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PRELIMINARY
ARCHEOLOGICAL EXPLORATIONS AT
WEEDEN ISLAND, FLORIDA

(WITH 21 PLATES)

BY

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Chief, Bureau of American Ethnology



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INTRODUCTION

The first printed account of any considerable size of the prehistoric shell and earth mounds near St. Petersburg, Florida, known to the author, was written by Mr. S. W. Walker and published in the Smithsonian Report for 1879.¹ This account considers many shell heaps situated on Hillsborough and Tampa bays, as well as others some distance along the west shore of Florida. Of the many prehistoric mounds that formerly stood on the site of the present city of St. Petersburg, only one (pl. 1, fig. 1) remains intact at the present time. Fortunately this ancient monument was saved from vandals and occupies a conspicuous position in Hospital Park, but the others, including six of considerable magnitude, have shared the fate of many other Floridian mounds. The great majority have been carried off and used in the construction of roads in the city, for the shells of which they are composed have a commercial value for that purpose. The Bull Frog Creek Mound, one of the most extensive in 1879, is now (1924) entirely obliterated.

In his studies of Florida shell heaps, Mr. Walker made excavations in some of those on Tampa Bay, where there were several mounds of size, and prepared a map illustrating their distribution. His articles on shell heaps appear to be the most important yet published on that region. Among these the mounds at Papy's Bayou, which are near, perhaps identical with those on Weeden Island, the subject of this paper, are thus described by him:

These mounds are situated on a narrow peninsula on the north side of Papy's Bayou, on Old Tampa Bay. The place is known as Pillan's Hummock, and has been settled at some time in the past, but I presume the settlers fled before invading hordes of mosquitoes and sand flies. A few tumble down houses in a small clearing, surrounded by straggling orange and lemon trees, will serve

¹Mr. Walker published several papers on Florida, among which are two articles dealing with antiquities of Tampa Bay; one entitled "Preliminary Explorations Among the Indian Mounds in Southern Florida" and another, "Report on the Shell Heaps of Tampa Bay, Florida."

as a starting point to any one seeking the mound. From these "improvements" a due north course will bring one into the neighborhood of this rather singular structure.

It is an oval-shaped mound, about 5 feet high, situated in a very dense hummock. For 100 feet a ditch 2 feet deep runs in the direction of its longer diameter. At this point the structure forks, and two embankments 5 feet high continue for 50 feet, making the entire length of the mound 150 feet. The shorter diameter is 75 feet in the center, and at the southern end is 60 feet wide. The central trench is 15 feet in width, and from the southern end traces of a ditch or ancient road may be followed several hundred yards into the hummock. The embankments forming the forks are 20 feet wide when they leave the main structure, gradually narrowing down to 10 feet at the end. Figure 1, plate VI, represents a ground plan of the mound, *A* being the central depression, and *B, B*, the higher portions. *C* represents the trail or roadway leading to the mound. Figure 2 is a section across the end looking down the ditch.

Excavations revealed human bones in every portion of the mound, but by far the larger part occupied the central trench. They were in a bad state of preservation, and I succeeded in getting out only three sufficiently sound to bear transportation, after thorough saturation with boiled oil. I also found one whole bowl, but on my taking it out the bottom crumbled into powder, and the rim broke into several pieces; enough was preserved, however, to make restoration possible.

The mode of burial was precisely the same as that described minutely in the history of the Ormond Mound, and represented in figure 2, plate III, which renders repetition unnecessary. The growth on the mound consisted of small oaks, and was precisely similar to that around it. It lay with its longer diameter toward the north. Three or four hundred yards west of this is another mound, composed of alternate layers of sand and shell, 150 feet in length, by 45 in width, lying in the same direction as the other. It differs from other mounds of this class in sloping gradually from the southern to the northern end. No doubt the northern end was once level and contained a dwelling. At the highest point it is about $4\frac{1}{2}$ feet above the level of the earth. Excavations have brought nothing to light worthy of note.

Great changes have occurred in this region since Mr. Walker wrote the above lines, judging from the present appearance of the mounds on Papy's Bayou and Weeden Island. Time has considerably modified the general physical features of the locality, so that it is now difficult to identify the mounds described by Mr. Walker. Their extension has been diminished and their height and configuration greatly modified. Still the above description applies in a general way to the typical mounds on the island north of Papy's Bayou (fig. 1).

The late surveys show that many shell heaps have been destroyed in the last half century; one of these on the island near the entrance to Papy's Bayou was carried away last winter. Among those that now remain is an extensive group situated on an island north of this bay, now known as Weeden Island from an old settler who lived

upon it many years. Dr. Weeden planted many trees in available places and harvested good crops of citrus fruits on tracts of land that formerly were low shell heaps. He was also interested in the Indian mounds, and made a small collection of objects while living on his property, which is now (1924) installed in the Tampa Chamber of Commerce. His lifelong interest in the island and its aboriginal inhabitants is known to local archeologists and historians. He recog-

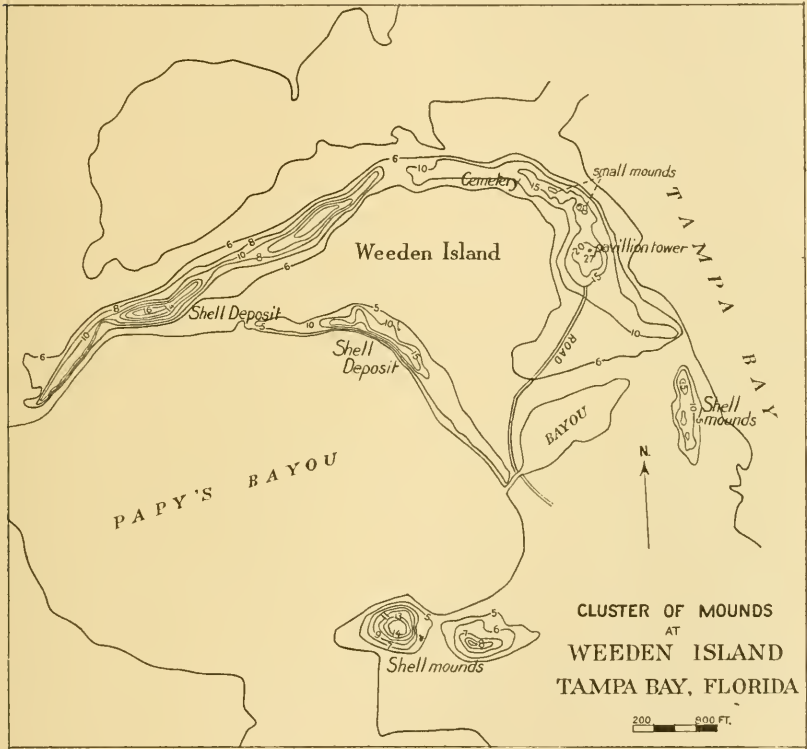


FIG. 1.

nized the great possibilities of his island as a recreation place and made an application to the United States government to have it reserved as a National Park. Dr. Weeden's homestead, which stood on the site of the present café and tower, was torn down in December, 1923. Many of the citrus trees were probably planted before his time, for it is not unusual in Florida to find a grove of lime and orange trees in an uninhabited place or on a deserted farm.

Weeden Island (fig. 1) is now owned by the Boulevard and Bay Land Development Company, under Mr. E. M. Elliott and associates.

The mounds of this island (pl. 2, fig. 1) are still conspicuous notwithstanding all are more or less worn down and one or two of them have disappeared the past winter. This island is now undergoing development as a business proposition by the company above mentioned and its appearance will be much changed in the next decade, but the intention is to preserve the mounds. On the highest point, where formerly stood Dr. Weeden's residence and out-buildings, was a large shell heap, upon which now rises a tall tower built in 1923-24. Not far away where a year ago was a jungle of palmetto and other semi-tropical plants and trees are several smaller mounds now on a park called Narvaez Park in honor of the Spanish explorer whose ill-fated expedition was lost in this neighborhood several centuries ago.

Up to the past year no extensive archeological excavations had been made on the island, although Dr. Weeden gathered a small collection of Indian surface relics, consisting mostly of shell objects, stone implements, and fragments of pottery, decorated and plain, of various kinds. No archeologist had yet put a spade into the mound excavated by the author previous to his work and its archeological treasures had not only not been revealed, but were not even suspected.¹

The author's attention was first called to the Weeden mounds by Mr. E. M. Elliott, of St. Petersburg, who, aided by many associates, is developing the property. Mr. Elliott visited the Bureau of American Ethnology about the close of the summer of 1922 and not only invited the author to visit his island and examine these mounds, but also urged a scientific exploration in this locality by the Smithsonian Institution. It was, as may readily be seen, a great pleasure to accept this kind invitation, and in November, 1923, as Mr. Elliott's guest, a delightful trip, but all too limited in time, was made to St. Petersburg for that purpose. This visit was little more than a brief reconnaissance, but included a very profitable trip with Mr. Elliott in the yacht *Sunbeam III* along the Ten Thousand Islands and southwestern Florida.² The yacht made short stops at Charlotte Harbor, Caxambas, Marco, Horr's Island, Porpoise Point, and other places in southwestern Florida. This trip demonstrated the splendid opportunities that await the archeologist in southwest Florida.³ For this and many

¹With the exception of a few newspaper notices the literature of Weeden Mound is very scanty. It does not seem to have been visited by Mr. Moore's parties.

²The scientific results of this trip will be considered in another article.

³In 1918, Dr. Ales Hrdlicka, of the U. S. National Museum, visited this region for the Bureau of American Ethnology, and the results of his trip are embodied in a memoir on "The Anthropology of Florida," published by the Florida State Historical Society, No. 1, 1922.

other opportunities to carry on archeological work in Florida the author desires here to express his thanks to Mr. Elliott, who first called his attention to the mounds.

The author began his work on Weeden Island in November, 1923, by running a trench into the large shell heap on which the pavilion now stands. While this work was in progress it was necessary for him to return to Washington, and during his absence Mr. Stanley Hedberg was put in temporary charge. Later the author appointed Mr. M. W. Stirling, at that time assistant curator of the division of ethnology, U. S. National Museum, to represent him until his return to St. Petersburg, in March. The progress made in the work during his absence was very gratifying. Mr. Stirling severed his connection with the Smithsonian Institution March 15, 1924, but the author remained in St. Petersburg until the middle of April, when he packed about half of the collection and returned to Washington.¹

The excavations at Weeden Island were carried on at the height of the tourist season and attracted wide attention not only from visitors but permanent residents throughout the State of Florida. As fast as specimens were taken out of the ground they were placed on exhibition in St. Petersburg to be examined by visitors. Frequent lectures and talks were given on them.

The work on Weeden Island was mostly confined to a single mound which for reasons that will appear may be called the cemetery (pl. 2, fig. 1). Several trial pits were made in different mounds in order to determine their nature and the work began at the mound where Dr. Weeden's house formerly stood. The first attempts were placed under the supervision of Mr. Stanley Hedberg, who with a few workmen ran a broad ditch from the north periphery to the center of this mound. Although the work was rapidly pushed with all possible care the results were few and desultory. The mound proved to be only a large shell heap with stratification of shells and sand. Few artifacts were found in it, although a great quantity of earth was removed.

This mound is evidently a place where the prehistoric inhabitants brought their molluscan food gathered in the neighboring bays and, after eating the soft animal parts, threw away the shells, thus without any design on their part inadvertently accumulating a large mound of shells. It was presumably an eating place and might be called a *kitchen midden*. Possibly it also served other purposes, as an elevated site, high above tides, for cabins, or as an observatory; but if the

¹The aid rendered by Mr. Stirling, Mr. Hedberg, Mr. Reichard and others contributed greatly to the success of the work at Weeden Island and the author desires in this place to express his thanks to these gentlemen and others who have assisted him in the undertaking.

natives ever built houses on it these constructions had long ago disappeared. From its nature one could not expect from this mound a collection of size.

The smaller mounds west of the largest were also tested by trial holes but they gave no better promise of a collection. These mounds were small and their shape can be readily traced by their contours. Some of them seemed to be composed wholly of shells, others of earth, and still others of both, combined and stratified. No extensive excavations were undertaken on any of these, but they were left for future work after several trial pits had been made. There was one low mound some distance from the main cluster which belongs to the same group but is somewhat exceptional. A trench (pl. 4, *A-D*) in it revealed fragments of human crania, skeletons, and shards. These were good evidences of a cemetery and the work on it continued until over a third of the mound had been opened. The more the excavations were continued the more the evidences increased and supported the first impression that this was a cemetery of the prehistoric inhabitants of Weeden Island and a promising mound to open.

It is doubtful whether the mounds at Weeden Island were as densely forested in prehistoric times as at present (pl. 3). Some of the trees that now grow on them are only a few years old, but there is a huge live oak in the midst of the cluster that may have sprouted four or five centuries ago. At present, palmettos (*Sabal palmetto*), generally encumbered with Spanish moss (*Tillandsia usneoides*) and other parasites, the Saw Palmetto (*Serenoa serrulata*), the pine and other trees occur everywhere on the island and in places their abundance warrants the term jungles. The mangrove is ubiquitous, especially at the water's edge.

One of the interesting features in the key landscape near Weeden Island is the presence of so-called pseudo-atolls.¹ The cause which gave these islands their characteristic form is not definitely known although several theories have been suggested. Judged from its general form (fig. 1), it would appear that Weeden Island itself is a matured pseudo-atoll.

An important food supply of the aborigines and one that profoundly affected the culture of the ancient inhabitants on Weeden Island were the banks of shellfish providing an abundance of molluscan food in the neighboring bayous and keys. This animal, almost inexhaustible along the Florida coast, was the main food of the Indians. In shallow water near Weeden Island there are many

¹ A very good example of pseudo-atoll is found in Moreno Bay, Jamaica.

molluscan banks and there is every reason to believe that when this island was inhabited these banks were ample to furnish a food supply for many people. Moreover, the shells were the material out of which many of the implements were made. The magnitude of the shell heaps indicates a large population.

Mollusks were not the only food of the natives. They also ate fishes, birds, and other game, and no doubt eked out a slender dietary with roots and fruit. There are indications that their culture was not as low as this might imply; certainly the artifacts from Weeden Island show a higher development. Then, too, there is very good ground to believe that, even in the earliest stages, when pottery was crude, they had elaborate canoes and wooden objects. To make these demanded proficiency in wood carving, and the objects found by Cushing at Marco are instructive in this line.

There is no evidence that all the inhabitants of the villages around Tampa Bay in prehistoric times were fish or corn eaters, although it appears that the inhabitants of Florida north of Tampa used roots for food. Apparently the people that lived south of Tampa were root eaters, and, sparingly, used corn or maize. This is important, if true, for in so far as food determines a culture area, southern Florida would belong to the Antillean rather than to the southeastern culture area of the United States. The character of food alone, however, is not a good index of a culture area and it does not follow that shellfish eaters belong to the same culture area, otherwise the prehistoric people of Maine and those of southwestern Florida would be kindred. All indications show that maize was introduced as a food from the north, and the most ancient inhabitants of both coasts of southern Florida may have been ignorant of corn.

TYPES OF MOUNDS OF THE WEEDEN ISLAND VILLAGE

The Indian mounds in Florida should be studied as clusters composed of different kinds of mounds forming units, or in other words a unit is a village that includes more than one type of mounds, each for different purposes. There were mounds where food was cooked and eaten, kitchen middens formed of refuse from feasts, also mounds that served as foundations for habitations, one of which was a temple or house of the chief, and there were burial mounds or cemeteries. Each had its distinct structural type indicative in a way of its function.

Among the many mounds on Weeden Island these several types are evident. Four types were differentiated in the course of the preliminary examination. These types differ in shape, size, and struc-

ture, and were apparently used for different purposes. Their contents were first determined by shallow test holes and several of these mounds were found to be composed wholly of shells. Trial pits dug into these revealed that this type was composed of refuse mollusk shells, mainly oysters, clams, and conchs. These mounds were refuse heaps and were once used as eating places. Their contents are the unintentioned rejects of the cast-off hard parts of the food animals.¹ Mounds of this type vary in size and shape, probably resulting from the way they were made. It is probable, for instance, that they served various purposes, one of which might have been elevations from which to observe the coming and going of canoes containing either friends or enemies. Mounds of this type are often stratified. Their stratification is uneven, and they are unsymmetrical.

They yield very little of cultural import as artifacts are rarely found in them, and ordinarily they are destitute of human skeletons. Few whole pieces of pottery occur in shell deposits of this nature; the archeologist finds in them such broken fragments of implements or utensils as would naturally be dropped and lost in them by those who were using the mounds. The largest of this type of mound at Weeden Island was examined superficially and excavations made from top to base by means of a trench dug in it from periphery to center. This whole mound had the appearance of a central elevation surrounded by a raised wall, which latter, upon examination, proved to be formed by shells mixed with a very small quantity of sand. The periphery of a mound of this type is difficult to determine, since the top is worn down by erosion. The largest mounds of this type have been leveled on one slope in order to plant a grove of citrus trees, which thrive on soil of shell heaps, probably on account of the decayed organic matter formed by the remains of the feasts. Upon the surface of these shell heaps there is ordinarily a very thin layer of blown sand in which grow small trees or bushes. The appearance of the largest Weeden shell heap would not indicate, in itself, a very great antiquity, but the extension of the mound over a large area and its height implies a considerable population.

No artifacts were found in the wide trench dug into the main Weeden mound from circumference to center, although fragments of pottery and of bones of various genera of animals were scattered throughout the mound. A good supply of fresh water is situated at the periphery of this mound, and is now used as a well.

¹ On account of the haphazard way in which these eating mounds were formed and the action of the elements enlarging their peripheries, charts of their outlines are not very valuable.

Another type of mound occurring in the Weeden Island cluster structurally belongs to a second type classified as domiciliary mounds. This type shows indications of being used as the sites of houses, which were frail structures made of a framework of upright logs to which were tied sticks for the sides, the roof being thatched with palmetto leaves, and the whole building raised a few feet above the surface of the ground. The number of these mounds was not determined, as they are situated so close together that they merge into each other, indicating a settlement of considerable size and a large population. They are now covered with trees and other vegetation. Trial pits showed the existence of shells in profusion, organic matter, and a few artifacts, but extensive excavations are necessary to reveal their true nature.

To give the reader an idea of the probable appearance of a Tampa Bay village in 1540, the author cannot do better than to quote the description of a settlement called Ucita by the Gentleman of Elvas, a contemporary of De Soto. This village is known to have been situated on the shore of Tampa Bay and its site may have been that of the Weeden Island mounds. He writes as follows:

On the 25th of the month [of May, 1539], being the festival of Espiritu Santo, the land was seen, and anchor cast a league from shore, because of the shoals. On Friday, the 30th, the army landed in Florida, two leagues from the town of an Indian chief named Ucita. Two hundred and thirteen horses were set on shore, to unburden the ships, that they should draw the less water; the seamen only remained on board, who going up every day a little with the tide, the end of eight days brought them near to the town.

So soon as the people were come to land, the camp was pitched on the sea-side, nigh the bay, which goes up close to the town. . . . At night the Governor, with a hundred men in the pinnaces, came upon a deserted town; for, so soon as the Christians appeared in sight of land, they were descried, and all along on the coast many smokes were seen to rise, which the Indians make to warn one another. The next day Luis de Moscoso, Master of the Camp, set the men in order. The horsemen he put in three squadrons—the vanguard, battalion, and rearward; and thus they marched that day and the next compassing great creeks which run up from the bay; and on the first of June, being Trinity Sunday, they arrived at the town of Ucita, where the Governor tarried.

The town was of seven or eight houses, built of timber and covered with palm-leaves. The Chief's house stood near the beach, upon a very high mount made by hand for defence; at the other end of the town was a temple, on the top of which perched a wooden fowl with gilded eyes, and within were found some pearls of small value, injured by fire, such as the Indians pierce for beads, much esteeming them, and string to wear about the neck and wrists. The Governor lodged in the house of the Chief, and with him Vasco Porcallo and Luis de Moscoso; in other houses, midway in the town, was lodged the Chief Castellan, Baltasar de Gallegos, where were set apart the

provisions brought in the vessels. The rest of the dwellings, with the temple, were thrown down, and every mess of three or four soldiers made a cabin, wherein they lodged. The ground about was very fenny, and encumbered with dense thicket and high trees. The Governor ordered the woods to be felled the distance of a crossbow-shot around the place, that the horses might run, and the Christians have the advantage, should the Indians make an attack at night.¹

The third type of building in a prehistoric Florida settlement is readily distinguished from those on the other mounds. Like the others it has no stone walls or permanent indication of the same. Its foundation is not as distinctive but is smaller than the kitchen middens already mentioned above. It is called in the above description the Chief's House or Temple.

The fourth type is distinguished by its contents. This is the place where the remains of the dead were buried, the cemetery, a low mound of sand and refuse covered with trees and bushes of various kinds, rising hardly more than four feet above the general surface of the ground, approximately circular in form. A preliminary shallow trial pit dug on one side of this mound revealed the existence of Indian bones mingled with pottery fragments in such abundance that as the work progressed these trial pits were enlarged, extending wholly across the mound. This type was the main scene of the excavations and a little more than one-third of the mound (pl. 5, *A-D*) was opened and the earth from the surface to base removed, preserving all the objects that were found from day to day.

The author's belief is that the foundation of this mound was a low hill or sand dune formed by blown coral sand in which the aborigines with their primitive implements could easily make a grave. No stones of any kind interfered with the excavations; the knoll or dune chosen for a cemetery was apparently not unlike hundreds of others along the west coast of Florida. The cemetery was inconspicuous when work began and is probably one of many that will be later discovered.

STRATIFICATION OF WEEDEN CEMETERY

Three layers, irregular in thickness, often lacking definite lines of separation, can be differentiated in Weeden Mound, but two of these

¹ The village as well as the chief was called Ucita. The site of this village has been variously determined. The majority of authors place Ucita (town) on Tampa Bay, near the present city of Tampa. The author has been greatly aided in his historical studies of southern Florida by Dr. J. R. Swanton, Ethnologist of the Bureau of American Ethnology. (See Bull. 73, Bur. Am. Ethn.)

are very evident, situated stratigraphically one above the other and distinguished by the nature of their contents. The third or uppermost is naturally modern or deposited since the locality was abandoned for burial purposes. It is penetrated by roots of trees and gives every sign of having been formed by blown sand, and reveals nothing of Indian manufacture; in other words, it seems to have been formed after the Indians had ceased to use this mound for a cemetery. Its depth averages about four inches and is fairly continuous over the mound so far as it has been excavated. Immediately below this superficial modern deposit came the first of two strata which are supposed to indicate two successive occupations. The shallowest burial (pl. 5, *C*) in this stratum was little more than four inches below the surface. At the time the mound was abandoned this skull must have been laid upon the surface of the ground or projected out of it; the modern layer had not yet formed. Down to the depth of three feet (*A, B*) we have at all intervals numerous fine examples of crania. Skulls and skeletons occur in numbers until we reach the lower portion of this stratum. The skeletons found through this layer were in bunches or bundles hastily deposited in their graves and destitute of a covering of any kind. The upright appearance (pl. 5, *D*) of long bones in the surface burials as they were uncovered led more than one visitor to exclaim, "Why, they were buried standing up!" This appearance was brought about by projecting ends of thigh bones and the skull being wrapped in large bones and the whole deposited vertically in the grave.¹ The main portion of both layers was of course formed by the blown sand, decaying refuse, and other organic matter.

Apparently a considerable time elapsed between the use of this place as a cemetery in the interval between the deposit of the lower stratum and the next in order. This is shown in places by black deposits of vegetable matter. The pottery of this layer is as a rule finely decorated and better made than that of the layer below. The implements and pottery² especially indicate a relationship with those people that in prehistoric times lived in the northern area of Florida and southern Georgia.

The lowest of the three deposits (pl. 7, *B, C, D*) in the Weeden Mound contains objects which belonged to an ancient people in

¹The method adopted to free the bones from muscles is known and both West Indians and some Florida tribes deprived the corpse of flesh before interment. (See Bushnell, Bull. 71, Bur. Amer. Ethn., pp. 95, 97. The skulls were painted vermilion, according to Romans.)

²See Clarence B. Moore's account of antiquities of this region.

Florida and the question who these people were is difficult to answer. It will be later discussed but provisionally it may be said that Florida was considered an island by the inhabitants of the Bahamas, to which they applied the name Cautio. We may call its inhabitants the Cautians. The author regards the Ciboney of Cuba and the Lucayans of Bahama as directly related to them culturally. We know they visited each other, which implies a close kinship.¹ The Ciboney or original people of Cuba and the Lucayans were a shell-heap people. Both were very little acquainted with pottery making, but had a few ornaments of shell. In many respects they were retarded in their cultural development and in about the same condition as the Cautians whose remains occur in Florida in this lower layer.

In other words, it is believed that there were two waves of immigrants into Florida in prehistoric times; one from the north, which brought with it the articles akin to those of Georgia, illustrated in the upper layer of the cemetery at Weeden Island, and another like those of the West Indies, corresponding to the lower layer, which were submerged by an influx of the northern clans, whose origin is yet wholly unknown. It is supposed that the archaic population of Florida was practically identical with the earliest people of Cuba, and in order to determine whether there was any difference in the crania of the peoples in the two layers of the stratification, the author had prepared a map, the numbers on which, reaching 444 entries, correspond with skulls and bones which were found at different depths. It is hoped that an examination by some anthropologist will aid in the deciphering of this problem. A few facts regarding the collection of somatological material may be instructive but a determination of racial relations is not attempted.

HUMAN BURIALS

The majority of human burials in the Weeden Mound were secondary, or those in which the skeletons had been stripped of flesh, done up in bundles, and later interred in that condition. There were instances of extended and flexed interments but in the majority of cases the smaller bones were not present; the larger bones of the arms, legs, and sometimes vertebrae, were bunched together. There were several instances where only the skull (pl. 7, *A*) was found and in others the bones of the arms and legs alone remain. These bones were commonly buried upright, not extended. They were very fragile and were preserved with considerable difficulty.

¹ An Indian village, Tergesta, once stood on about the same site as Miami and the interchange between it and Cuba or the Bahamas appears to have been frequent.

The burials were thickly crowded together, one above another, facing upward, downward, and laterally. There was apparently no uniformity in the position in which they were laid. Cross sections of a vertical hole excavated in the sand in which the skeleton was dropped are seen in plate 7, *D*. Above the skeleton was often placed a layer of oyster or other shells and a thin layer of sand. In some instances only sand covered the interment.

The roots of the trees growing on the mound sometimes penetrated the earth through the skull and often filled the cavities of the long bones. These roots were often so numerous that the exterior of the long bones was covered by them.

Lieut. A. W. Vogdes, of the Fifth Infantry, U. S. A., who in 1876 published an account of the Vogdes Mound near Tampa, found evidences of cannibalism in prehistoric times. The skull and bones of a dog and split tibia (possibly for marrow) of a human being also occur. Fragments of charcoal are now and then found scattered through the mound but evidences of fire pits are difficult to discover.

Diseased and broken human bones, sometimes healed or grown together, were found in the mound. There were two infant skeletons, one of a foetus. A similar foetus was described by Mr. Clarence B. Moore.¹ Perhaps the most exceptional interment of a baby's skeleton was the use of a large bivalve mussel shell for a coffin. One of these was found in the Weeden Mound.

The situation of many human crania found below the surface will be shown on a chart to be published later where the depth below the surface is also mentioned. The vertical wall of the trench is in some cases shown (pl. 5, *A*) with the skulls projected from the bank. As the skeletons were very fragile and easily fell into fragments if handled just after they were found, it was customary to leave them exposed to the sun and air a few days after they were found or until they hardened. This also gave visitors an opportunity to "see the remains" before they were transferred to paper "nail bags" in which they were kept, numbers being added to each bag to show the locality and depth at which they were found.

Plate 6, *A*, shows two skulls *in situ* near a hole in the bank out of which the large black bowl (pl. 21, *C*) was taken. These two skulls rest on the top of the lower layer of stratification, the bowl being probably a mortuary offering belonging to the "lower stratum."

¹The works of Mr. Clarence B. Moore on Florida archeology have been of greatest aid to the author in the preparation of this article and he takes this opportunity to express his appreciation of them.

In plate 5, *D*, we can also see two crania buried in a shallow grave. The upper cranium (pl. 6, *B*) is surrounded by long bones buried four inches below the surface; the lower (pl. 6, *B*, *C*) resting on top of the lower "stratum." The crania of both *A* and *B*, plate 7, rest on the same layer.

The relationship of the skulls of the lower layer to those of the upper stratum is shown in plate 6, *B*, and plate 7, *A*, shows a skull before it was removed from the earth. Mr. Reichard is shown wiping off the superfluous sand with a small paint brush. When first exposed each cranium has a reddish color which becomes whiter as the skull dries by exposure. When the sand clinging to it is removed it dries faster. This particular skull (pl. 7, *B*) lies on top of the lower layer, three feet below the surface. The white surface is the natural sand below the lower layer. Plate 6, *B*, *C*, *D*, shows the vertical bank with the human crania protruding from the side. The different burials on the several layers are shown and the crania indicate the level of separation of these layers.

Plate 8, *A*, shows the customary group of visitors at the excavation. They numbered several hundred daily and on Sunday over a thousand.¹ Plate 8, *C*, shows one of the few human skeletons that were found extended or with a well-preserved vertebral column.² Plate 8, *D*, shows leg bones that projected from the ground before excavation.

POTTERY

Three of the figures on plate 4 show the position of a capacious black food bowl in the lower layer before it was removed from the earth, and in a fourth (*B*) a workman is repairing it. Another figure (*C*) shows a boy digging out a human skeleton found near the bowl. Although this food bowl was broken into many fragments most of the parts were gathered together and a complete bowl restored. Unlike the majority of vessels found in the cemetery this specimen was not "killed," although broken into many fragments.

The decorative pottery (pls. 9 and 10) excavated at Weeden Island was mainly found reversed in the upper layer, or that immediately below the superficial layer of modern or historic time. This pottery is of the finest character and compares well with that from other areas in North America. It takes various forms, as large food bowls, platters, spherical bowls, vases, elongated jars (pl. 11), and cups. As a rule the paste of which it is made is coarse and rough,

¹ It was found necessary to rope in the trenches and not allow visitors to enter, but from the dump they had a good view of the work as it progressed.

² Also pl. 2, fig. 2.

sometimes tempered. Superficially it exhibits no evidences of painted decorations or symbols, although some shards are banded with red and dark brown colors. It often has a fine gloss, not glazed.

In the large number and variety of form of the vessels of burnt clay it is not strange that the uses of several types cannot be determined definitely. We miss certain forms, as ladles, cups, handled amphoras and effigy jars, but to offset these there are several varieties peculiar to Florida. Among the latter may be mentioned the cylindrical form with beautiful superficial decorations (pl. 11), square boxlike medicine bowls and thin pottery objects like frustra of cones open at base and apex (pl. 12, *E, F, G*).

Certain smaller hollow globular bowls made of clay and perforated on one side, resembling bowls of pipes, were probably used for smoking, but the globular clay pipe, although not foreign to Florida, is not found in the collection from Weeden Island.¹

HUMAN HEADS MADE OF BURNT CLAY

Representations of four human heads of clay in low relief are found on shards. Two of these heads (pl. 10, *E, F*) are as well made as any taken from Florida mounds and were attached to the rims of bowls, facing outward. They were in relief and the bodies, legs and arms of the human being were not represented. The surface of the bowl was decorated with geometric figures. They were probably duplicated on the diametrically opposite rim of the bowl.

The human heads in relief are among the best-made prehistoric ceramic decorations of pottery and are not common in the collections made in South Florida.² No effigy bowls occur in the collection from Weeden Island. The bowls and vases of the upper layer were nearly all "killed," a hole being broken in the bottom of about every vessel. The edges of this perforation were sometimes smoothed over after the fracture. No specimens were found that had been manufactured and artificially punctured for mortuary purposes before they were fired. The object of the "killing" of a vessel was, of course, to let out the spirit of the vessel when buried with the dead.³ Commonly

¹ There were two clay pipes badly broken and one almost entire in the collection.

² Clarence B. Moore (Notes on Ten Thousand Islands) figures (p. 463) a human head effigy from Chokoloskee Key. In the Index he refers to "human head-effigies on rim of vessel" collected at Moundville, but makes no reference to it in text.

³ Mr. Clarence B. Moore has called attention to this feature on Florida pottery in several articles.

the decorated vessels were placed in a reversed position, but some of them were still upright. They contained decaying organic matter, probably remains of food. There are in the collection no examples of urn burials, although in some cases a reversed food bowl fitted close upon a human skull. The many scattered fragments implies that vessels were purposely broken—a modified form of “killing”—before they were deposited with the dead. In most cases the Tampa Bay ware has geometrical decorations, but jars bearing on their rims heads of human beings, animals, or birds were rare. In one or two instances the head of a bird was represented in low relief and the accompanying avian body simply smooth without elevation. The decoration of the pottery is exceptional in that the designs are incised and generally formed by series of punctures or incised lines. The exterior, and occasionally the interior, of food bowls was decorated, but the ornamentation of jars is generally limited to their exteriors. This use of dots or punctuation (punctures forming lines) is one of the distinctive features of Florida ceramics and the designs are generally conventional figures.

In a study of the various decorated fragments which the author obtained he was particularly struck with certain resemblances in method of drawing to designs found on West Indian gourds or calabashes, especially when lines are formed by a series of punctures. In West Indian pottery, especially the Tainan of Porto Rico and Santo Domingo, the lines terminate both with and without punctures. There is here figured (pl. 13, fig. 1) an ornamented Cuban calabash, the geometric lines on which recall very closely some of the decorations on the pottery from Florida. It would seem that the style of decoration of Florida pottery is a survival of that used in the decorative technique of calabashes, or that the technique of the ornamentation of gourds had been taken as a motive for the decoration of pottery.

Besides the regularly formed jars, platters, and bowls resembling those common in prehistoric southwestern ruins we find in the Florida mounds cone-shaped vessels without top or bottom, and long hollow clay cylinders adorned on the outside with decorations of unknown meaning. These elaborately decorated objects are apparently important religious paraphernalia but of unknown significance. Some of these bowls are very deep, often long and narrow, but without a base or too unstable to stand upright when placed in position. It would seem that such a vessel was intended to be carried in the hands of the participants in ceremonial processions or dances; or set in sand to afford a base or rest to keep it upright.

The author has made a considerable search for deposits of fire clay out of which the terra cotta objects of Weeden Island were made, and has not been wholly unsuccessful. There is a considerable body of marl mixed with clay but this generally becomes quicklime when submitted to heat. A fairly thick stratum of almost pure clay of excellent character was discovered by men working a steam shovel, near Papy's Bayou, which may have been the material the ancient potters used in the manufacture of their pottery.

There is no evidence, however, that the ancient potters were acquainted with the potter's wheel or that they glazed their work, but it would appear that the apparent glaze which many of the pottery objects possess was due to smooth gloss obtained with polishing stones with which the rough clay was rubbed. No glazed pottery was found in the author's excavation, and no designs were painted on the vessels.

Among the remarkable examples of unbroken pottery that were found at Weeden Island there are four specimens which from their general character and decoration are especially worthy of extended consideration. These are supposed to have been used by the aborigines of that island for ceremonial purposes, and are figured in the following plates:

Plate 9, *A, A*, represents a thick-walled bowl which, when seen from above, is oval in shape. The design, which is brought out in plate 10, *A*, is limited to the upper region of the outside of the bowl and is composed of dual units, that is, the figures on two opposite diameters, while partaking of the same general character, are slightly different in their appearance from those at right angles. It is impossible for the author to determine what these designs represent, but there is little question that there are embodied in them feathers or wings, organs of some bird, but highly conventionalized. We have, for instance, in the center a circular figure that may represent the head, from which are extensions on either side, in form conventionalized wings. The body hangs below the head. In figure *A* (right), where another quadrant is represented, the avian character, although preserving a general symbolic likeness, is somewhat different. A remarkable feature about this bowl is the existence on the rim at the ends of the shorter diameter of a small protuberance, connected along the rim itself by a punctured line. This bowl, like all the others, was perforated or "killed" before it was buried.¹

¹As these bowls were buried in a cache containing ten specimens their condition would indicate not that they were wholly mortuary but simply hidden by burial in the mound.

Plate 10, *B*, shows a view of the vessel (pl. 9, *B*) from above. The designs at two ends of a diameter are almost the same and bear identical decoration. This bowl recalls that just considered, with the exception that its general form is globular with an in-curved rim undecorated, and there is only one unit of decoration.

Plate 9, *C*, also represents a globular bowl, the decoration of which may be highly conventionalized figures like serpents winding about the bowl, the outlines indicated like the others by punctures. This bowl is one of the most symmetrical of all those that were found, and the design is the only one suggesting the serpent.

Plate 9, *D*, *D*, likewise represents a small globular bowl which has two units of decoration similar in design. It is not perfectly spherical but has knobs or mammas-like elevations at opposite ends of the longer axis. These knobs bear as unique decorations (pl. 10, *D*), conventional forms which cannot be identified. This bowl is smaller than the two just mentioned and was one of a nest of ten, six of which were broken and four entire.

Perhaps the most remarkable of all these bowls is shown in plate 11, which recalls in its general form the cylindrical ceremonial vases discovered in great numbers by Mr. G. H. Pepper in one of the rooms of the great pueblo ruin, Pueblo Bonito, in New Mexico. Although broken when found it was cleverly mended by Mr. Egbert, who cemented the decorated fragments together and restored the vessel to its original form, as shown in plate 11. This vessel may likewise have been ceremonial. It is too small for use as a food bowl, and was made and decorated with the greatest care. The portions which have been added in repairing it are plainly indicated. So far as the author has examined the collections previously made in Florida, they contain no specimen of the same general form as this, although one collected from Tarpon Springs by Mr. Cushing has a similar ornamentation.

In the next plate (pl. 12, *D*) there is represented a globular bowl but the incised figure on it is so much worn that it is difficult to decipher. Its general character is the same as that on plate 9, *B*.

We also found at Weeden Mound a few bowls of globular form (pl. 21, *E*) that are destitute of decoration, which shows that this form of vessel is not rare in the mound. These bowls were sometimes cached or thrown in a heap, and it is instructive that all were found together in the upper layer. Several simple small globular

bowls¹ with very thick walls and their surfaces unadorned with a design or with paralleled incised lines (pl. 12, *B*) were likewise collected at Weeden Island. Some of these may have contained food, others for condiments. A few had encircling or vertical parallel incised lines on their outer surface and various other generally rectangular figures, all very coarse and apparently purely decorative.

Among the most remarkable ceramic objects found at Weeden Island are those jars shaped like frustra of cones open at base and apex, one of which is shown in plate 12, *E*, *F*, and *G*. There are several of these jars in the collection, the use of which the author is unable to determine. The decoration on the outside is crude, without tattooed designs. Few vessels of this shape have yet been recorded by students of Floridian archeology, and these forms may be peculiar to the Tampa Bay region.

There are a few larger fragments of particular interest. One of the finest animal designs (pl. 14, fig. 1) represents a bird, possibly a pelican. The fine bowl upon which it was made in relief was a ceremonial one, which may account for the care used in its production and suggests that the intention was to represent one of the sacred birds of the ancient Florida Indians. Both head and beak are in low relief, the head a circle with one eye (pl. 18, *A*). The two clavate bodies on the head represent wings or feathers. The greater part of the body that remains is indicated by punctations but an open space enclosing a picture of the heart in form of a puncture is left in the middle. This is a common way among primitive people of representing internal organs.

More or less conventional pictures that may represent various birds appear on several bowls, and it would seem that, as among the pueblo Indians, the feather was adopted by these Florida people as a decorative element and appears in many different forms.

There are only a few representations of animals on the pottery obtained at Weeden Island, one of which, with protruding eyes and serpentine body, bears a marked resemblance to a fish. The serpent itself appears not to have been represented as in northwestern Florida and Georgia.

The number of realistic figures thus far found in the decoration of Florida ceramics is small, but it would seem that there are several conventionalized designs that have thus far not been determined.

¹ These are sometimes cubical with almost vertical sides. South of Tampa Bay, especially where clay is rarely found, these are made of hard wood, the utensils being about the same shape as those made of clay.

In one fragment we detect a remote similarity to a fish made in relief on a shard, but no other instance of even a remote likeness to an aquatic animal can be detected.

There is a great variety of stamped designs, of which the checker pattern is the most abundant. Designs of all kinds as a rule were confined to the outer surfaces of vessels but there are a few in which the decoration is on the interior. These stamped ornaments are similar to those of other parts of Florida.

PUNCTATION

The geometrical designs are punctated pyriform, spirals, ovals, circles, scrolls, and rectangular figures. Some of these are identified as feathers, but many are simply cross-hatched spirals and parallel lines.

One of the marked characters of the decorated pottery from Florida is the use of punctures in outlining designs; this method of ornamentation, as elsewhere indicated, is a survival of calabash decoration¹ (pls. 16-20).

The formation of designs on pottery by the use of superficial punctures is not a very common feature in prehistoric decoration, although it is found at various places in the Florida-Georgia area. It reached a high development at Weeden Island.

These punctures may be arranged in clusters or in straight or curved lines. Incised lines often bear serial or terminal punctures. The latter is common in Tainan pottery of Porto Rico and Santo Domingo, where the terminal puncture varies according to the shape of the point of the implement with which it was made, the triangular form predominating.

There is one form of puncture often isolated, sometimes terminal, which merits especial notice. This form is perfectly circular and smooth as if made by revolving an implement with circular point and may be designated as a circular puncture.

These different varieties of punctuation may occur on the same bowl and their combination may lead to a very composite design.

STAMPED DESIGNS

There is a very great variety of stamped designs, apparently made with a wooden paddle or stamp and applied to the vessel before it was baked or while the surface was still soft and would readily receive an impression. These are so regular in form that we can

¹ A somewhat better term for this method of representing figures is "tattooing," used by Cushing in labeling photographs of pottery from Tarpon Springs, Florida.

hardly believe they were handmade but must have been mechanically applied (pl. 14, *B*).

The most common stamped designs are the checker patterns, which include square, rectangular, and diagonal, formed by different arrangement of the outlines of the stamp. Under the category of stamped designs may also be mentioned the circular, oval and other regular figures formed by curved lines, spiral to parallel. The number of these geometrical patterns is large and they seem to occupy much the same relations to the undecorative pottery and that with elaborate designs that the corrugated pottery of the pueblos does to the painted ware or that with conventional or realistic figures.

The great variety of forms of these stamped designs indicates to the author's mind a considerable infusion of elements of pottery decoration from outside and points to a northern origin. While the stamped pottery from Weeden Island is believed to be older than that with punctured designs, and possibly lies under it stratigraphically, the author is not at present able to definitely make up his mind on its sequence.¹ Thousands of fragments with stamped designs were found, including all those recorded from southeastern United States as well as the Florida peninsula.

SHELL OBJECTS FROM LOWER LAYER

The excavations made at Weeden Island revealed a considerable number of implements made of shell and a few of bone. These objects occur at all depths from the lowest to the highest, and assume a variety of forms. Perhaps the most numerous of the shell utensils were drinking cups made of conch shells, the lip being artificially smoothed and the spire formed into a handle. Drinking cups of this kind containing the "black drink" were placed upon the graves of the dead, according to early writers. These shells were used in ceremonials and are represented in certain early illustrations which represent shell drinking cups placed on a mound of earth with a group of mourners surrounding them. One of the Indians, evidently a chief, is sometimes figured drinking from a shell cup. A fairly large number of these cups was found on top of the mound at Weeden Island.

Weapons made from fossil conch shells are also represented.² Several celt-shaped objects of celt form but made from the lips of

¹ See Nelson's "*Chronology in Florida*," *Anthrop. Papers, Amer. Mus. Nat. Hist.*, vol. XXII, part 2, 1918.

² A number of these are figured by Mr. Moore and other students.

conch shells, not stones, were discovered in the shell heap. The edges of these implements were sharpened by artificial means. The whorl of a shell was often perforated and through this hole a wooden handle was inserted. This implement became very effective, especially when semi-fossilized, and was used in the same way as the ax or hatchet made of stone. Very few stone weapons¹ were found throughout the excavation, which was to be expected since there were no stones available for that purpose. Another form of shell implement had a sharp cutting edge like a knife or war celt. It was manufactured from the lip of the conch shell, curved and sharpened at one end and pointed at the opposite extremity. This implement was evidently carried in the hand and not hafted upon a handle.

There were several other types of cutting implements made of shell, and from the same material the aborigines made needles, bodkins, beads and ornaments. Shell pendants evidently fringed their scanty kilts. Similar pendants of bone or stone were strung along the lower edge of their kilts, and served as rattles in their dances. Some authors have interpreted them as sinkers for fishing nets, but their small size and often beautiful finish belies this explanation. Not only have they been found on the garments of Indians but have also been figured in this position by artists.² Marine shells lend themselves to ornamentation on account of their pearly luster and the fact that they are soft and can be readily incised or worked into many different forms. Among these ornaments we have circular disks or elongated plates perforated for suspension. Some of the shells were suspended from the neck as a pectoral.

A few small beads also were found, some of considerable size. In none of the shell disks from Weeden Island was there any example of incised shells, so common in Tennessee and Georgia, although shell beads were sometimes decorated.

A remarkable cluster of sun shells (pl. 21, *D*) was found about three feet below the surface. Bone objects bound by some form of vegetable fiber, perhaps Spanish moss, were found placed in a sun shell about five inches long. Another shell served as a cover and thus it was deposited in the ground.

STONE WEIGHTS FOR NETS

The prevalent rock of Tampa Bay is a coquina, or limestone, that does not lend itself to the manufacture of finely polished stone

¹ No polished stone celts or grooved axes.

² Notably in White's interesting volume so frequently quoted by students of the Floridian Indians.

implements.¹ It is a modern formation, soft and very friable, a kind of coral limestone which hardens somewhat on exposure to air, but which never becomes very compact. It is of late formation; modern shells and even human bones are imbedded in it. We find repeatedly in this region not only fragments of pottery imbedded in this hardened limestone, but also various undoubted modern objects. This rock is also prehistoric in formation, and was sometimes made into weights (pl. 21, *A*, 1) for fishing nets.

A kind of rock resulting from the tubes of certain marine worms formed in compact masses also served for weights (pl. 21, *A*, 1). This rock is not very hard and is not suitable for utensils or implements. These stones were possibly attached to nets and used for sinkers, and generally have a triangular form. They are perforated through the middle and apparently attached by means of strings.

PROBLEMATICAL STONE

Among the stone objects obtained at Caxambas and presented to the author was one supposed by the donor to have been used as a primitive anchor, but the evidence indicates rather that it was used in the preparation of meal from roots. Little is known of the vegetable food of the ancient Floridians, but it is recorded that by grinding certain seeds and roots, as those of *nymphaea*, meal was obtained from which they made a pancake which was fried over the fire. A circular object from southwest Florida may possibly have been the nether stone of a mill upon which these seeds were ground. This object is about a foot and a half in diameter, flat on one side, rough on the other, with an eccentric hole. It was used somewhat like a quern and into this hole was inserted the stick by means of which a rotary motion was imparted to a millstone.

CONCLUSIONS

AGE OF WEEDEN CEMETERY

The objects gathered from the excavation of the burial mound at Weeden Island add nothing to our knowledge of the age of the skeletons and mortuary objects found in it, save that these objects are prehistoric, which in Florida means any date of the Christian Era earlier than the advent of the Spanish conquerors, or 1500. The natives probably never saw a white man or heard of a European,

¹ Arrow and spear points (pl. 21, *A*, 3) made of flint and occasionally a banner stone are found on the surface of Florida mounds, but these bear every evidence of modern introduction, possibly by the Seminoles.

which does not mean, however, that they were of very great antiquity, nor does it signify that some of their descendants might not have gazed with wonder on the soldiers of De Soto. It is possible, on the other hand, that the Spanish explorers saw the sons or grandsons of those who were buried in this cemetery.

No object of European manufacture has been found in the Weeden graveyard. That is significant for it indicates the white man exerted no influence on the arts of men and women buried there. Whatever we can glean from the remains shows that they were strictly American. Moreover, there is some evidence in the Weeden Mound of a considerable lapse of time between the first and the last interments and that two layers indicating distinct kinds of burial and culture may be shown by superimposition. That is important. Who were these people, how long ago did they live, and what became of their descendants? These are the perennial unanswered questions. They were Indians, that we know; but the documentary records we have of their life are insufficient to determine who they were. If any one is to find a key to their manners and customs it must be the archeologist, and we look to renewed research for this key. The author finds the following layers in the mound from the surface down: 1, Modern; 2, Upper Layer, Muskogean; 3, Lower Layer, Cautian (Antillean).

RELATION OF CUBAN AND FLORIDIAN PREHISTORIC CULTURES

Of all artifacts collected by archeologists, pottery is among the most satisfactory in comparisons of primitive cultures. Upon it is depicted much that affords explanations of aboriginal life. It will be seen by an examination of the decorations on the upper stratum of pottery from Weeden Island that it belongs to the Georgia-Florida or rather Southeastern North American group in which figures are made by a succession of punctures. This method of making designs readily separates this from the other culture areas of North America, as will be apparent when we compare the designs of the specialized ceramic area of the peninsula of Florida and pottery of the Gulf States, Alabama, and Mississippi and other areas.

When we compare the Florida pottery with the highest decorated ceramics from the West Indies we find considerable difference between it and that of the Tainan of Cuba, Santo Domingo, and Porto Rico, where ceramic art reached its highest efflorescence, and are unable to refer it to the Antillean area. But the crude pottery of the lower stratum resembles that of the lower stratum of the West Indies.

The author has discussed in the preceding pages the more important objects excavated at the Weeden Mound in 1923-24, but a large number of additional specimens still remain in St. Petersburg awaiting their place in the final report.

Columbus on his first voyage cruised along the northern coast of Cuba and there learned of a tribe called Guanahatibibes, who lived in caves. These were the original or oldest inhabitants of Cuba. The Tainan culture of the eastern end of this island was later and exotic. Mr. M. R. Harrington has shown in his valuable contribution on "Cuba Before Columbus"¹ that the Guanahatibibes or Ciboney artifacts continue under those of the Tainan or pottery makers of the east end of the island; in other words, there is good evidence that the original population of Cuba was much more primitive in culture than the later, as the author has pointed out in his paper on the "Archaeology of Cuba." Later observations suggest that the lowest layer, or Ciboney culture above mentioned, was also represented in other West Indian shell heaps. This archaic culture distinguished by little or no ceramics has been detected in Cuba, Haiti, Porto Rico, the Lesser Antilles, and elsewhere, and when Columbus landed on the West Indies survivors of it were still represented on these islands.

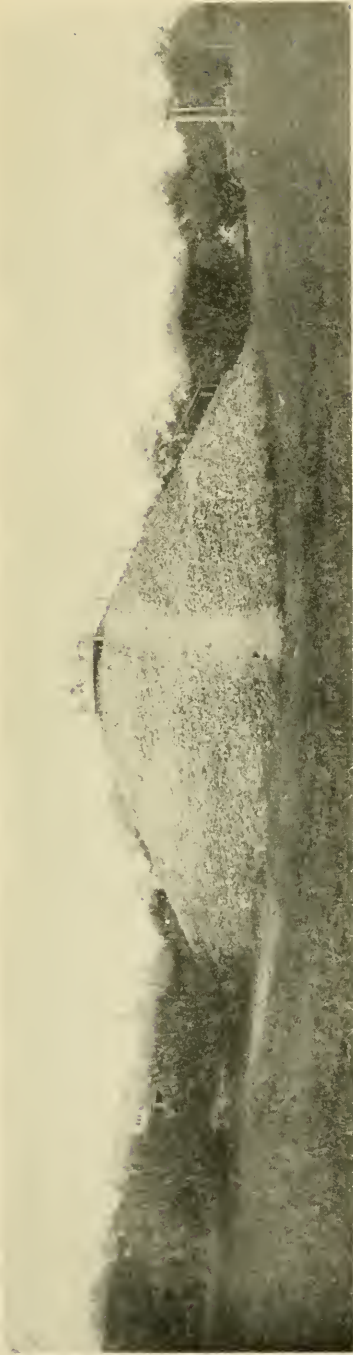
There was a close likeness between the original or archaic population of Florida south of a line from the east coast to Charlotte Harbor on the west coast, and the earliest population of the West Indies; and the evidence is fairly good that the archaic culture of the Greater Antilles extended over the northern portion of the peninsula of Florida under a superficial Muskogean or later development. The question now arises, did the lower or older culture migrate to Florida from the West Indies, or was it autochthonous both in Florida and the West Indies.

The designs used in the decoration of the pottery of the upper layer as here illustrated in Weeden Island are of wide extension northward, and the important question to consider is whether the lower layer which indicates the earliest culture is an extension of a northern people from the continent southward or a southern culture from the West Indies into the peninsula of Florida. Certain facts lead the author to associate closely the Floridian and Caribbean archaic cultures.

There is no likeness between the decorated pottery of Weeden Island and the so-called Tainan ware of the Antilles. Whatever

¹ Indian Notes and Monographs, 1921.

relationship exists between Floridian and Antillean ceramics is found in the ancient forms or those found in the lower strata. In the absence of knowledge as to the relationship of the people who inhabited the Weeden Island mounds and the Indians found on Tampa Bay by the Spaniards, we cannot say whether they were ancestors of the Caloosa or Timucuan. This determination awaits future studies.



1. Oyster shell mound on hospital ground, St. Petersburg, Florida. All the covering soil has been removed and other changes made.



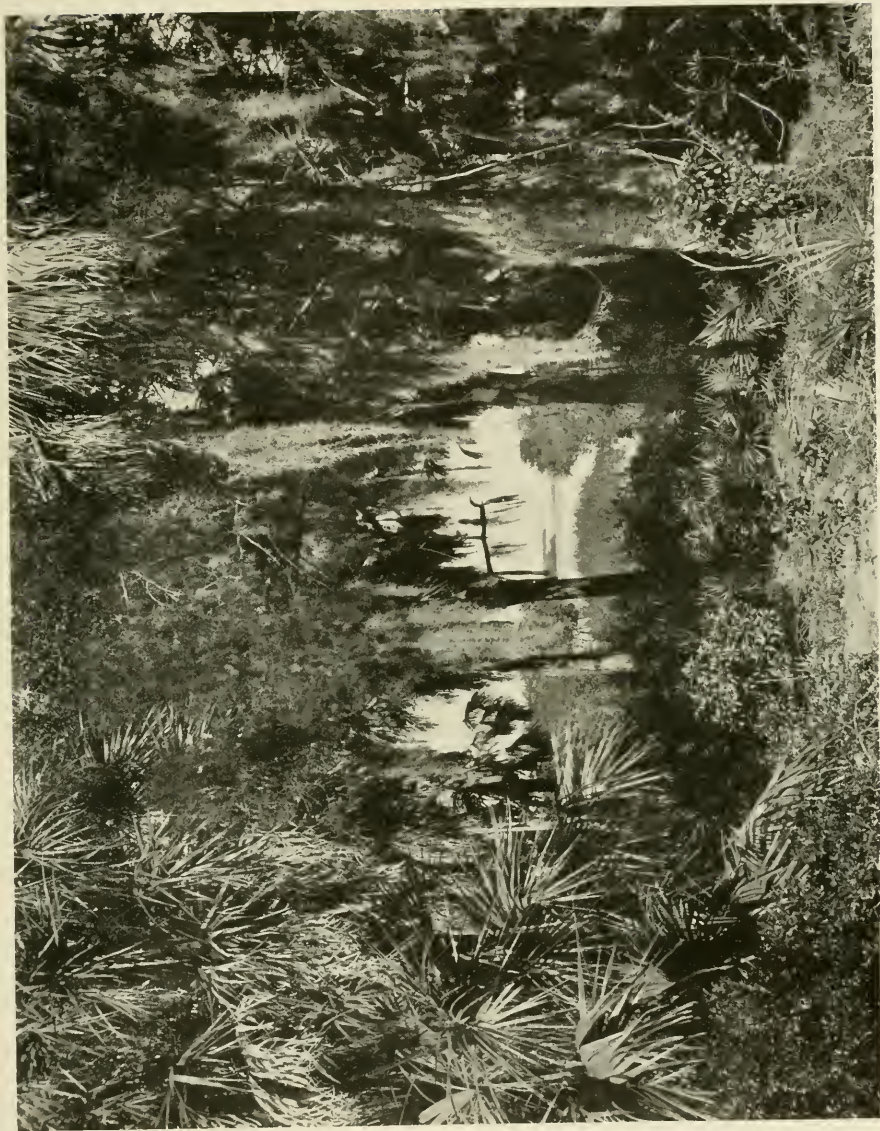
2. View from Weeden Mound looking about due north, over Tampa Bay, showing keys along shore. Photograph by Beck.



1. Indian mound, Weeden Island, Narvaez Park, St. Petersburg, Florida.
Photograph by Beck.



2. Flexed skeleton, Weeden Mound, St. Petersburg, Florida.
Photograph by Beck.



Semitropical vegetation, Weeden Island, St. Petersburg, Florida. Photograph by Beck.



Views in trench of Weeden Mound, St. Petersburg, Florida.

- A. Large undecorated food bowl on top of lower layer.
 B. Mr. Reichard repairing bowl A.
 C. Tree growing in upper layer above burial.
 D. Food bowl A on top of lower layer.



Sections of Weeden Mound excavation.

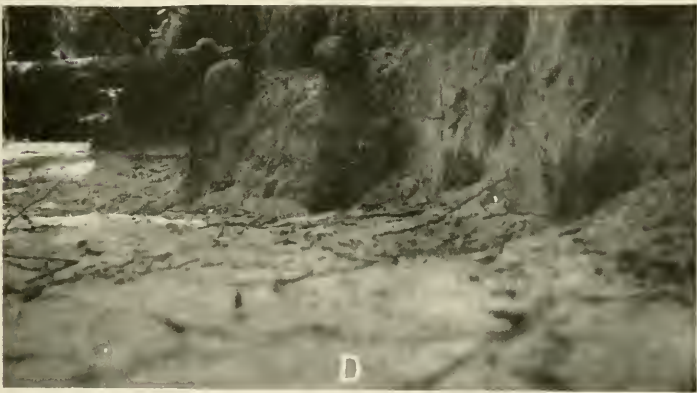
- A. Human skulls on lower layer.
- B. Skulls on lower layer, with long bones.
- C. Shallow burial on upper layer just below surface.
- D. Section of mound showing burials on upper and lower layers.



Sections of Weeden Mound.

- A. Two skulls in lower layer. Black food bowl removed.
 B. Bundle burial in upper layer near surface.
 C. Skull on top lower layer.
 D. Skulls on top lower layer.

Photographs by D. L. Reichard.



Sections of excavations at Weeden Mound, St. Petersburg, Florida.

- A. Mr. Reichard indicating position of skull.
- B. Skulls in lower level.
- C. Burials in black sand above lower layer.
- D. Skulls *in situ*. The dark sand represents the lower part of the upper layer.

Photographs by D. L. Reichard.



Views of excavations, Weeden Mound, St. Petersburg, Florida.

A. Visitors standing on dump.

B. Visitors at end of trench.

C. Two layers in section of mound.

D. Secondary burial in upper layer near surfaces showing ends of large bones vertically placed.

Photographs by D. L. Reichard.



Pottery from Weeden Mound (Upper layer).

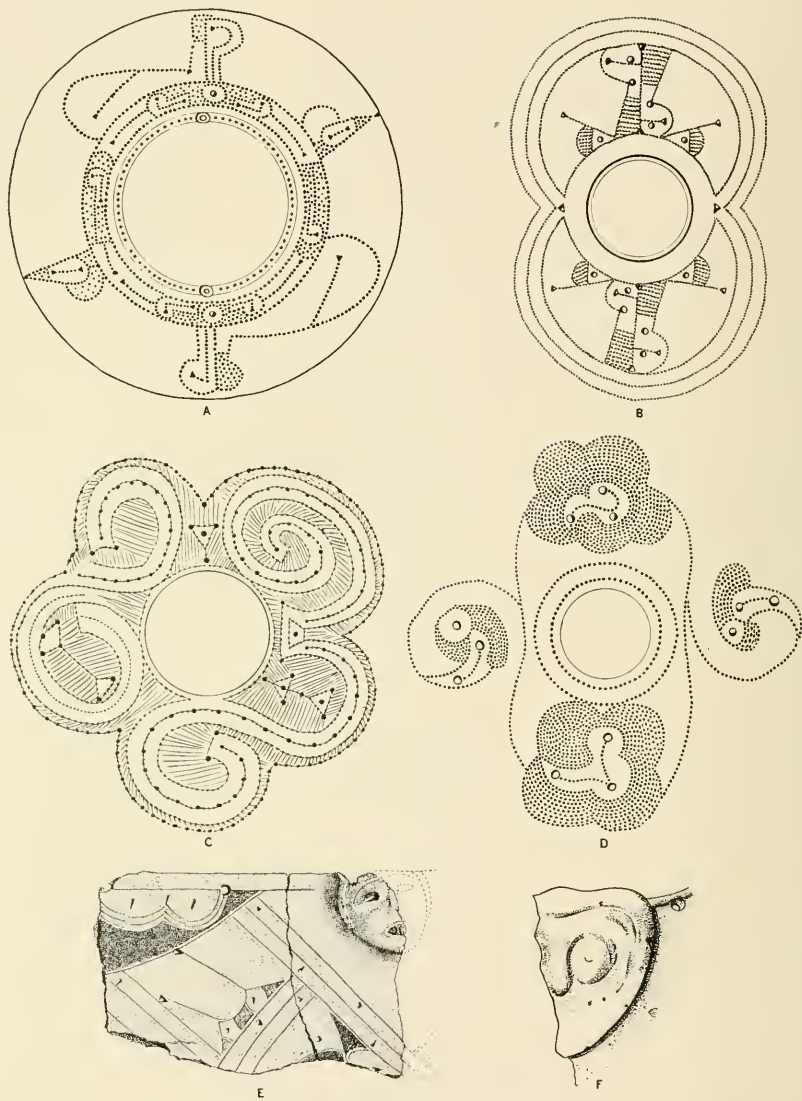
A, A. Decoration of same bowl from two sides. Size $7\frac{3}{4}$ " by $6\frac{1}{2}$ ".

B. Spherical bowl from one side. Size 8" by $6\frac{5}{8}$ ".

C. Bowl with snake figures. Size $10\frac{1}{4}$ " by 7".

D, D. Two views of same bowl, different diameters. Size 6" by $6\frac{1}{2}$ " by 5".

(Taken from a cache near surface.)



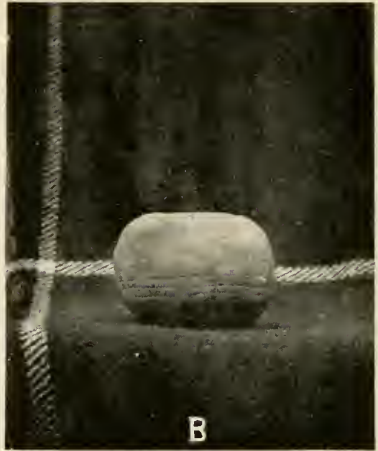
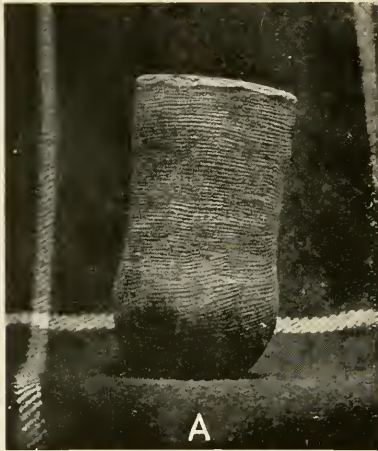
Designs on bowls A-D from above.

A, plate 9, fig. A; B, plate 9, fig. B; C, plate 9, fig. C; D, plate 9, fig. D; E, human face in relief on edge of bowl; F, another head in relief on edge of bowl.

Mullett.



Two views of a jar found in fragments and restored. Size 6" by 15". Shows designs made with punctures, and circular depressions made with cane.



Pottery from upper layer, Weeden Mound, St. Petersburg, Florida.

- A. Deep vase with coiled incised decoration.
 B. Globular bowl with incised decoration.
 C. Human face and pottery shards.
 D. Globular decorated bowl showing perforation ("killing").
 E, F, G. Three views of conical bowl.



1. Gourd showing figures made by puncturing. Cuba.
Size, 9" diameter; 8½" height



2. Pottery vessels, from near surface. A, size 5" by 6"; B, size 8½" by 9".



A

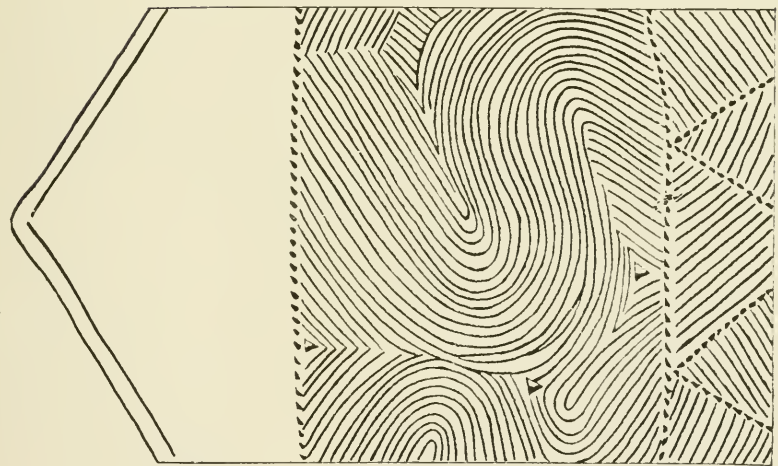
Mullett.



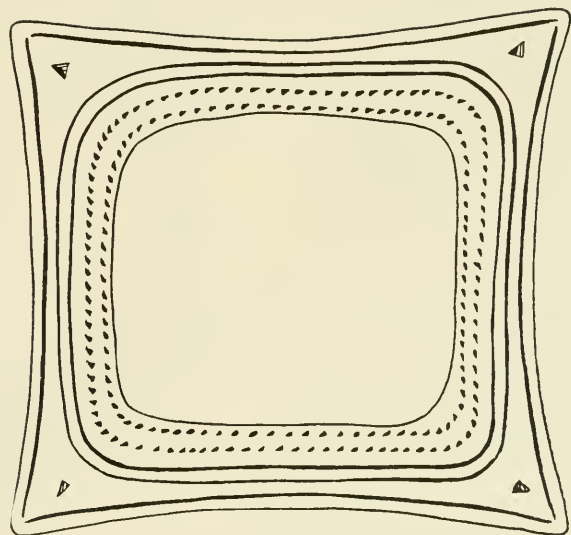
B

Ceramic objects from Weeden Mound.

- A. Fragment of a food bowl or ceremonial vessel decorated with bird design. Size, $6\frac{3}{4}$ " by $6\frac{1}{4}$ ".
- B. Deep rough bowl with stamped decoration. Height, $11\frac{1}{2}$ ".



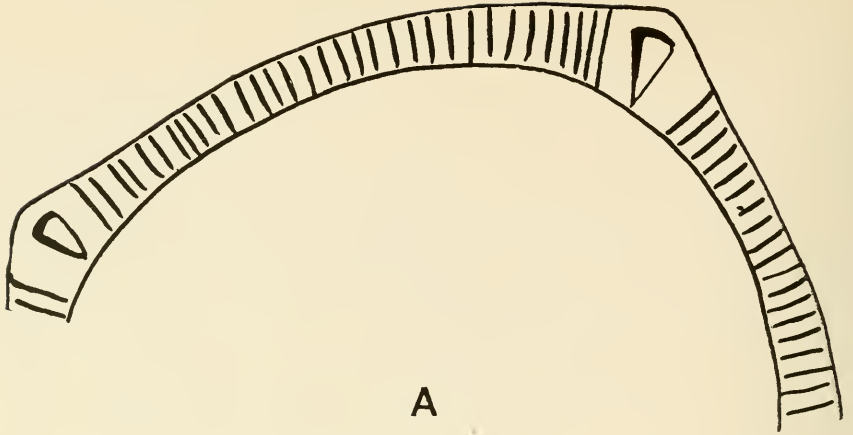
A



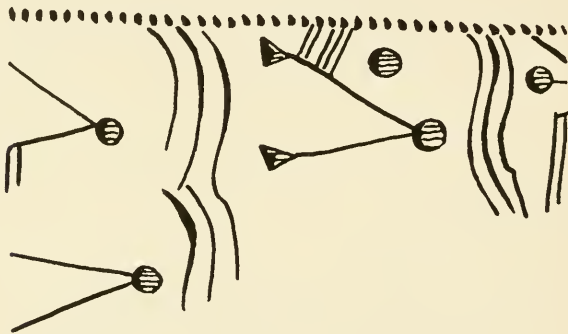
B

Mittelt.

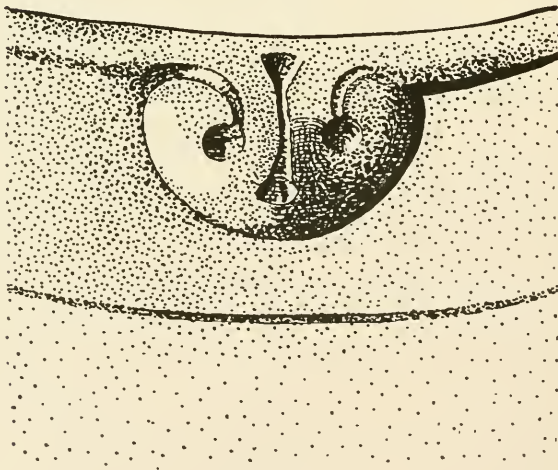
Lateral and top decorations of a deep cubical jar from Weeden Mound, St. Petersburg, Florida. (From a fragment.)



A



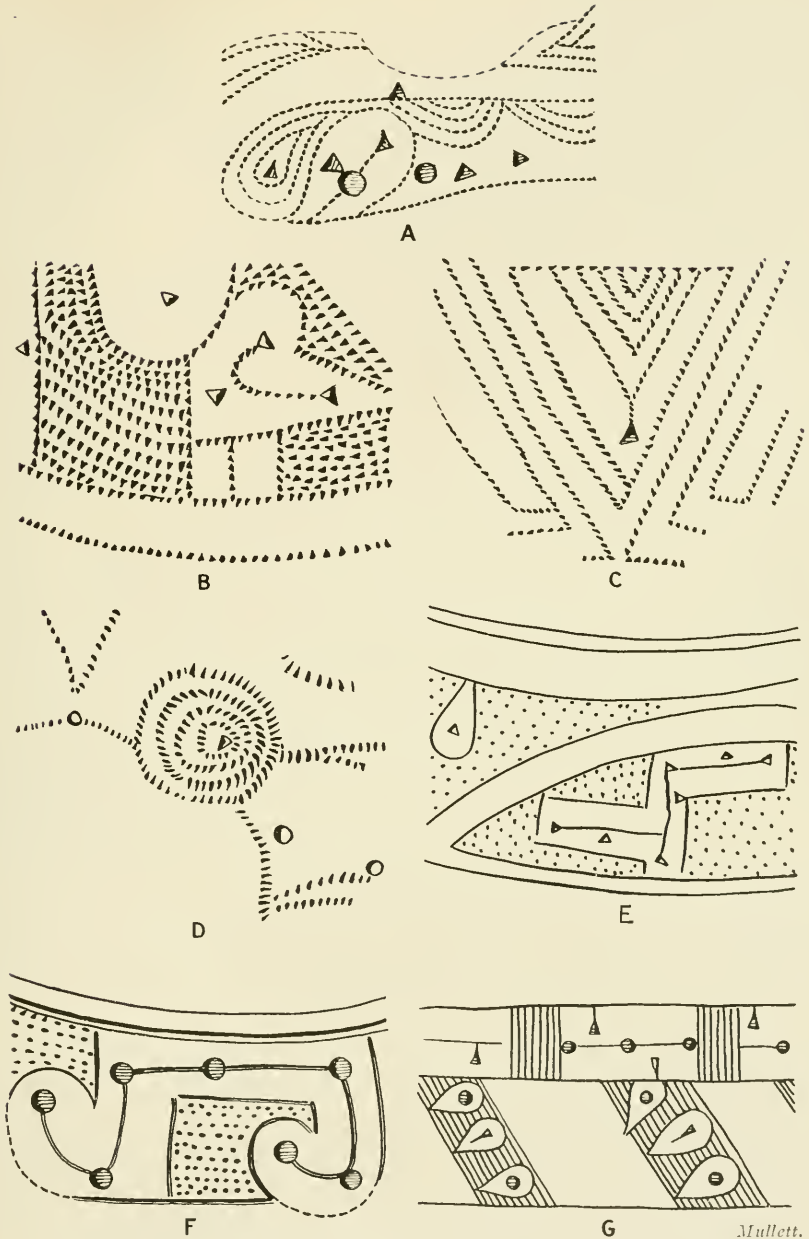
B



C

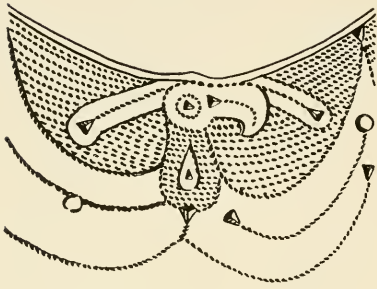
Mullett.

Various designs made with punctate or other incised figures on pottery fragments from Weeden Mound.

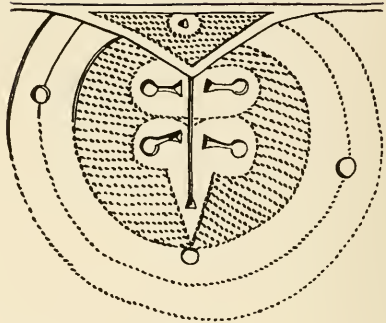


Mullett.

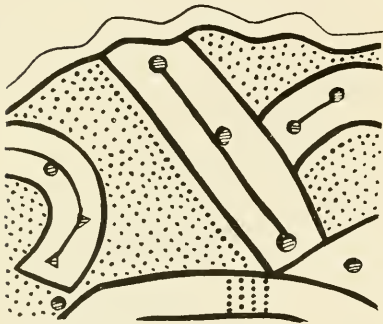
Various designs made with punctate or other incised figures on pottery fragments from Weeden Mound.



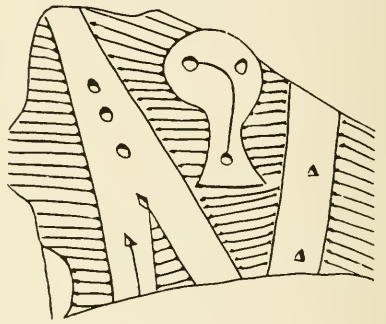
A



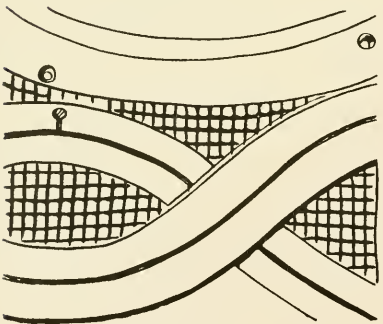
B



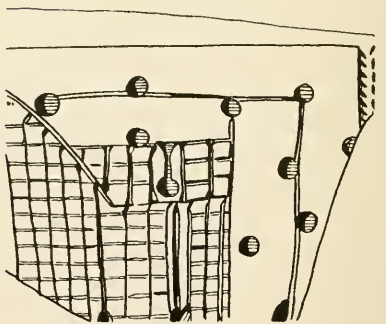
C



D



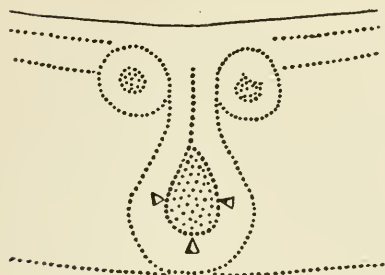
E



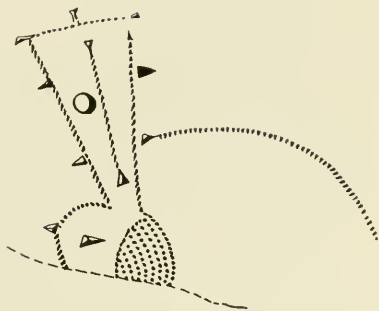
F

Mullett.

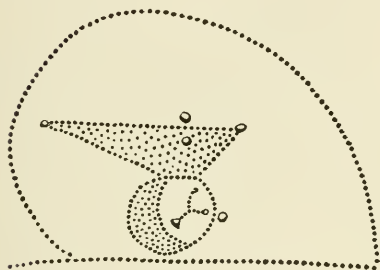
Various designs made with punctations on pottery fragments.



A



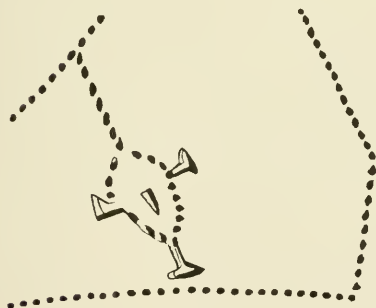
B



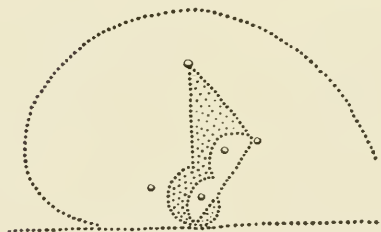
C



D



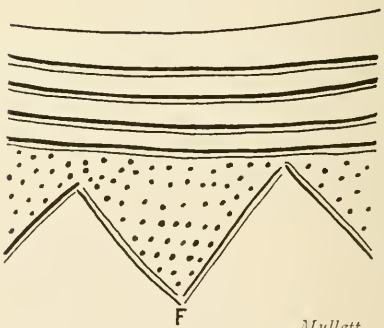
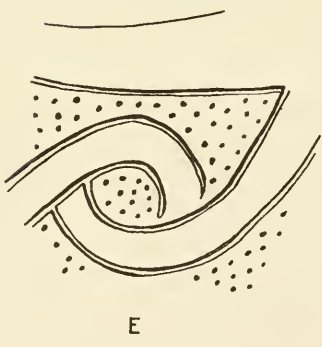
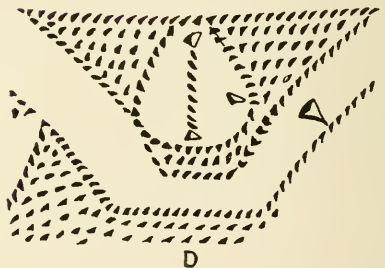
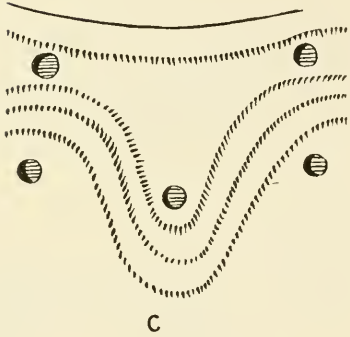
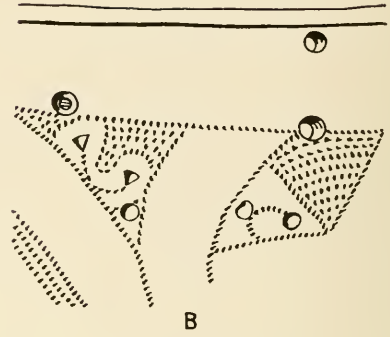
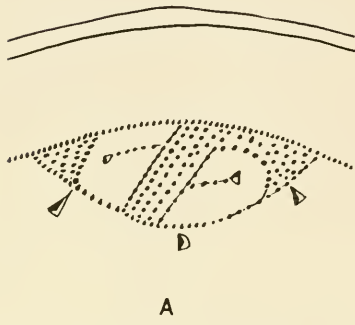
E



F

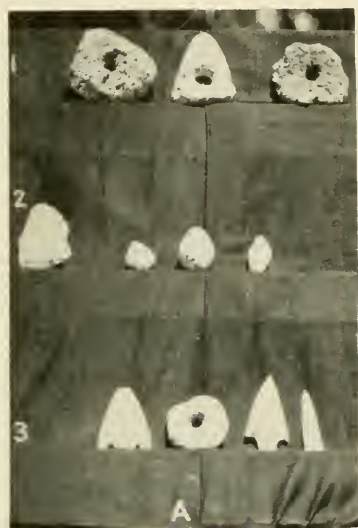
Mullett.

Various designs made with punctations on Weeden Mound pottery. *A* and *D*, rim below; *B*, *C*, *E*, *F*, no rim shown.



Mullett.

Various designs made with punctations on pottery fragments.



Various artifacts from Weeden Mound.

- A. Stone objects. B. Fragments of pottery.
 C. Coarse food bowl. D. Cluster of sun shells.
 E. Globular bowl without decorations.

Photographs by D. L. Reichard.