenware of the complicated stamp was wanting.

SKIDDAWAY ISLAND, CHATHAM COUNTY. NORTH-END SETTLEMENT.

This mound, in a field formerly under cultivation, about 1.25 miles in a S. S. W. direction from the northern end of the island, had sustained a certain amount of previous investigation. Its height was 2 feet; its diameter, apparently about 45 feet. The mound was completely dug down by us.

Several skeletons offering no points of especial interest and the lower part of a vessel of the ordinary type were met with. The upper part of this vessel had been ploughed away and lost. Near by lay one fragment of a calcined bone.

No artifacts of interest were found.

REMARKS.

The mounds of the Georgia coast, as judged by their contents, lead us to believe them to have been relics of a race ill supplied with stone, almost without copper,

but given to the manufacture of earthenware, which, however, lacked diversity of type.

The builders of these tumuli differed markedly from the aborigines of Florida in their method of constructing many of their mounds, in possessing a totally different type of tobacco pipe, in the absence of mortuary earthenware with ready-made perforation in the base.

They coincided, however, in the absence of the grooved axe and of the mortar made of stone. In both sections this utensil was probably of wood, as are some along the Georgia coast at the present time.

In mortuary methods we note a striking difference between the mound-makers of the Georgia coast and their neighbors to the south. In Florida, cremation, though practised, was by no means carried to so great an extent as on the coast of Georgia, while, to the best of our belief, placing of cremated remains in cinerary urns and uncremated skeletal remains in jars was unknown in Florida.¹

A point of interest, as illustrating diversity of custom in neighboring localities, is that when jars were used for uncremated remains, infants exclusively were selected in some localities, as at Creighton Island, and at Ossabaw Island, and adults in others, as at Sapelo Island, and at St. Catherine's Island with one exception.

Another feature of interest was the occasional occurrence of mounds in which the skeletal burials were those of women and children exclusively. But the most striking feature of all and one for which we vainly seek a solution is the use in the same mound of forms of burial so varied, varieties of inhumation and of cremation lying side by side.

We are told by Cabeça de Vaca,² who, as the reader recalls, crossed from Florida to Mexico comparatively early in the sixteenth century, that certain aborigines of northwest Florida burned the remains of their doctors while burying those of all others. Here we see a distinction in form of burial, which, however, cannot apply to the Georgia coast, for even had physicians been proportionately as numerous in former times as they are at present, still the percentage of cremations in the coast mounds is too great to consider these cremations the remains of medicine-men alone. Besides, as we have seen, cremated remains of infants are met with on the Georgia coast.

In conclusion, we call the attention of the reader to mortuary customs across the sea in former times, so ably presented by the Marquis de Nadaillac in the succeeding paper, "Inhumation and Incineration in Europe."

¹ Colonel C. C. Jones (*op. cit.* page 456), refers to urn-burial in Florida. We think this accomplished writer, who did little work in that State, must have accepted erroneous information. Vessels buried beside skeletons often receive a certain number of bones from them, a fact which may have misled investigators as to urn-burial in Florida.

² "It is their custom to bury the dead, unless it be those among them who have been physicians, and those they burn." The Narrative of Alvar Nuñez Cabeça de Vaca, translated by Buckingham Smith. Washington, 1851, page 49.

INHUMATION AND INCINERATION IN EUROPE.

BY THE MARQUIS DE NADAILLAC.¹

All known facts show that in Europe inhumation and incineration, two such different methods of disposing of the human body, were in use at the same time among the same peoples during the age of iron, the age of bronze and, in some cases, even during the neolithic period.

The Iberians, the oldest inhabitants of Western Europe, buried their dead and punished notable criminals by the cremation of their bodies.

The Gauls burnt slaves, dependents and horses that they might follow their master into the life beyond.²

In the glorious days of Rome cremation was general. In the eyes of the aristocracy, however, the destruction of the human body by fire was a humiliation. By burial this aristocracy distinguished itself from the lower classes and from peoples subjected by conquest. We know that Sylla, of the illustrious Cornelia gens, was the first of his race to be cremated.

It is now generally admitted that the rapid extension of cremation was due to the Celts. We find it from Greece to England, from Etruria to Poland and Russia. Bodies were burnt and those who were not rich enough to have the entire body cremated, contented themselves with burning the head and the arms—hence partial cremation.³

But everywhere the two rites are side by side. Here, inhumation is the most employed; there, cremation. Why this difference among the same people, at the same epoch, in the same place of sepulture? Does it imply a diversity of origin, of caste, of social or religious condition?

The answer to this question is impossible in our present state of knowledge. Moreover, it should be different according to the country, the people, the epoch under consideration. Everywhere different influences have acted under different surroundings.

Brittany offers a striking example. The dolmen of Mt. St. Michel and the dolmen of Tumiac are but a short distance apart; both date from the neolithic period; they were built by the same race, probably during the same epoch. At St. Michel we find incineration;⁴ at Tumiac, inhumation.⁵

¹Translated by C. B. Moore.

²Caesar, *De Bello Gallico*, L. VI, C. XIX; L. I, C. XIV; L. VII, C. III.

³*Handbuch der Deutschen Mythologie*—d'Arbois de Jubainville, *Rev. Arch.* 1891, Mar.—April.

⁴R. Galles, *Rapport sur les fouilles du Mont St. Michel en Carnae*.

⁵L. Galles, *Fouilles du tumulus de Tumiac en Arzon*.

M. du Chatelier takes us to the other extremity of Brittany. Out of 145 megaliths, dating from the stone age, he reports 20 inhumations, 72 cremations, 31 containing charcoal alone. In 22 no conclusions were possible.

We see a similar state of affairs near the town of Reims, in the Puy du Dôme,¹ in the Marne and in a number of other of the French Departments. The rule is not universal, however. At Calvisson (Gard), for instance, we find neolithic burials embracing cremation only.²

In Scotland we are able to cite only the celebrated cairns of Caithness. In them at the same time are met with, without a clue to explain such characteristic differences, the burial at length; the skeleton flexed upon itself; and cremation.

In Italy results are startling. "When you find," says Baron de Duhamel,³ "the two forms of sepulture together, it is because two populations were living side by side, and the predominance of one or of the other indicates that of the population practising the prevailing rite." In Italy, inhumation was practised at first; incineration appears with bronze; next inhumation returns with the oldest Etruscans. Incontestable proofs of this have been found at Alba, at Chiusi, at Pisa and at different points in upper Italy. At Felsina, the ancient metropolis of the Etruscans, the present Bologna, burials by incineration and burials by inhumation were contemporary. A like state of affairs existed at Certosa, at Marzabotto, at Villanova. In the necropolis of Villanova inhumations predominate;⁴ at Marzabotto the two forms are of equal occurrence.⁵

Various Austrian provinces furnish indisputable evidence. At Santa Lucia; at Rosegg, in the Drave valley; at Rovische, in the Basse Carniole; at Vermo, in Styria; at Watsch; at San Margarethen; and especially at Hallstatt, which has given its name to a period whose beginning dates back 2000 years at least before our era; we constantly see the two rites in concurrent use.⁶ The relationship between them varies only according to localities. At Watsch, for instance, with 200 tombs where incineration was employed, there were hardly a dozen where skeletons were found. But nothing would seem to indicate that these latter were destined for people of a lower class; while they were not protected by great slabs of stone like the others, their mortuary equipment was richer and the objects of bronze gave evidence of a higher art.⁷ At Rovische researches yield at times quadrangular cases of stone each enclosing an urn filled with the ashes of the dead, or a skeleton stretched at full length, the head to the east, with an urn at its feet, clasps on the chest, rings on the fingers. At Santa Lucia, on the left bank of the Idria, at its point of union with the Isonzo, 1200 tombs, previously unopened,

¹ Cartailhac, *Mat. pour l'hist. de l'homme*, t. IV, 1^{re} Série, p. 267; t. XII, 2^e S., p. 145.

² *Ass. Scient. de France*, Marseille, 1891.

³ *Remarques sur la question Etrusque*, Berlin, 1890.

⁴ Count Conestabile, *Rev. Arch.*, t. XXVIII, pp. 253, 320.

⁵ Count Gozzadini, *Atti e Memorie di Storia dell' Emilia, nuova serie*, t. VI, p. 1.

⁶ Hochstetter, *Die neueste Gräberfunde von Watsch und S. Margarethen und der Culturkreise der Hallstatt Periode*.

⁷ Notably there have been found many *situlae* and plates from sword belts, bearing in repoussé military, religious, or civil scenes, a regular album of the persons buried. A. Bertrand, *Les Celtes dans les Vallées du Pô et du Danube*.

were discovered. Incineration had been employed in them in by far the greatest number.¹

Investigations were begun at Hallstatt in 1846. Nowhere, according to Baron de Sacken, who for a long time directed the work, has there been observed in the same region modes of burial so diverse and in part so remarkable—the incineration of bodies, the mingling in the same tomb of bodies burnt and bodies buried—nowhere in fine has there been observed on so great a scale a mixture of types belonging more particularly to the bronze and to the iron age. According to the latest information we learn that 993 tombs have been searched. Of these 527 show burials, 453 cremations. The funeral trappings were well preserved as a rule. There were discovered 640 objects in gold, 5574 in bronze, 593 in iron, 270 in amber, 73 in glass, 1243 in terra cotta.² In those tombs in which burial was practised the dead were laid out clothed in their garments.

If we look toward Germany we see similar cases. In tumuli near the lakes of Ammer and of Staffell, in upper Bavaria, which are of the later Hallstatt period, we find, out of 121 tombs, 44 given to incineration, 18 to inhumation, and 59 which show no trace of bones or of fire, though they contain the same mortuary deposits as the others. Later, in tombs attributed to the iron age, all the bodies are cremated.

In Hesse, Thuringia, Franconia, in the countries forming the extreme west of Germany, inhumation was the general rule during the entire stone age.³ In Mecklenburg—an exception, no other example of which I know—men were buried, women incinerated.

In the tombs of Prussia and of the grand duchy of Posen the presence of skeletons and of urns filled with ashes proves the existence at the same time of the two methods of disposing of the dead.⁴ The tumuli of eastern Prussia, notably those of Birkenhof, tell a different story. They enclose a varying number of stone cysts containing urns with incinerated bones. Each cyst was surrounded by a circle of stones, and often a larger circle of stones on end encircled several cysts. These urns, made without the use of the potter's wheel, frequently had two handles. Investigation yielded many objects in amber, but on the other hand articles of bronze, and of iron especially, were of the greatest rarity.⁵

Scandinavia shows a duplication of the points noted in the north of Germany. At divers places are remarked the simultaneous use of the burial rite and of destruction by fire.⁶

In Bosnia the *gromilas*, or tumuli, go back to the Hallstatt period. Cremation, however, is rare. Of 140 tumuli recently investigated, but 11 showed complete incineration, and 18, where the burning was partial. In all the others the body had been buried.⁷

¹ Hochstetter, VII *Bericht der Prähistorischen Commission*. Wien, 1884.

² *Mitth. der Anthropol. Gesellschaft in Wien* 1887-8. Dr. Häernes, *Revue d'Anth.* May, 1889. A. Bertrand, *Rev. d'Ethn.* 1883.

³ W. Schmidt, *Cong. Anth. de Paris*, 1878, pp. 285-7.

⁴ Kohn u. Mehlis, *Materialen zur Vorgeschichte des Menschen im Ostlichen Europa*.

⁵ O. Tischler, *Ostpreussische Gräbhügel*.

⁶ W. Schmidt, *l. c.*

⁷ *Fouilles des galgals prehist. de Grassinac*, *L'Anthropologie* 1896, p. 213.

Research in different portions of Russia leads to the same conclusions. Mr. Radimski has opened 530 graves in the necropolis of Jezerina. Three-fifths showed incineration; but everywhere the two rites were apparent in neighboring tombs and sometimes even in the same one. The majority of mortuary deposits belong to the epoch of la Tène, but some were of the date of Hallstatt and even of the Roman period.¹

The results obtained by Mr. Zavinetvich in the province of Minsk, White Russia, show that inhumation predominated with increasing ratio in proportion as one approached the Dnieper.²

In the country formerly belonging to the Jadzvinques the presence of the two mortuary rites is noted.³

In all Europe we are confronted with two very different forms of sepulchral rites. We cannot tell their origin, we know only that cremation by degrees disappeared before the progress of christianity. Complete discontinuance, however, was slow, for we have an edict of Charlemagne, of the year 789, punishing with death those who continued to burn their dead according to the pagan custom.

¹ *L'Anthropologie*, 1894, pp. 472-3.

² Baron de Baye, *Congrès de Wilna*, 1893.

³ *Congrès de Moscou*, 1892, p. 233.

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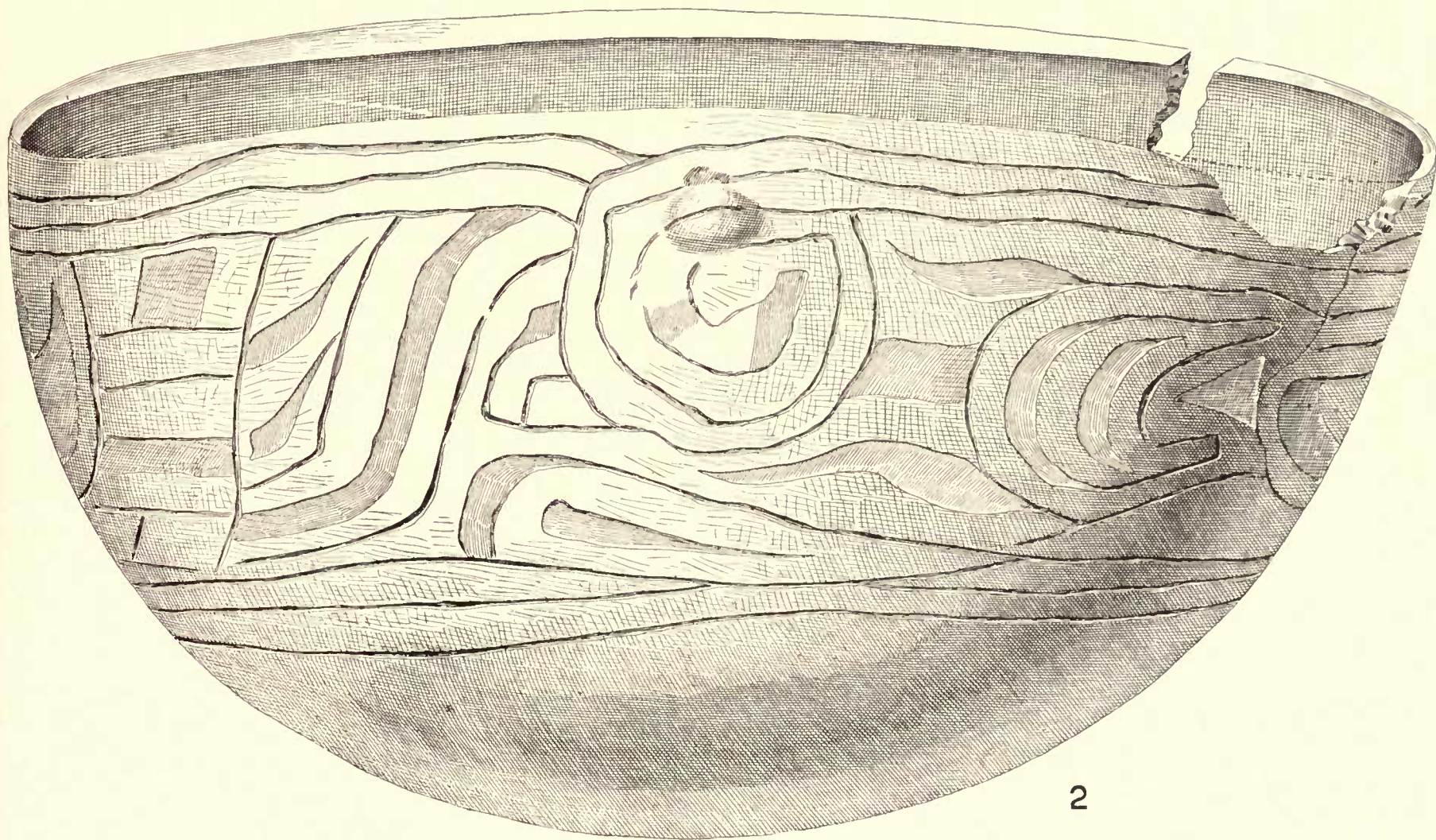
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MOORE: GEORGIA COAST MOUNDS.

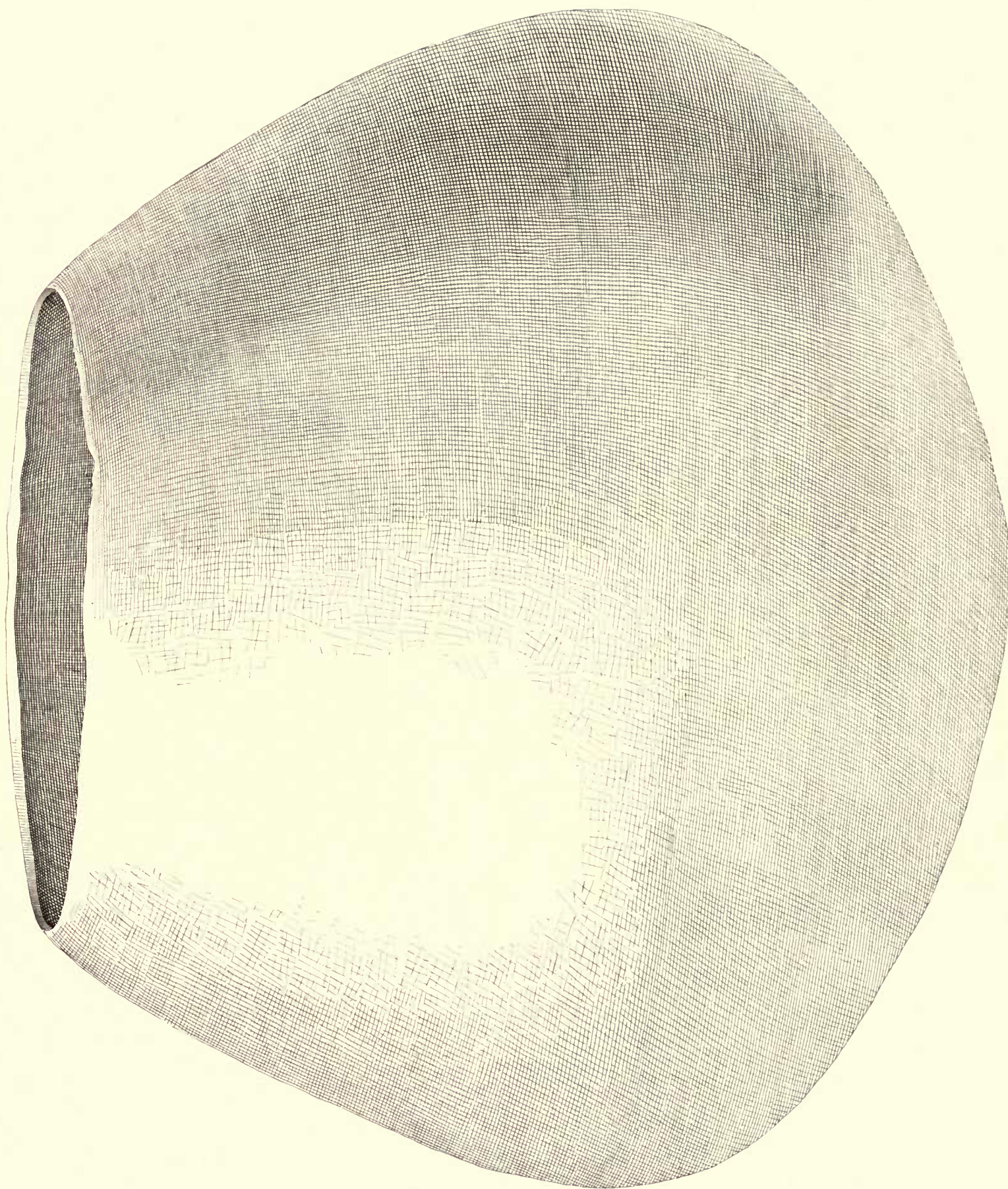
1. VESSEL OF EARTHENWARE, MOUND B, DARIEN. 2. VESSEL OF EARTHENWARE, WALKER MOUND. (BOTH FULL SIZE)





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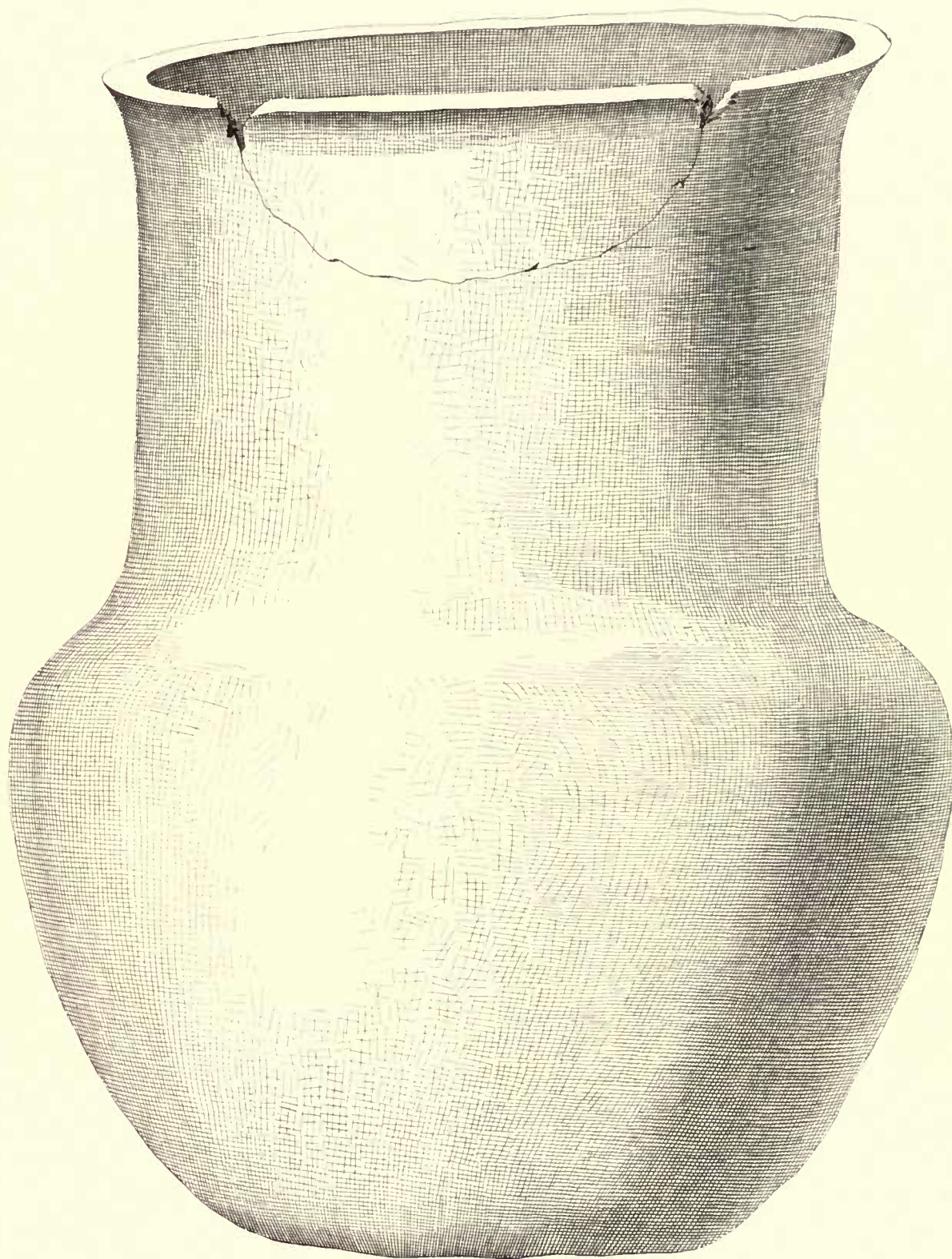
VESSEL C (BURIAL 20). MOUND AT SHELL BLUFF (SEVEN-EIGHTHS SIZE.)



MOORE: GEORGIA COAST MOUNDS.

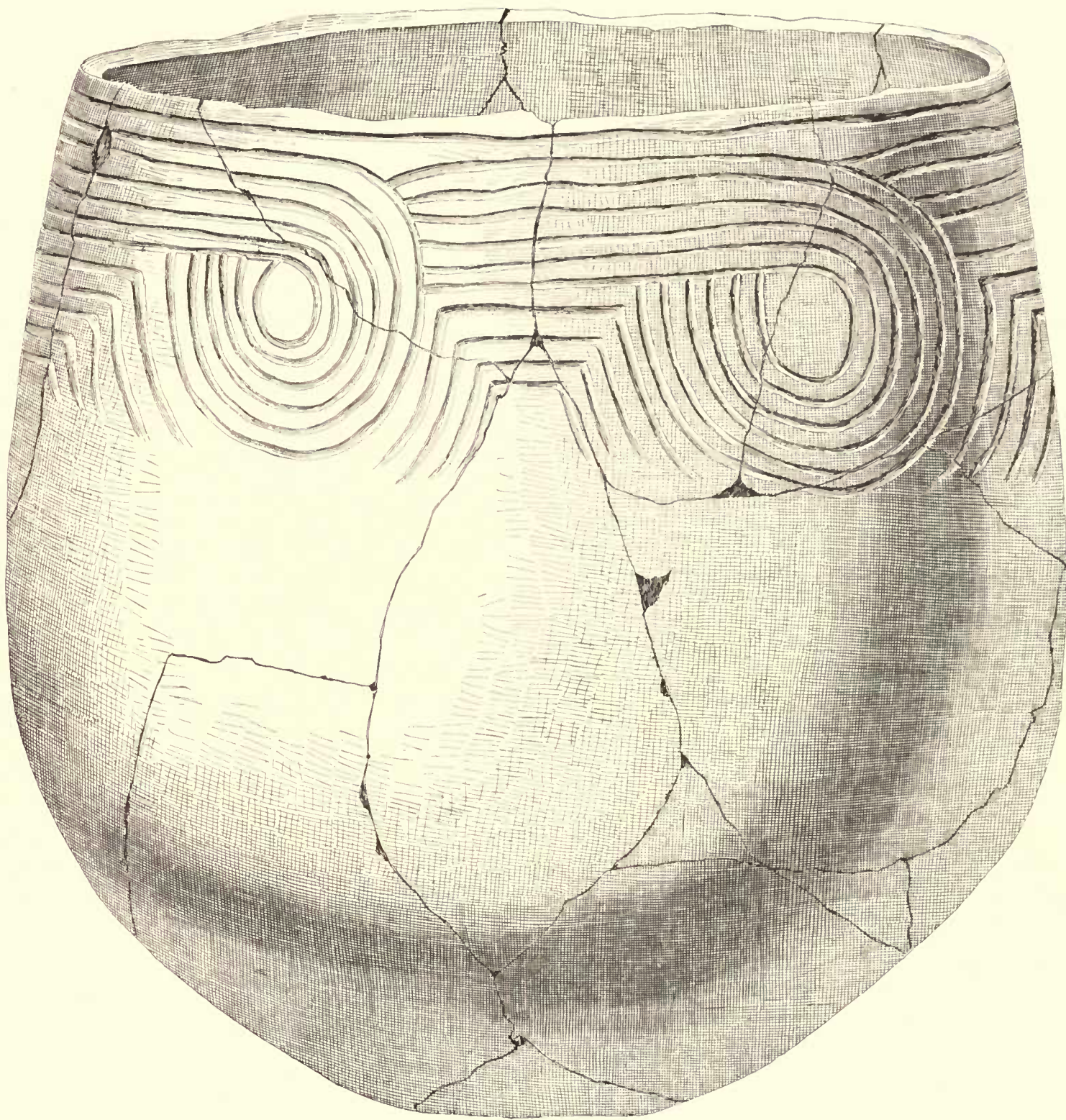
VESSEL D (BURIAL 20A). MOUND AT SHELL BLUFF. (FULL SIZE.)





MOORE: GEORGIA COAST MOUNDS.

VESSEL OF EARTHENWARE. MOUND NORTH END OF CREIGHTON ISLAND. (FULL SIZE.)



MOORE: GEORGIA COAST MOUNDS.

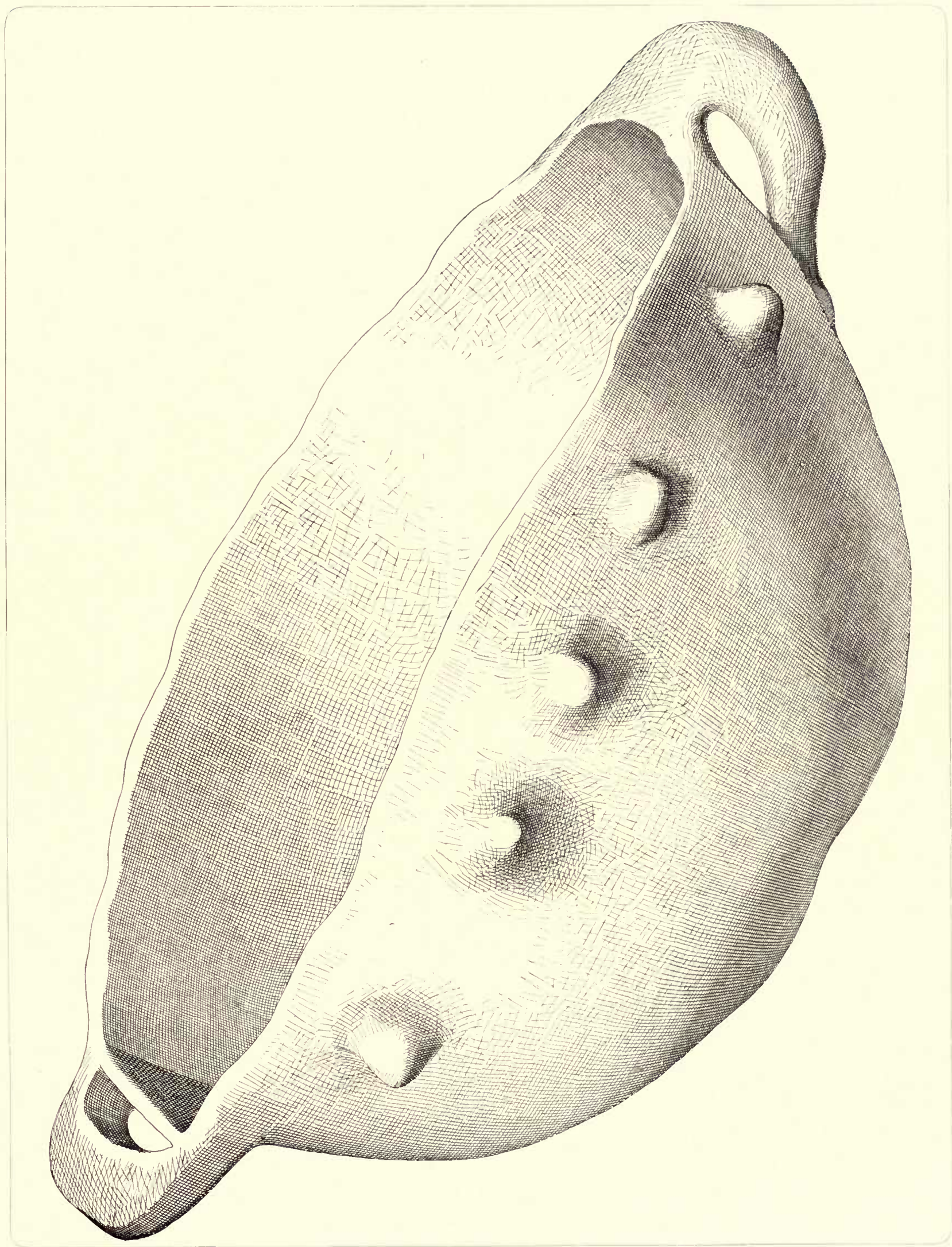
CINERARY URN, WALKER MOUND. (HALF SIZE.)





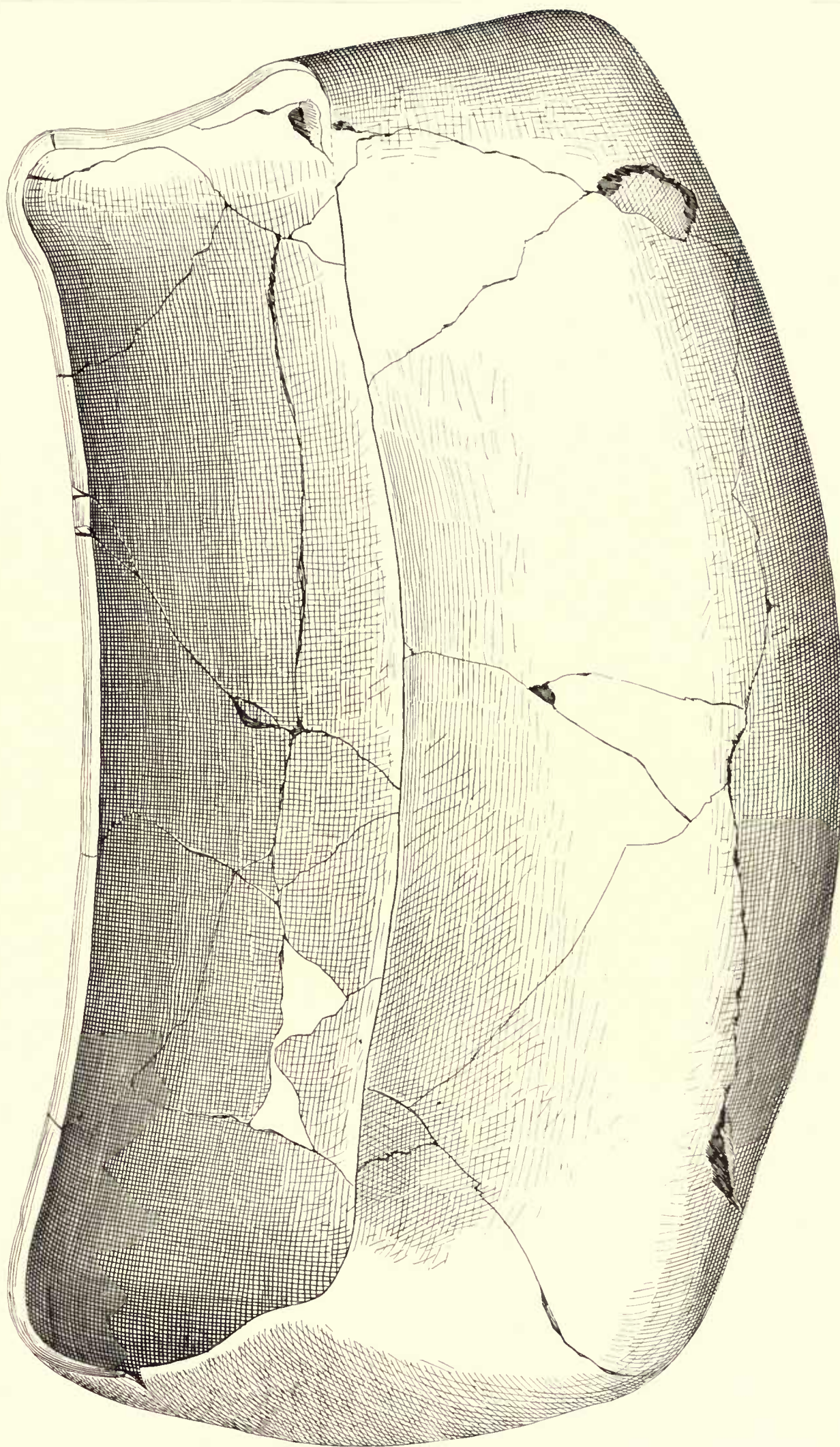
MOORE: GEORGIA COAST MOUNDS.

CINERARY URN, WALKER MOUND. (THREE-FIFTHS SIZE.)



MOORE: GEORGIA COAST MOUNDS.

DISH OF EARTHENWARE. MOUND AT BOURBON, SAPELO ISLAND. (FULL SIZE.)



MOORE: GEORGIA COAST MOUNDS.

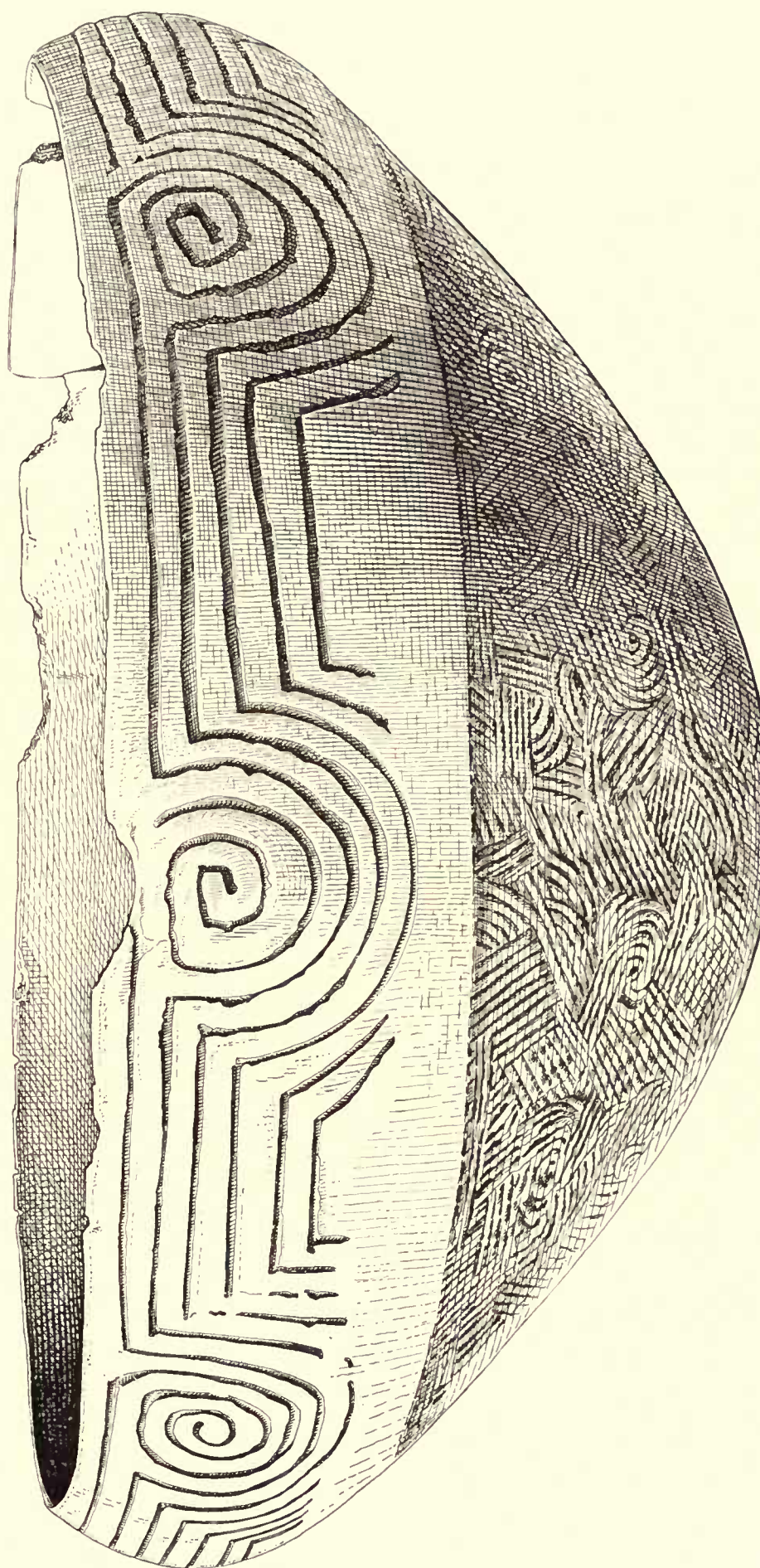
VESSEL C (BURIAL 36). MOUND IN DUMOISSAY'S FIELD, SAPELO ISLAND. (THREE-FIFTHS SIZE.)



MOORE: GEORGIA COAST MOUNDS.

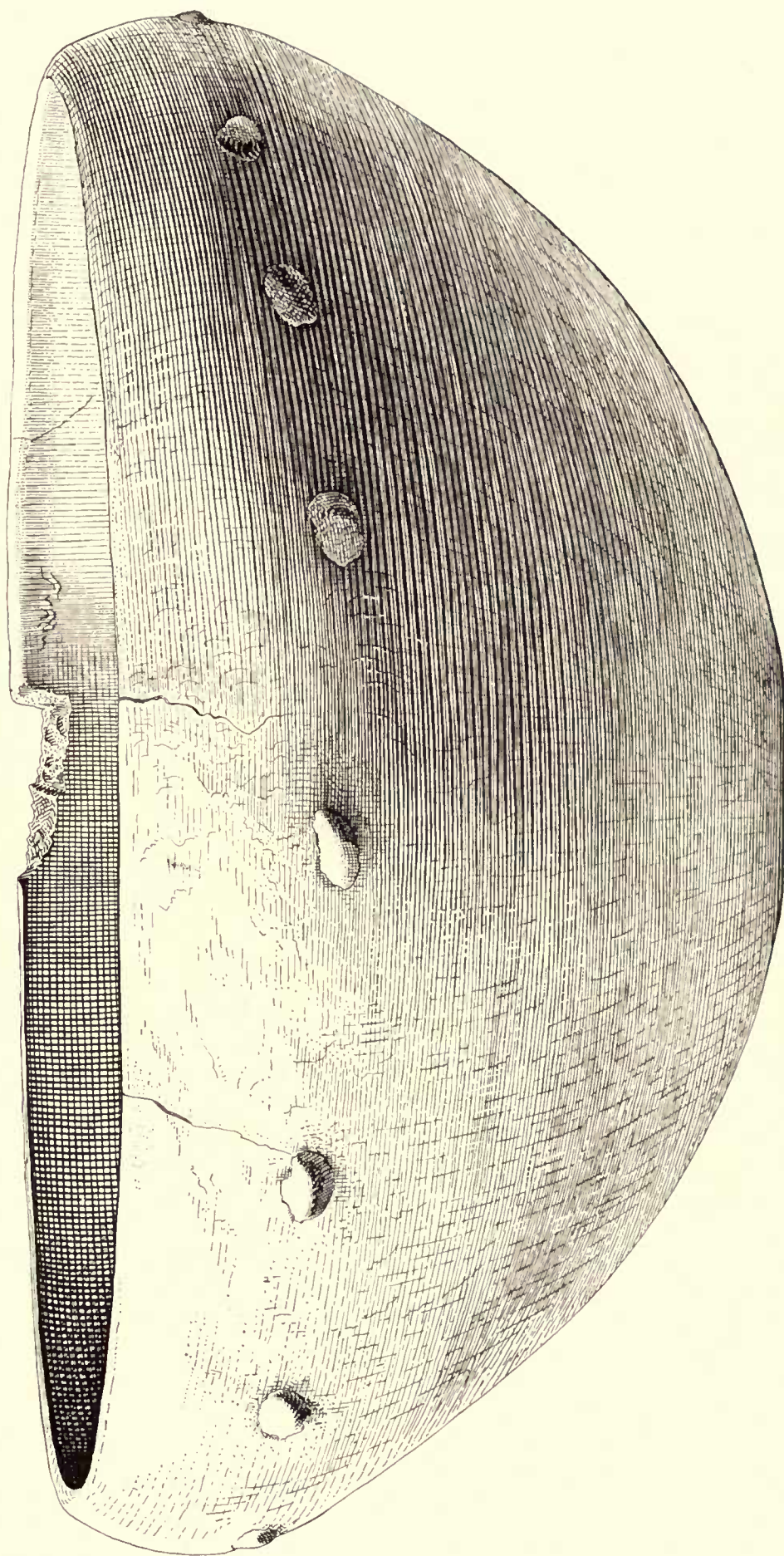
VESSEL D. MOUND A, MIDDLE SETTLEMENT, OSSABAW ISLAND. (ABOUT FIVE-EIGHTHS SIZE.)





MOORE: GEORGIA COAST MOUNDS.

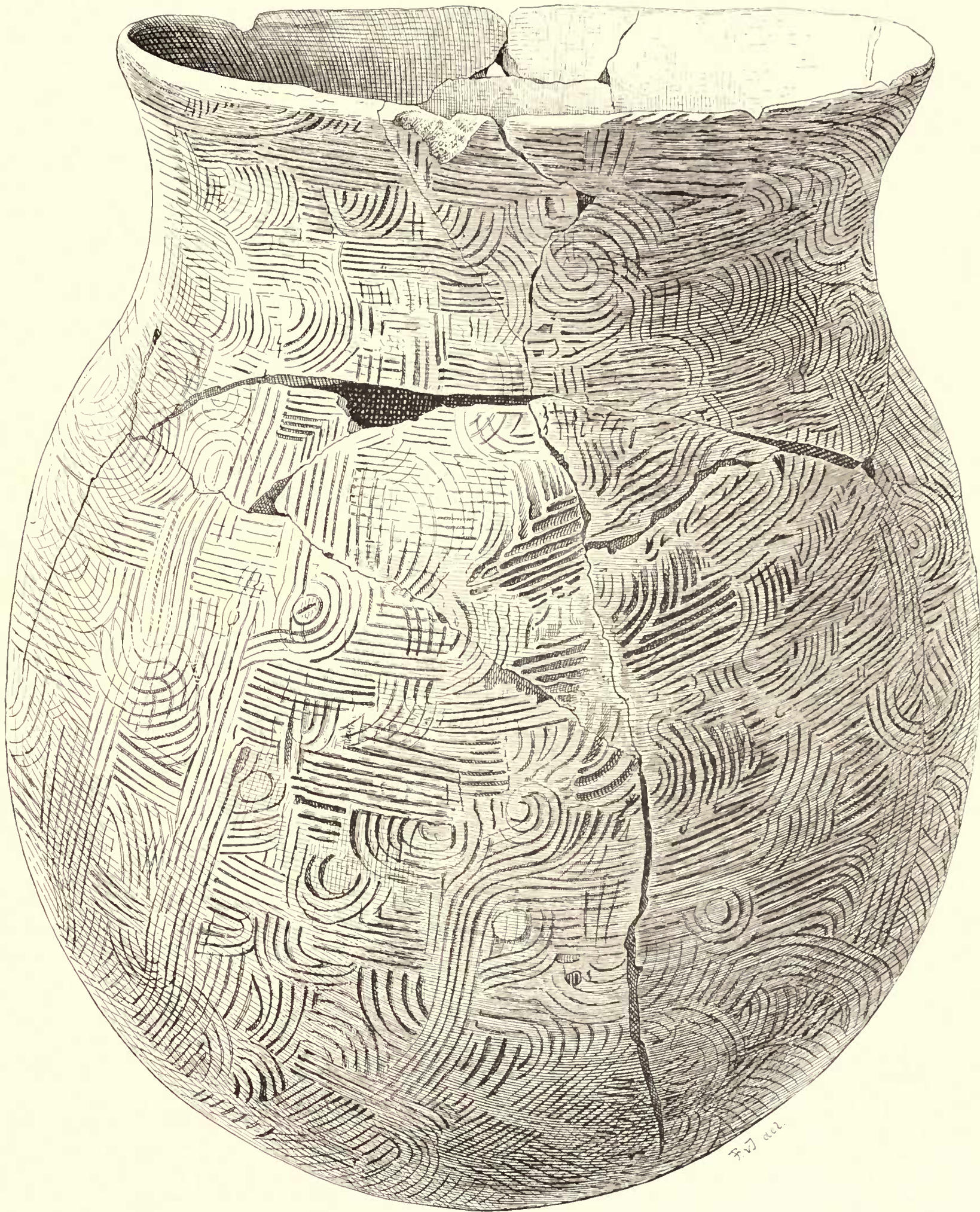
VESSEL Rb. MOUND A, MIDDLE SETTLEMENT, OSSABAW ISLAND. (ABOUT FOUR-FIFTHS SIZE.)



MOORE: GEORGIA COAST MOUNDS.

VESSEL 68. MOUND A, MIDDLE SETTLEMENT, OSSABAW ISLAND. (ABOUT FIVE-SEVENTHS SIZE.)

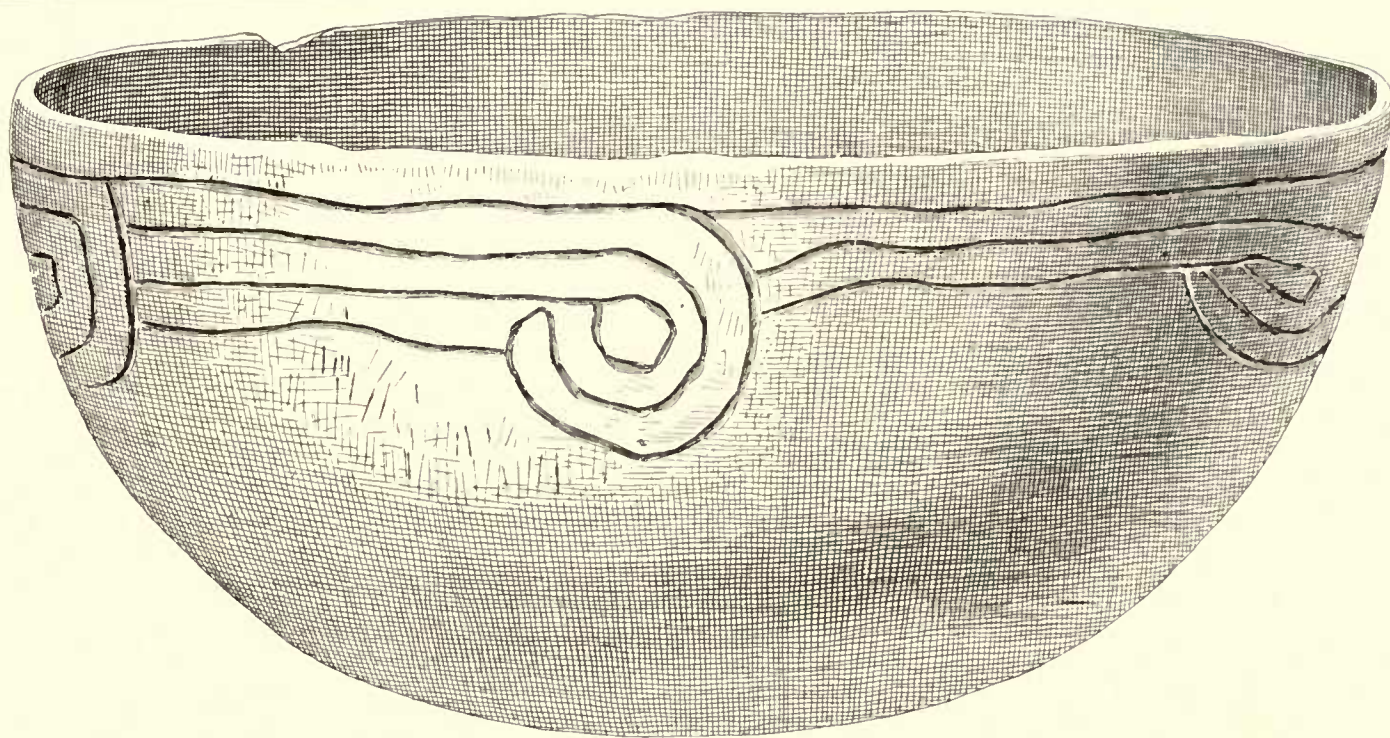




MOORE: GEORGIA COAST MOUNDS.

VESSEL AA. MOUND A, MIDDLE SETTLEMENT, OSSABAW ISLAND. (ABOUT TWO-THIRDS SIZE.)





1

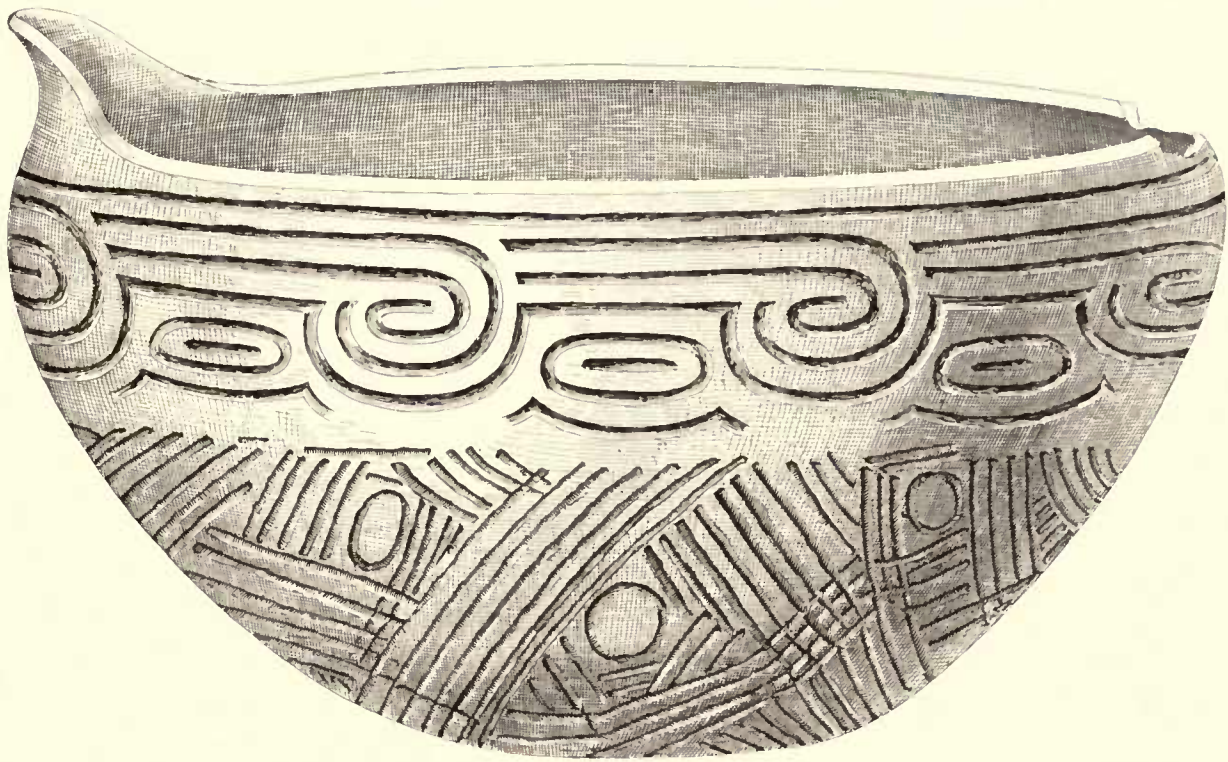


2

MOORE: GEORGIA COAST MOUNDS.

1. VESSEL II. 2. VESSEL I. BOTH MOUND A, MIDDLE SETTLEMENT, OSSABAW ISLAND. (FULL SIZE.)





1

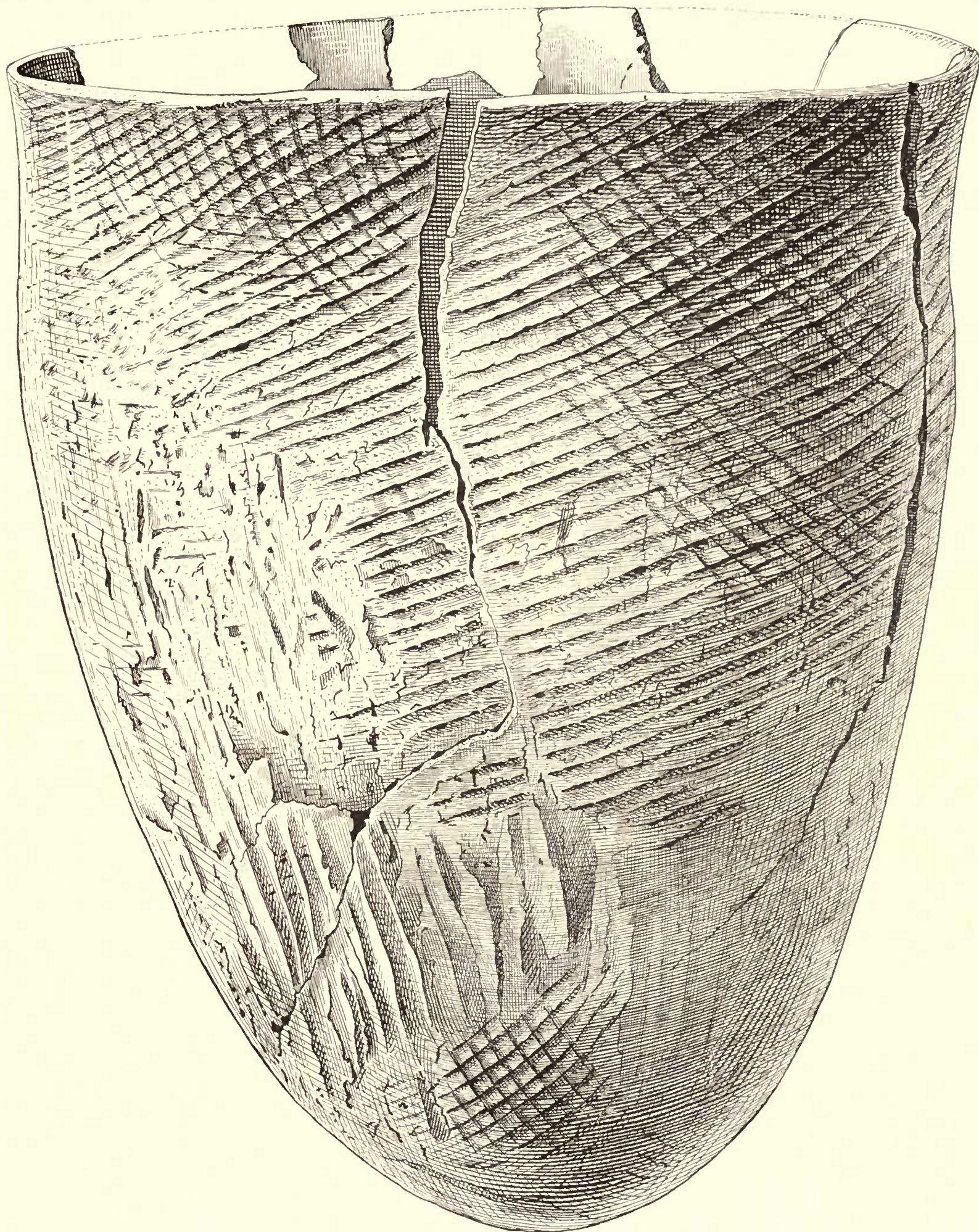


2

MOORE: GEORGIA COAST MOUNDS.

- | | | |
|---------------|---|--------------|
| 1. VESSEL LL. | MOUND A, MIDDLE SETTLEMENT, OSSABAW ISLAND. | (FULL SIZE.) |
| 2. VESSEL O. | MOUND D, MIDDLE SETTLEMENT, OSSABAW ISLAND. | (FULL SIZE.) |





MOORE: GEORGIA COAST MOUNDS.

VESSEL N. MOUND D, MIDDLE SETTLEMENT, OSSABAW ISLAND. (TEN-ELEVENTHS SIZE.)





MOORE: GEORGIA COAST MOUNDS.

DIAGRAM OF INCISED DECORATION ON VESSEL OF EARTHENWARE. WALKER MOUND. (NINE-TENTHS SIZE.)



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