

Dec. 1953

Delaware Archaeological Board

H. Blinn

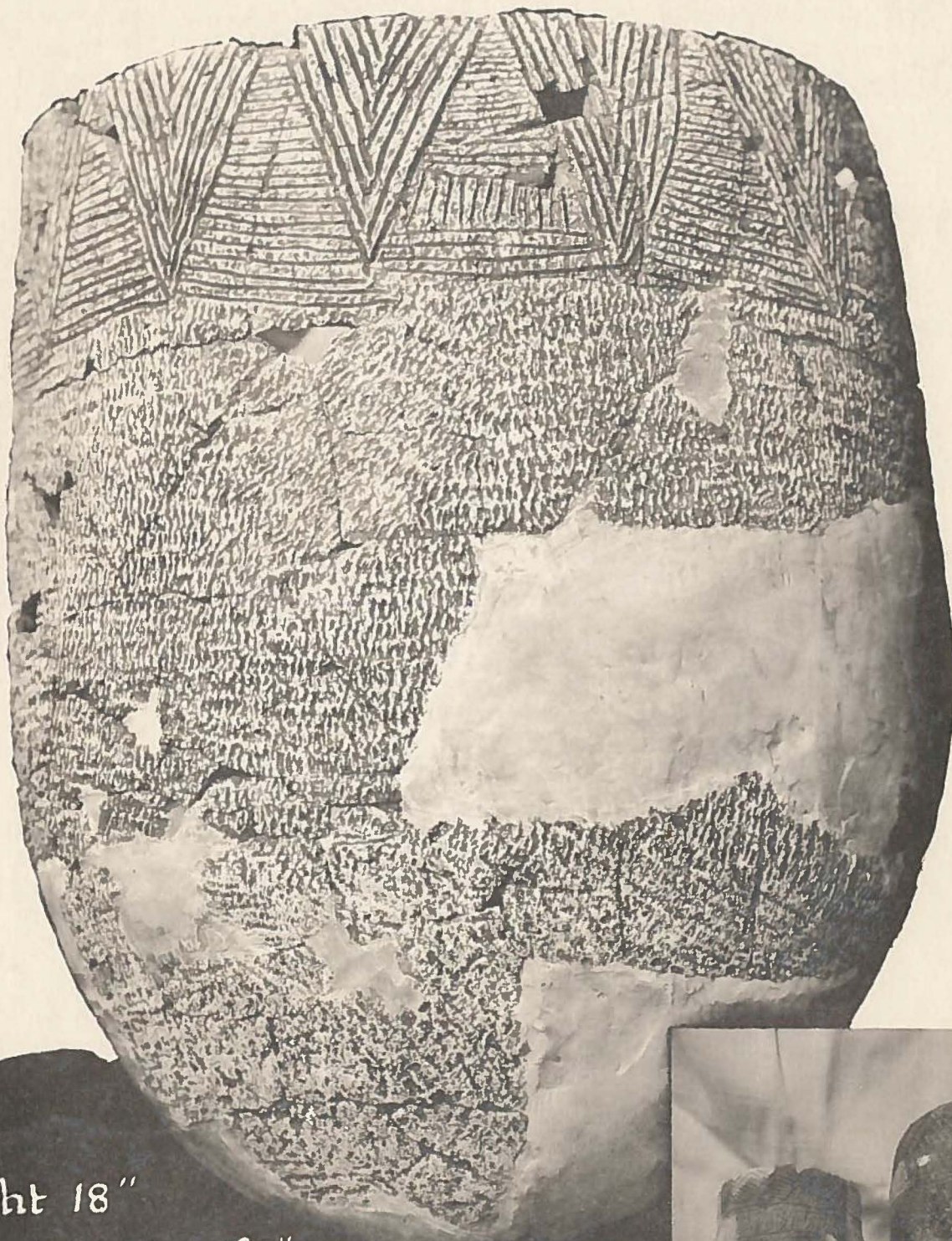
Vol. V. No. 2

The ARCHEOLOG

NEWS LETTER OF THE
SUSSEX ARCHAEOLOGICAL ASSOCIATION

O. H. Peets, Editor

Lewes, Delaware



Height 18"
Oval rim 12" x 14 $\frac{3}{4}$ "



Our Cover: In our July number we reproduced an oval pot found by Perry Flegel and D. Edward Corkran and we expounded our theory that this shape was accidental. The finding (by Mr. Flegel on the Willin site) of another large oval pot made us all wonder if there might have been some purpose in this shape. Henry Hutchinson's article in this issue takes up this question and disposes of it -- unless more oval pots are found.

The walls of this large vessel are relatively thin being very little thicker than much smaller pots so the danger of deformation before or during firing must have been great. It is unlikely that the oval shape was an advantage and it would not have been such a disadvantage as to have called forth excessive efforts to avoid it. Attention is drawn to horizontal breaks which divide the vessel into five nearly equal bands. An experienced modern potter using the coiling method would build up a pot of this size in about this number of stages, allowing time for each stage to dry so that it could bear the weight of the stage above. The coils would be rubbed together as the work progressed so the finished coiling would show a pot nearly smooth as to surface but perhaps irregular in shape. The walls could be made thinner - enlarging the pot - and the shape improved by paddling or by the related "hammer and anvil" treatment. It would be at this point that the fabric imprinting took place and this imprinting is not found on the base of this pot or on the two smaller ones. The base may have been settled in the sand when the imprinting was commenced. In his paper "The Germ of Shore-land Pottery" read before the International Congress of Anthropology in Philadelphia (1894) F. H. Cushing describes this technique but it is not subject of his paper which relates to the making of net-impressed ware. In our own shore areas we find sherds of net-impressed vessels and hope enough will be gathered together to make an article on this subject.

A large pot reproduced on page 31 of Dr. Ritchie's book "The Pre-Iroquoian Occupations of New York State" has a rim decoration very like the one of our cover.

The ordinary photoengraving camera is mounted on a rigid frame connected with a copy board at perfect right angles to it, and has lamps at carefully measured angles and distances. This is an ideal arrangement for reproducing photographs or other flat copy but we tried making a small negative, then an enlargement and finally a halftone negative from this enlargement but the result was not satisfactory, and we decided to make the halftone directly in the big camera. The pot was put in a chair and pulled around under the attic skylight until the design showed as we wanted it. Unfortunately the camera on the regular stand could not be trained on it, so we put the camera on a stool and the stool on a box and propped it at a crazy angle with a picture frame. The Archeolog does not want a photoengraving plant but some Hollywood equipment might be useful.

GEOLOGY AND ARCHEOLOGY

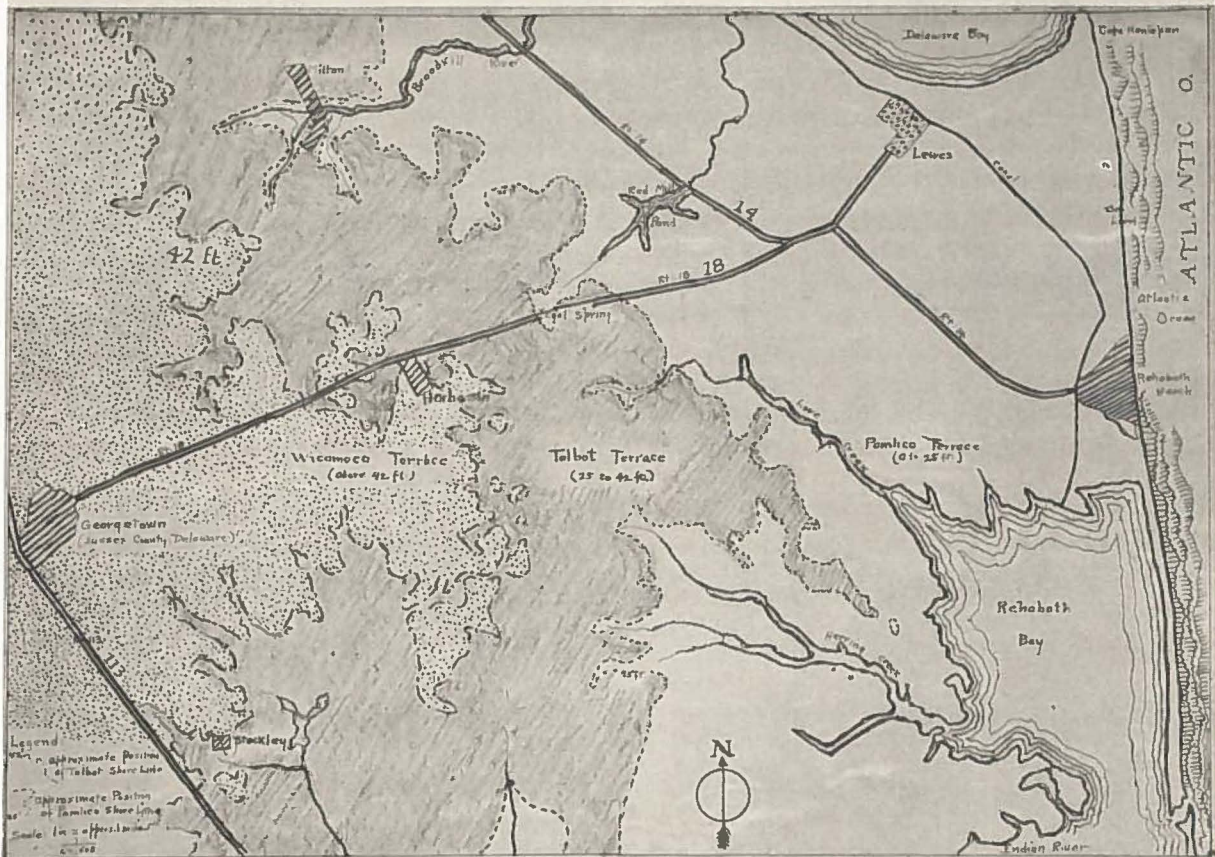
INTRODUCTION: Geology and Archeology are closely related sciences because ancient man's remains and his tools of stone and bone are found intimately associated with the sedimentary deposits of the so called "Ice Age" which began about a half a million years ago and has continued up to the present time. It is during this period of time that the human race developed from a few groups of ape like creatures scattered over Asia, Northern Africa, and the near East to the present billions of people inhabiting nearly every region of the earth.

GLACIATION: This most recent "Ice Age", of which the earth has experienced several others in the more distant past, was caused by a change of climate. Snow and ice began to accumulate on the northern plains of the continents and in the mountainous areas until several thousand feet of ice was formed. Since ice under pressure becomes plastic and is capable of slow movement, the continental ice sheets and mountain glaciers, thus formed began to move outward and downward from the centers of accumulation pushing along soil and rock fragment with a bulldozer like action and gouging out the underlying bed rock formations. Most of the rock material transported by these ice masses was deposited at their margins, where the movement had come to a standstill, and formed deposits called glacial till or drift. After many thousands of years the climate changed to a warmer one and the ice began to melt and great floods of melt-water coursed down the streams and rivers to the ocean basins carrying clay, sand, gravel and even large boulders, frozen in blocks of floating ice. Some of this sedimentary material was dropped along the river valleys but much of it reached the sea and was deposited along the shore lines.

GLACIAL TERRACES AND SHORELINE MOVEMENT: There is a normal "Water Cycle" in which water is evaporated from the surface of the oceans and blown by air currents on to the land areas, where it is precipitated as rain and then carried back into the oceans by streams and rivers. When the climate becomes cold this cycle is interrupted and the water carried on to the land becomes locked up as glacial ice. As this process continues the ocean basins shrink and shore lines move seaward as the water level lowers. It is estimated that the sea level dropped three hundred and fifty feet during the last period of ice accumulation and the shore line moved seaward, possibly, fifty miles. When the climate becomes warm the ice melts, water pours back into the oceans and sea level rises again. If our present climate continues to get warmer and the ice caps on the Antarctic Continent and Greenland and the glaciers of Alaska and other mountainous areas of the world melt, sea level will rise, probably, one hundred and twenty-five feet. Such a flood would cover all of the Delmarva Peninsula.

About two hundred thousand years ago, in the Second Interglacial Age, as shown on the accompanying chart, the Wicomico Sea covered all of the Peninsula and as it retreated it left a covering of sand and gravel thirty to fifty feet or more in thickness over all the flooded area and also four old shore lines, along the Eastern and Western Shores of Maryland and Virginia, marked by escarpments at elevations of 140 ft., 100 ft., 70 ft. and 42 ft. above the present sea level. In Sussex County the 42 ft. shore line, "The Talbot", is visible near Gravel Hill on route eighteen, several miles east of Georgetown.

SHORE LINES of the "WICOMOCO" SEA VISIBLE in SUSSEX COUNTY (It had successive shorelines elsewhere up to 140 feet)



The map above shows two of the shore lines of the Wicomico Sea. The one surrounding the shaded area being 25 feet, and the other surrounding the stippled area being 42 feet above present sea level.

The chart below shows the relationship between Archeology and Geology

Time Divisions	Deposits	Terraces	Duration of Each Age	Elapsed Time	Locality	Evidence of Man
Recent Epoch			10,000 yrs.	700-300 yrs. 1000-2000 - 1500-3000 - 5000-10000 yrs.	America	Late (Mississippi) Wood land: Middle Early Archaic Late Early Paleo indian: Folsom & Patagonia Men
Glacial Epoch	Fourth Glacial Wisconsin	Mankato Till	25,000 yrs.	35,000 yrs.	Europe	Cro-Magnon Men
	Third Glacial	Cary Tazewell Peoria Loess Iowa Till				Neanderthal
	Third Interglacial	Gumbotill	50,000 yrs.	85,000		Rhodesian
	Second Glacial	Illinois Till	50,000 yrs.	135,000		
	Second Interglacial	Gumbotill	120,000 yrs.	255,000		Java and China Apemen
	Second Glacial	Nansan Till	50,000 yrs.	305,000		
	First Interglacial	Gumbotill	80,000 yrs.	385,000		Pittdown Men
Pliocene Epoch	First Glacial	Nebraskan Till	50,000 yrs.	435,000		Heidelberg
						Eoliths

Then followed the Third Glacial Age which continues for approximately fifty thousand years. Ice accumulated on the continents and sea level dropped all over the world. During the following Third Interglacial Age this ice melted and the sea again advanced on the land and, in Sussex County, clay, sand and gravel of the Pamlico terrace were deposited. The old shore line marking the maximum flooding of this sea stood at twenty-five feet above present sea level. This low Pamlico escarpment can be seen at the Dixie-Bell Farm near Cool Spring.

CAUSE OF GLACIATION: It is interesting to speculate as to what causes these changes of climate but no one has been able to prove the exact cause. It is sufficient to say that variations in the amount of heat energy received from the sun are in some way responsible. An increase in the carbon dioxide content of the atmosphere, volcanic dust in the air, and uplift of mountain ranges, changing and cooling the moisture carrying air currents, have all been advanced as immediate causes of glaciation.

GEOLOGIC COMPUTATION OF TIME: Geologic in Europe and America have tried to estimate the duration of the four glacial and three interglacial ages using the extent of weathering of the older morainic drift deposits during the succeeding warm and humid climates of the interglacial Ages. The weathering of rocks is an extremely slow process, but, given sufficient time, even granite boulders can be change to a sticky clay formation called "grumbotil", (see chart), especially in flat, poorly drained areas. Since the last morainic drift sheet of late Wisconsin Age (Mankatoan) was deposited, weathering has affected it, in places, only to a depth of two and one half feet. Elsewhere the drift is in a remarkable fresh condition. The older drift sheets of the First, Second and Third Glacial Ages have been weathered eight, twelve and five times as much respectively as the drift sheet of the Fourth Glacial Age, producing gumbotils between each Glacial Age. Evidently these earlier interglacial periods were of much longer duration than that since the last retreat of the ice. The elapsed time since the last ice retreat is variously estimated at from ten to twenty-five thousand years. Using the ten thousand year estimate and multiplying by eight, twelve and five one obtains 80,000, 120,000 and 50,000 years for the First, Second and Third Glacial Ages. More is known about the Fourth Ice Age (Wisconsin) because its deposits lie on top of the others and a duration of 25,000 years has been given to it.

THE GLACIAL AGES AND PREHISTORIC MAN IN ASIA, AFRICA AND EUROPE:

Excavation in Europe and the Mediterranean region in river terraces and caves have yielded numerous cultural objects of ancient man but few human bones or skeletons. The artifacts discovered show definite progressive advancement of skill in the making of weapons, other implements and even of engravings, paintings and sculpturing. As many as seventeen superimposed cultural layers have been found in a single cave in the Dordogne region of France.

Possibly the oldest human bone found to date is the Heidelberg jaw discovered eighty feet below the surface in river deposits of the early Ice Age near the town of Heidelberg, Germany. Also, in southeastern England, Piltdown, gravel deposits of the same age have yielded one incomplete skull and lower jaw of a primitive man but no associated artifacts.

In deposits of middle Ice Age time in China and Java, numerous skulls and other human bones have been excavated. These are associated with artifacts and charcoal deposits and with fossil animals identified as middle Ice Age. The skull cap of these primitive people is ape-like but differs from any known ape in having a much larger brain capacity.

Evidently they knew how to build fires and make crude tools out of flint.

A late Ice Age cave deposit in Rhodesia, has yielded a nearly perfect skull with ape-like brow ridges but with a brain capacity of a human being.

In Europe and around the Mediterranean region there lived a race of men whose abundant remains and artifacts are found mostly in cave deposits of the Third Interglacial and the Fourth Glacial Ages, the Neanderthal man. From the artifacts which they made and the brain capacity of their skulls it is evident that they were quite intelligent but the receding forehead and heavy eyebrow ridges show that they were more primitive than modern man.

As the last ice sheets began to melt there appeared in Europe, a new race of men structurally comparable in every way with modern man, The Cro-Magnon. They were skilled in making stove implements and they left records of much artistic ability in the engravings, paintings and sculptured figures found on cave walls.

PREHISTORIC MAN IN AMERICA: Apparently man did not reach America until about ten thousand years ago. In northeastern Colorado, at the Lindemeier Site, remains of Folsom Man are found associated with characteristic fluted flint implements and fossil mammoth's bones. Here the artifacts are definitely associated with Mankatoan glacial deposits whose age has been determined as ten thousand years by the radioactive carbon method. No human remains of Folsom Man except a rib bone recently reported from Blackwater Draw, near Portales, New Mexico, have been found. This lack of human skeletal material in the many Folsom sites is probably, due to the fact that these people were roving hunters with no fixed place of habitation except camp sites. When one of them died the remains were either buried in shallow graves or above ground in rock piles, as some Indians still do in the Northwestern part of our country. Under such burial conditions the chance of preservation is very meager. In two caves in Patagonia, South America, several human skeletons associated with fossil bones of the extinct sloth and American wild horse have been found near the bottom of the cave fill. Excavations prove that there were four periods of habitation above the layer where the skeletons were discovered. These skeletons are definitely Indian in character. Their age is not definitely known but is probably, somewhat later than Folsom Man. During the time when the last ice sheet, (Mankato), lay on the North American Continent, sea level was several hundred feet lower than now and there was, probably, a land bridge connecting eastern Siberia with Alaska. It is believed that at this time Folsom Men reach the Americas.

The question naturally arises as to how long it took for Folsom Men to reach the eastern seaboard in Sussex County, Delaware. Possibly a thousand years or more. Folsomoid points have been found by Mr. Harold Purnell about two miles north of Georgetown. In Dinwiddy County, Virginia, Folsom artifacts have been discovered in some quantity and also in Eastern Pennsylvania.

At this time sea level was much lower than now and these men could have roamed over all the Delmarva Peninsula.

Professor George F. Carter, of John Hopkins University, who is now working in the glacial terraces of California looking for earlier evidences of primitive man, claims to have found eoliths, (very crude man-made artifacts), in river deposits of the Third Interglacial Age. If he can prove his contention then the date when man reached America must be put back eighty-five thousand years. The Pamlico terrace, in Sussex County, Delaware is the same age as this California terrace, so it may be worth while to examine it more critically.

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The page of map and chart had just been printed when news came that the "Piltdown Man" was a hoax, made with an old human skull and the jaw of an ape. Such famous deceptions, like the Saita tiara and the imitations of the paintings of Vermeer, probably do more good than harm for they test critical judgements which otherwise might be thought infallible. Although not deserving to be classed as a hoax, the Archeologist's headless ape still challenges the ceramic experts of the world. Three leading American authorities have examined it: One said he was almost certain it was modern; a second said there was nothing about it that would prevent its being really old, and the third refused to commit himself.

* * * * *

At our November meeting Mrs. Dorothy Cross, in an excellent lecture on the archeology of New Jersey, restated the time divisions from the Paleo-Indian to Historic as they are now being used, and described the distinguishing artifacts of each age, showing on the map where sites of each period (except the first) had been found. It would be desirable to do the same for Delaware in a paper with map that we could publish. Conversation with Mrs. Cross after the meeting brought out her opinion these nomadic hunters would have camped on the trail of the game they were following and had little to attach them to one place long enough to leave stratified remains. No "site" has been found in New Jersey or Delaware but from the number of Folsomoid points found in both states it would seem mistaken to exclude the Paleo-Indian from the list of occupations.

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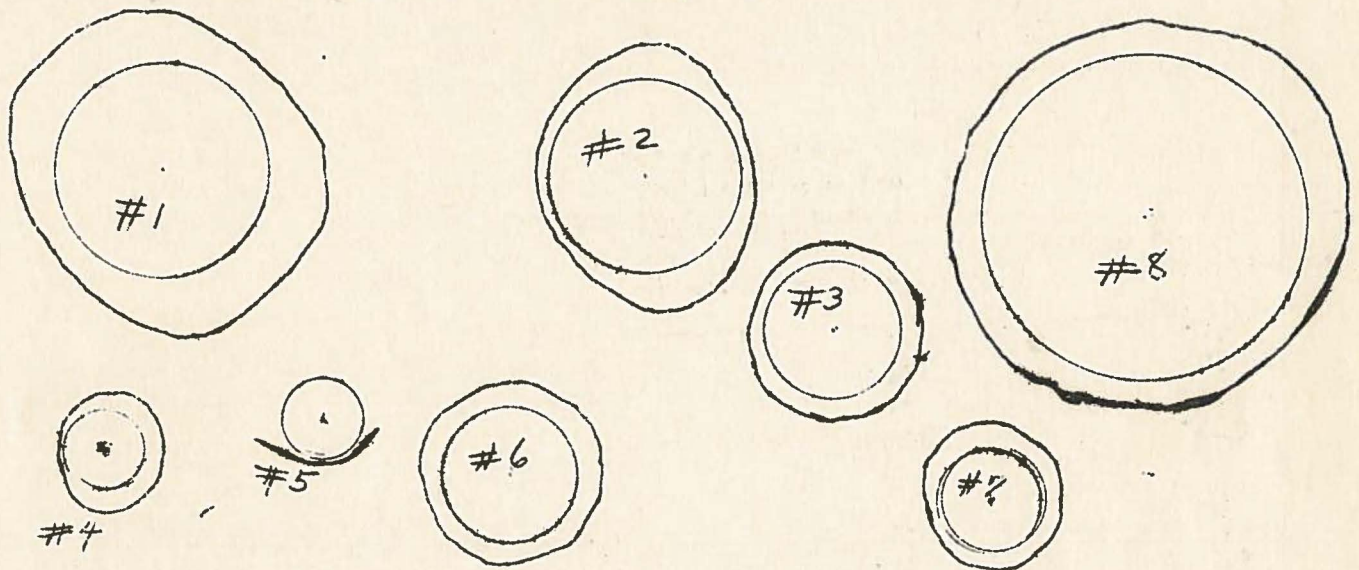
The only account of an actual dig which has come to our otherwise encumbered desk is one by Richard Ehlers at the end of Long Neck Road. Very little was found except oyster shells neatly packed between layers of earth. Just what compulsion was behind the kitchen midden complex of the American Indian remains one of the deepest of mysteries, though explanations based on speculation are numerous.

ARE UNSYMETRICAL POTS A DISTINCTIVE TRAIT ?

Since the restoration of the oval-ish pot from the Marshhope-Moore site, and the large unsymmetrical one from the Millin site, some members have suggested that these "non-round" shapes may be a distinctive trait of that Marshhope-Nanticoke area.

To either lay or to materialize this ghost, we have traced the outline of the rims of all the restored pots from this area that we know of, and have also traced the rims of those pots in the Zwaanendaal museum that came from the Lewes-Rehobeth area. Of these tracings we are considering in this analysis, only those which have about 50% or more of matching and continuous rim sherds, since with less than this, the shape of the rim opening can be up to the craftsman who restores the pot.

The outlines of these pot openings have been reduced in size by means of coordinates and reproduced here. A circle has been drawn inside the rim outline to show more clearly the irregularities of the rim shape.



While Nos. 1 & 2 are more distorted from a true round than the others, it will be noted that they all depart considerably from a true round.

Tabulating for comparison-

Fig.	Area	Dif. in Major Diams.	Percent of matching continuous sherds	Percentage Variation of Ave. Diam.
1	Nanticoke	2"	75 %	17.9 %
2	"	2"	100	20.
3	"	0.5"	60	6.9
4	"	0.8"	60	16.5
5	"	?		
6	Lewes-Rehobeth	0.7"	85	9.
7	"	0.2"	80	3.
8	"	1.2"	100	7.2

The Nanticoke area pots show a much greater percentage of variation than the Lewes-Rehobeth area pots, but there is no trend toward any particular shape. Those from the Nanticoke-Marshhope area are generally thinner in wall thickness in the body and are a little coarser in texture, both of which would make it more difficult to handle the "green" pot before it is dried and fired.

We feel that at the present time with the limited number of restored pots available, no special shape can be call a trait of either area, and that the distortion from the true "round" can simply be attributed to the crude methods of manufacture in use, and occasionally lack of skill by the artisan.



"THE WRESTLER." A SEATED MALE NAIDE WITH BEARD AND MOUSTACHE, THE ARMS LIFTED IN AN AGGRESSIVE MANNER. STONE. OLMEC. UXPANAPAN (VERA CRUZ.) 25 1/2 by 21 1/2 ins (Lent by Sr. Lic. Gustavo Corones)

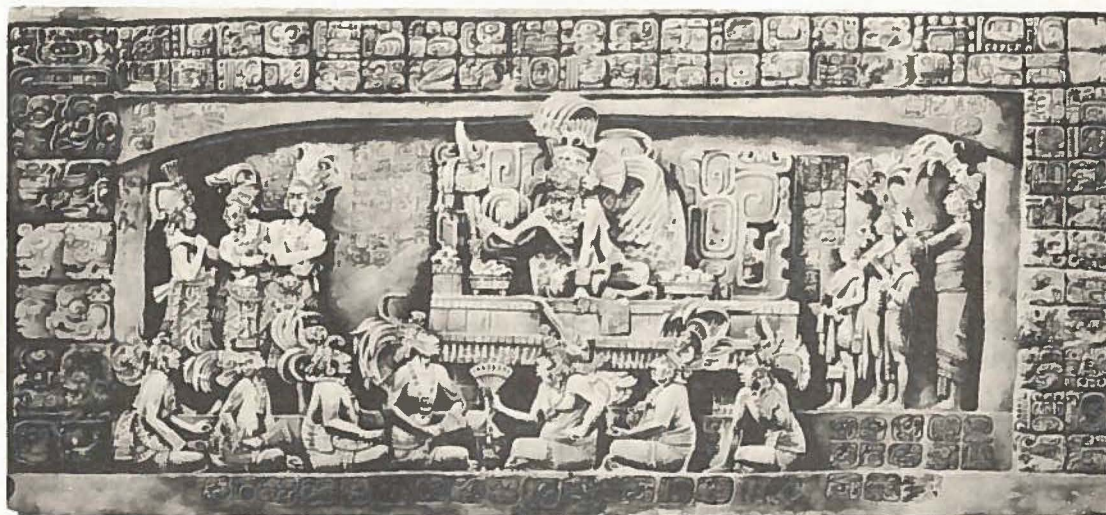


CEREMONIAL AXE REPRESENTING A HUMAN HEAD IN PROFILE, WITH MOUSTACHE, AND BIRD'S HEAD HEAD-DRESS. DIORITE. CULTURE OF THE GULF OF MEXICO. MEXICAN GULF COAST. 10 1/2 by 7 1/2 ins.



A FUNERARY URN REPRESENTING A FIGURE WITH PLUMED HEAD DRESS IN THE FORM OF A JAGUAR'S HEAD. OCHRE TERRACOTTA. ZAPOTEC (3RD PERIOD). (OAXACA.) 18 1/2 by 15 1/2 ins.

Photographs above from
ILLUSTRATED LONDON NEWS
Those below are from
AMERICAN ANTIQUITY



Mayan lintel from Piedras Negras. (Drawing by M. Louise Baker).



Sculptured panel from Borobudur, Java (from Krom and Erp, 1920).

TRANSPACIFIC CONTACTS

Memoir No 9 of the Society for American Archaeology published as part 2, of the January issue of "American Antiquity" contains fourteen articles covering with authority almost an equal number of components of the question of past relations between Asia and America. This Memoir is sold seperately at 1.50. Orders should be sent to the Treasurer of the Society, Geo. F. Mill, Box 600, Bismark, North Dakota.

If there is any phase of this problem not covered by this collection, it may be that of the capabilities of Asiatic shipping in the first centuries of the present era. Until recent years a great deal was made of the nearly total lack of maritime structures among the Indians of the immense coast line of the American Continent, but the dramatic adventure of Kon-Tiki, though it did not illustrate the two way intercourse with Southern Asia which seems to be needed to explain the sudden eclusion of several arts and sciences among the peoples of America, did put an end to the thinking which denied the possibilities of trans-Pacific contacts on the grounds that the Indians lacked the means of making them.

On their side, the Asiatics did not need rafts of balsa wood, for their junks adapted perhaps from the Phoenecians as were some types of Spanish and Portugese boats, could have made the trip. Hardly a month passes that does not bring us a story of persons crossing either ocean in far smaller boats. The lack of press-agents rather than the lack of navigators may be the reason we think of trans-oceanic travel as having begun with Columbus. Greenland followed the fashions of Scandinavian homelands centuries before Spanish discoveries.

Gordon F. Ekholm from whose article in this series we have been permitted to use two illustrations says-- "The very important considerations of how these postulated contacts between south-east Asia and Middle America may have occurred is also outside the scope of this paper, but it is necessary to state my belief in the probability that actual ship navigation across the pacific was responsible."

Artists and architects have contended ever, since the discovery of aboriginal American art that the similarities were enough in themselves to prove contact, for spontaneous development to that extent was contrary to the whole history of art, but, unfortunately, the only large area assumed to have been cut off from the art of Europe and Asia, is the territory under discussion, so the caution method taken by Dr Ekholm may be required by the rules of logical exposition.

O.H.P.

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