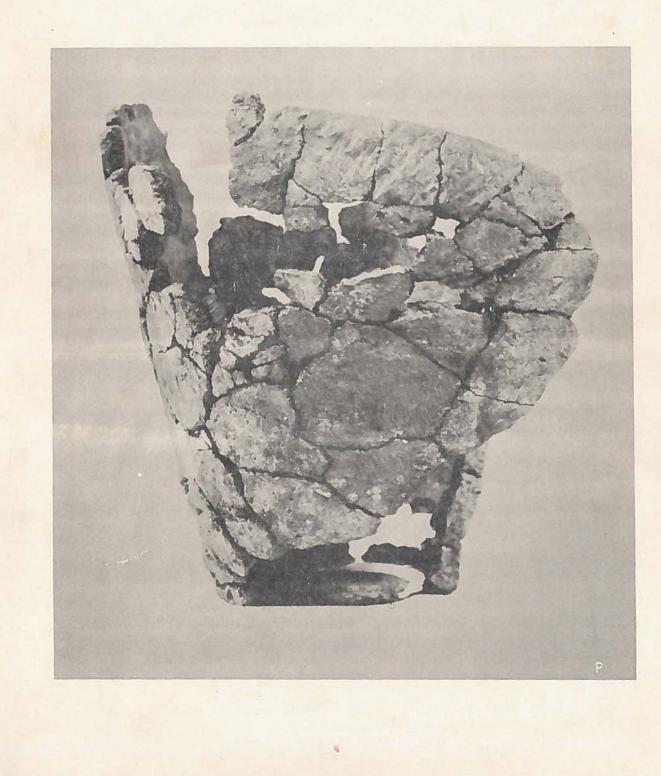
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P. S. Flegel Editor

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June, 1955

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EXAMINATION OF THE PAGAN CREEK DIKE

David Marine

(Editor's note: The following examination was made on Dec. 9, 1951 by Frank Austin, Donald Dillon, Mr and Mrs. Charles H. Robinson and Dr. and Mrs. David Marine.)

The Pagan Creek Causway or Dike is approximately 125 yds. in length. It extends in a general N.E. and S.W. direction but has an angle about 40 yards out from the S.W. approach so that in the S.W. 1/3 and extending a little N.E. of the present channel of Pagan Creek the direction is roughly N. 45° E. while the remaining or N.E. 2/3 of the dike is roughly N. 25° E.

This dike is also about 1/5 mi. down stream and to the Northeast of the black-top State road running from Nassau to the Pilottown road.

When the Queen Anne Railroad Causway (whose direction is roughly N. 66° E.) was built (about 1890) the S.W. end and approach to the Dike were destroyed, and there are still the deep scars on either side of the right-of-way where dirt fill was obtained for the railroad causway.

A plat of the Rowland property between Lewes Creek and Pagan Creek, drawn by John Shankland and dated July 26, 1773, shows the Dike or causway was used to carry a road which extended from Pilottown road (about a nile to the N. E.) southwestward into the "back country". It is also shown on the plat accompanying the deeds from ames ong to Nat. Cottingham in 1033 and N. Cottingham to Wm. Russell in 1836.

There was an Indian village on the right bank of Pagan Creek just to the westward or down stream from the Causway. This Indian camp site is known as the Russell site in the records of the Sussex Archaeological Association.

Following several visits to the Dike by Orvillo Poets and the writer, Mr. Samuel Russell, the owner, gave permission to examine it.

At a distance of 114 feet from the edge of the field, a trench was cut, extending to the middle of the Dike and at rt. angles to its long axis. At this point the Dike is about 9-10 ft. in width at the top and rises $2\frac{1}{2}$ to 3 ft. above the present marsh level. It is covered at this point with honeysuckle, sweet gun and some wild cherry saplings which are up to 4 inches in diameter.

The trench with vertical sides extended to the nid-line of the Dike and was about 18 in, wide and five feet deep. Water rose 17 in. in the trench within an hour after the trench was completed.

The upper 6 or 7 inches was composed of grayish topsoil and roots. Under this was a firm sandy loan fill about 3 ft. thick. In profile this fill has a marbled appearance varying from light yellow to gray suggesting that topsoil and yellowish subsoil were mixed in the loading of the fill material. At the bottom of this 3 ft. of fill the uniform hard packed original clay can be seen. The 3 feet of fill was hastily examined as it was removed and one small intact notched arrowhead and many quartsite flakes were recovered.

The examinating party then noved southwestward on the Dike 122 ft. from the above described trench and 236 ft. from the edge of the field and sank a test hole. The Dike, at this point, is about 1½ feet above the present marsh level. This part of the Dike is quite badly cut and disturbed by muskrats and/or other burrowing animals, and this undoubtedly accounts in part for the greatly reduced height of the Dike which originally was probably of a uniform height above the marsh level.

The test hole was 18 in. by 30 in. by 30 in. deep before water provented additional digging. A striking feature of the profile is the layering of the naterial. The first 6 in. is composed of dark sandy soil containing grass and shrub roots. The second lay-:: er of 5 to 6 inches consists of reddish clay. The third layer is 7 in. at its thickest part and is composed of homogeneous gray clay. The fourth layer is about 2 in. thick and is composed of dark gray sticky muck and could be a part of the third layer. The fifth layer is about 3 inches thick and is composed of uniform gray clay. The sixth layer varies fron 6 inches to zero in thickness and is composed of washed white sand (typical beach sand was the diagnosis of Messrs. Austin, Dillon, Robinson and the writer). The seventh and final layer had a composition of a sticky brown-black nuck, which probably was of the original marsh muck. Water prevented the dotermining its depth although probing 2 feet more into the muck touched no bottom.

SUMMARY

We conclude that the dike is a nan-nade fill containing Indian artifacts (arrowhead and flakes) that were in the original fill - dirt and probably was obtained fron nearby shores, both of which show extensive former occupation by Indians.

The layer of beach sand found in the 2nd test-hole and lying directly on the marsh muck was perhaps used in an attempt to stabilize the muck as it might well serve this purpose better than would a clay.

It has also been determined that the Dike and the road from Pilottown Road which crossed it are located on the original West India Fort Tract -- a Duke of York patent which was obtained by Helmanus Moolbancke dated July 2, 1672, altho it had also been surveyed for him by the Maryland Colony on Oct. 3, 1670. No carlier records are found but since the Duke of York patent issued by Francis Lovelace uses the Dutch measurements for this tract, it is obvious that it was originally a Dutch grant antedating the English occupation in 1664.

Since the Diko and, in all probability, the Dutch trading post are located on the original "West India Fort" or "The Company's Fort" Tract, it is probable that the Dutch West India Company, or their irrediate successors, were the builders of the Dike to facilitate trade with the Indians from the southwest. Also, since the first English governor on the Dolawaro -- Richard Nicolls in 1664 -- granted a continuance of the rights of Picter Alrick to trade with the Indians from Boonties (Bonbay) Hook to Cape Henlopen which were granted by Alexander d'Hinojossa in 1660 when he sent Alrick to the Horekill as commandant, it would be logical to assume that the Dike was built at the height of the 2nd period of Dutch activity in the Horckill area (1658 to 1664)

SPINNER POINTS AND ARCHERY

Orville Peets

Stone projectile points with appositely beveled edges are still frequently called "spinner points" in spite of all that archers have said and written on this subject, but at least this name is now usually put in quotes so there has been a slight gain, although we still read such statements as the one which found its devious way into the September 1954 "Archeolog"

"----that its beveled edge gives the arrow a rotary notion when shot from the bow"

This was quoted by the contributor from what seemed competent authority but it repeats an idea that is false. A well supported contradiction from an archer appeared in "American Antiquity" and from "Ten Years of the Tennesce Archaeologist we take the following on the beveled point.

"No type of Indian relic has suffered from so nany wild and wierd theories concerning its use. One incorrect and hoary old theory, thought up by nen who never shot a bow, is that these points were beveled to spin the arrow in its flight. The beveling does not set up enough air resistance to spin the shaft; that was done by the feathering."

The present writer was once State Champion in the early days of archery in Delaware and always nade most of his equipment. He learned that all three feathers of an arrow must be from the

same side of the bird, for the arrow rotates in one direction or the other according as its feathers are taken from right or left wing. But whether or not this is an important advantage is debatable. Hunting arrows fitted with broadheads are sometimes purposely nade to rotate "to equalize wind action on the point", but if the head could be kept horizontal the wind would have no effect upon it. The feathers on the best target arrows are put on as straight as possible and plastic is used on flight arrows to avoid spin. Rotation is important in a bullet but archers White, Black, Yellow or Red have never bothered nuch about it.

The verb "to shoot" has been traced to the word for arrow and archers have always used it rather than the recently invented expression "to arch", so we should say "fire" a gun rather than "shoot" one. The shooting habits of the American Indians have never, to the writers knowledge, been made the subject of a careful study though it is known that such habits clsewhere in the world are of an extraordinary persistence. As a small boy, the writer remembers that his grandfather, who had shot the bow with the Indian boys in New York state tried to teach him to shoot with what he learded much later was the Oriental or Asiatic draw or release. The Turks also used this release and it extended to the Arabs and Moors. This writer once saw a very old painting in South Portugal which depicted Moorish archers using the Asiatic draw with arrows properly held

under the bow and not over the knuckle of the bow-hand as would have been done by the English archers,

At present, unfortunately, the Indian maiden holds the bow as she was taught to do at Vassar and tribal braves hired in Hollywood have been known to refer to the Boy Scout Manual.

This writer once shot with Chief Longlance who had appeared in Western films, though Howard Hill did the actual shooting. Longlance (of Harvard, though we believe he did not graduate) held his bow nearly horizontal which is Indian enough but with the arrow on top of the bow used the three-finger draw. This is cited to show how difficult it would be at present to trace shooting habits which might have been useful as distinguishing traits. But at least it can be put down emphatically that some New York Indians used the Asiatic hold snapping up the thumb to release the cord, for the picture of this being illustrated by this author's grandfather is as clear as anything in my experience with the bow.

While we are on the subject of archery there is the matter of "bird points". It seens quite logical to non-archers to assume that small points would be used to shoot shall game, but natives who depend on shall birds for some of their protein make a wide arrowhead with crossed sticks or use a section of bamboo split to form a cone. In order to kill or knock down a small bird with a half inch point, one must be able to hit a circle not over an inch in diameter. With an arrowhead two inches wide one would have nany more chances of making a hit, about nine times more it scens. Although this is a mathematical natter, and probably not exactly

correct, it natters little since the writer was always better at archery than at mathematics.

It has been noted that birdpoints are often found near waters where aquatic fowl may have been hunted. This makes sense to the writer for he once hit a wild fowl with a broad-point and the arrow glanced off the bird. The duck was knocked down but was able to swin away before the guide could reach it in his boat. A Canadian archer who had shot ducks and goose, as well as bear and noose, related that he had had the same experience and thought that vory small sharp points were nuch botter and arrows nade with those floated better giving more chances of retrieving the misses.

The writer once saw a shortbacked osage bow that was said to have been used to kill buffalo. The arrows with it were tipped with snall obsidian points. the bow seemed very strong, about 80 pounds pull. It is the strength of the bow rather than the point on the arrow which makes the greatest difference. A weak bow is generally used for snall game and a snall bow for larger game though when the sheriff remarked how strong his bow seemed to be. Robin Heed replied, "Why Sir, that's only my birdling bow."

Though not archery, it may not be out of place here to discuss the question of blow guns and the points used on the darts used for them. When this writer advanced the theory, several years ago, that some very small thin projectile points found by James Parsons, night have been used in a blow gun, he felt that this was a rather daring idea and in one respect it was, for there seens to be an ingrained objection to the noble savage being pictured as using any weapon but the bow and arrow. Hiawatha with a blow gun would be an outrage. But the recently published first volume of an encyclopedia has an article on the American Indian that is unquestionably authoritative, and in it is this statement; "East of the Mississippi the blow-gun was used for small game, apparently an intrusive trait from South America, via the West Indies." Some of the local socalled bird- points may have been used in a blow gun. The thin and carefully calibrated ones almost certainly were used for the blow-gun since the bow would not require this refinement in nanufacture.

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MORE ABOUT POTTERY DISCS

Perry S. Flegel

In the June 1954 issue of the Archeolog, Vol. VI No. 1 there appeared an article and a drawing showing parts of an unknown artifact that was found on the Mispillion River site, and in pit "7 of what was at that time called the Phillips site.

The article referred to is a circular piece of clay 2-3/4 inches in diameter, one quarter of an inch thick and punctuated with a series of holes drilled 7/8 inches from the edge of the disc.

During recent months some effort has been made, by the writer to determine the identity of the object.

of the object. In a recent letter from T. M. N. Lewis, head of the Department of Anthropolegy, at the University of Tennessee, to the writer the following except from his letter may be of some interest. "....pottery discs are extremely cormon on the late Mississippi sites in eastern Tennessee, but these examples you refer to are all dissimiliar to yours in that they lack the perforarions. They appear to have been made very quickly from sherds. Whether they were used as dice or game counters is difficult to say, although I would prefer the latter possibility."

As a matter of reference a number of discs (without the perforations) are described in "Ten Years of the Tennessee Archaeologist", pp. 112 - 113 and elsewhere. Some of these discs are elaborately carved but the ones from the Phillips site are plain and cord-wrapped stick impressed. REPORT ON THE WORK DONE TO DATE AT THE MISPILLION RIVER SITE (A PROJECT OF THE SUSSEX ARCHAEOLOGICAL ASSOCIATION)

H.H.Hutchinson and G. Onwake

(Editor's note)

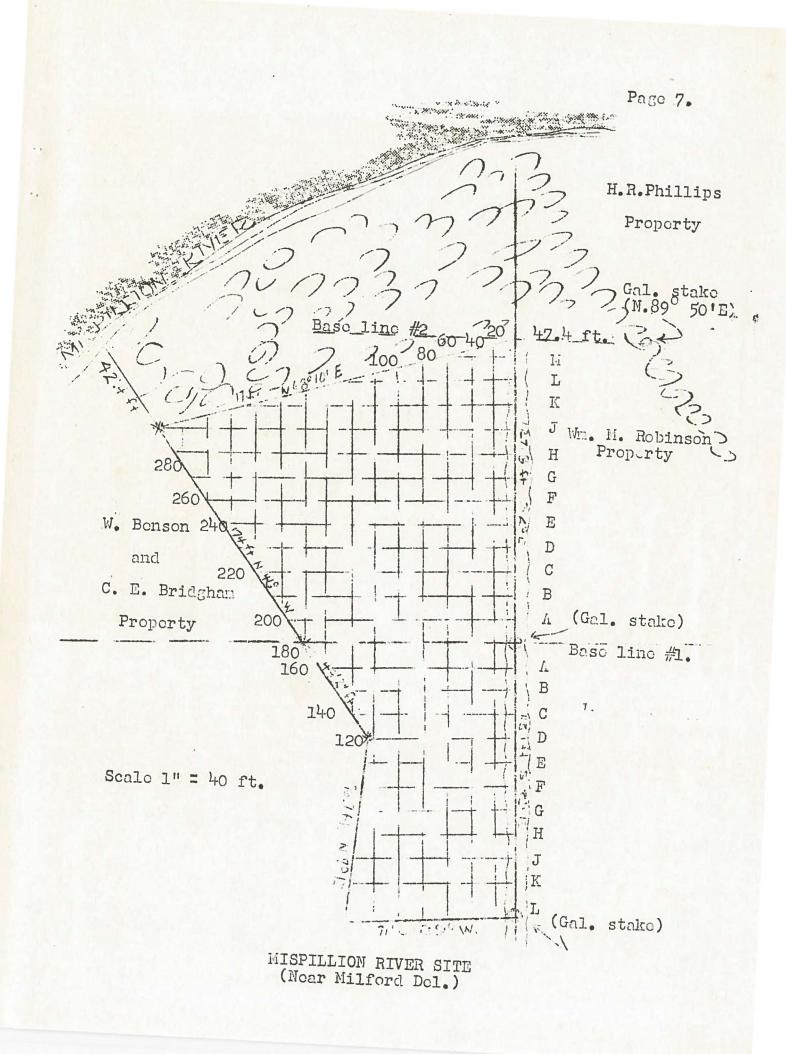
About a year ago the Sussex Archaeological Association began the preliminary work of securing permission to dig and rental of a parcel of land to the W. of what was originally known in its records as the Phillips site. Since that time about an acre of land has been leased by the Association. The map, (plate I, page 7) shows the area that is being exanined and excavated. Also illustrated is the method of laying out and marking the 20 ft. plots. The following is an account of the work that has been done to date. This article is the culminative efforts of the reports that were submitted to the editor. Mr. Hutchinson has been appointed chairman of the Mispillion site committee).

Permission to do archaeological work on this site was obtained last winter by Messrs. Flogel and Onwako. Following the conplotion of an agreement by the owners of the land, and the Sussex Archaeological Association, the area to be worked was surveyed and staked out in 20 ft. squares, (Plate 1, p.7). To date only a small amount of work has been done, but from that amount there appears evidence of some interesting data to be recorded. Several sections including the extreme southern end of the area were assigned to Mr. Onwake, and a preliminary report of his activity follows.

(1) A section bounded on the north by the line running from SJ 40 and SJ 60 and extending south 14 feet to the southern boundary of the area that was reserved to the Association and covering 280 sq. ft. has been under investigation by H. G. Onwake.

Beginning along the southern boundary of the reserved area the investigator has spent some time removing the top soil by trowelling. Excavation has been carried to a depth of about 10", penetrating the sub soil about 1. inch. The surface of the sub soil has been carefully scraped clean and examined for disturbances. To date forty six shall rathor circular, dark areas which may or may not be post molds or decayed root stalks have been observed and recorded on a graph of the area. Small white markers have been placed in the ground at these discolored areas in an effort to deternine a possible pattern, and to additionally clarify the area in photographs.

Nine and one-half ft. south of SJ 44 was uncovered a shallow fire bed, oval in shape and with dianctors of 2 ft. by 1 ft. 4 in. containing deposits of charcoal. The feature was cleaned off but not disturbed. In as much as it is situated within a curving line of suspected post-holes, or nolds, it may represent a fire area which was once burned inside an Indian dwelling. Such a conclusion must await the renoval of the top soil in the romaining part of the section being investigated and possibly that of the adjoining section.



At a depth of $8-\frac{1}{2}$ in. on the edge of the fire-bed was found a broken stermed rhyolite arrowhead.

In the western part of the section there is located a very large shell refuse pit which extends into the adjoining section. No effort is presently being made to explore the pit. All top soil from the surrounding areas will be removed by trowelling before the pit will be opened.

Pottery and chips have occured frequently in the top soil. Fewer shards and chips have been recovered from the sub soil. These have been hepted separate from those occuring in the top soil.

Pottery and chips which lay on the top of that part of the shell refuse pit from which the top soil has been removed and which appear to be part of the pit burden have been hept apart from those recovered from the topsoil and the sub soil.

Daily chip counts have been naintained. Each day's work has been indicated on the graph of the area and ancedotal notes describing the work done and objects or features discovered have been made.

(2) On April 23, 1955 a party consisting of T. Dale Stewart, Waldo Modal, Latimore Ford, Bob Stackhouse, Charles Shaffer, W. S. Corkran and Geo. Stokes visited the site and was assigned a refuse pit outside the reserved section for investigation. Field notes and photographs were made by H.G.Onwake as exploration of the pit was made.

The pit was oval in surface shape having diameters of 10 ft. 6 in. M-S and 6 ft. 2 in. E.W. Top soil 8 in. was removed and examined for artifacts. Nost of

the refuse was oyster shells. A fow conch, clam and mussel shells were observed. The refuse was generally saucer shaped in vertical profile from west to east and achieved a maximum depth of 12 in. at the center. It was underlain by a layer of discolored earth which contained a few shells, about 6 in. thick. Near the center of the pit, lying under the disturbed carth, was found the skeleton of a human male. The burial was partially disarticulated. The pelvic bones rested on the chest. Part of the ribs occurred in a group removed about 15 ft. to the SE of the main deposit of bones. The right scapula lay about 12 in. IN of the skull. The head was turned face down and lay toward the north. Both upper arms and all but 7 of the vertebrae were missing. A triangular arrow point was found beside the skull

North of the human remains and resting against the curved wall of the pit at the same depth was the skeleton of a dog. The body lay on its right side and was curved to the contour of the northern pit wall, the head being to the west, with the nose pointed toward the human remains. Had the human skeleton not been partially disarticulated, this reporter would conclude that the dog may have been killed and buried with its master. The partial disarticulation, along with the displacement of a number of ribs and the right scapula and with the absence of a number. of vertebrae and upper arm bones, indicates secondary burial, which would have required some lapse of time between death and final interment. This seems to argue against the cororonial killing of the dog. Burial with the

Cultural material recovered from the refuse consisted of a large quantity of pottery, an ulna awl in good condition, a suallfragment of a thin soapstone object, a broken pipe stem having a deep longitudinal groove, a large calcodony pebble fractured longitudinally and having one edge finely chipped, a rhyolite knife (?), a thick stonned rhyolite arrowpoint, a thin flat based isoseles triangular jasper arrowpoint, a broken chert point, and a triangular jaspor spall. Largo quantities of broken animal bones were collected. Chips were numerous and fire cracked sandstone pebbles were not infrequent. All the material is in the custody of this writer. The pit was refilled and returned to tillable condition.

The data reported to date is too limited to draw any definite

COVER ILLUSTRATION

Many pieces of grit tempered pottery have been found locally, at least throughout the central region of the Delmarva peninsula, and all of these shards that have been found, in pits and elsewhere have never been present in quantities to assemble but very few pottery vessels.

To date only three of these grit tempered vessels have been located that have been restored. One of these vessels was mentioned recently in a past issue, (Dec. 1954, Vol. VI, No. 3"The Waddell Site Grit-Tempered Pot"),

picture of the cultural level for this site, except that it will have many traits that are characteristic of other Delaware coastal sites; such as their being predominantly oyster caters, also on a smaller scale they consumed conch, clam, fish and turtle from the coastal waters and doer and the common land birds and small land animals.

They worked bone and stone for tools and made pottery out of the material available. (Both grit and shell tempered potshards are found(. They enjoyed a good snoke now and then, made crude textile cloth, of a sort, and had sufficient leisure to fancy up or decorate their artifacts. It is hoped that before the site is finished we will see a clearer picture of how their dwellings were built and possibly learn something about their religious customs through their grave goods.

of the Archeolog and two more have just come to light. The one shown on our cover and found by R. Vandergrift is perhaps the most complete of them all. It is described in detail in a separate article elsewhere in this issue. The other one is also described in this issue.

The finding of these grit tempered vessels could be a step forward in our attempt to determine the chronological position of these pots in the history of earthenware of our American Indian.

INDIAN RIVER FLAT-BOTTOMED POTTERY VESSEL

1

H.G. Onwalco

Perhaps the nost unique bit of archaeological evidence yet discovered in the Delmarve Peninsula is a large flat-bottomed vessel recently found by Roger Vandergrift at a sandy HoolI in Pincy Neck east of Degebore on the north side of Pepper Creek, a tributary branch of Indian River.

During the process of bulldozing away scrub growth on the top of the knoll, the owner had turned out a human skull which subsequently came to the attention of Mr. Harold Purncll, Mr. Purnell informed the writer about the find and he in turn asked Vandergrift to investigate the site. Vandergrift was quick to note the unusual appearance of the broken pottery fragmonts strewn over a relatively small portion of the knoll and carefully gathered then up. It was evident that the bulldozer had displaced and badly crushed at least a large portion of a pottery vessel which had had a flat botton. Vandergrift determined the terminal point of the buildozer's swath and, beginning there, trowelled through the sand and recovered many more fragments, ultimately requesting the writer to try his hand at fitting them together, Several nonths and innumerable hours later the vessel took form.

It is difficult to describe the shape of the vessel. The writer has likened it to an ordinary coal scuttle. One wall rises sharply from the bottom at an angle only slightly off the perpendicular while the opposite wall sags forward like the front part of a coal bucket. Approximately a fourth of

the vessel is missing. The weathered appearance of the breaks indicated that the vessel had been damaged in use and discarded to remain hidden in the sand until disturbed by the bull-dozer. One mending hole occurred near the rin of the almost vertical wall.

The botton is flat both inside and out. Not all of it was recovered but sufficient is present to permit an estimate of the inside diameter as having been about five and one quarter in. and the outside diameter as having been about six and three-eights inches. The thickness of the bettom at the approximate center in 1.7 cm., or just about 11/16 inches. The bottom is plain and smoothed having no indication of any nat impressions.

At the point of juncture with the base the side walls are 1.4 cn., or not quite 9/16 inches in thickness. This increases to 1.6 or 10/16 inches as the wall rises. One half inch below the rin the walls are 1.1 cn., or about 7/16 inches thick.

The vessel is 12½ inches high. The estimated inside diameter from the rear wall to the vertex of the forward sag of its opposite wall is 13½ inches. The estimated inside diameter from side wall to side wall is 11-1/8 inches. Only a small portion of the rin, six inches in length remains. Measurements, therefore, are approximations at the presuned height of the missing rin section.

There is no curvature of the

rin. It is rounded and without decoration. The tempering material consists of coarse particles of pulverized quartzite with a slight admixture of sand and a few tiny particles of mica. The clay is soft and crumbly.

The vessel is light tan in color, having a reddish cast and was probably sun-fired. Both the interior and exterior are smooth, a few vertical scratches probably resulting from the smoothing tool are visable on the exterior. There is no evidence of coiling and the lines of breakage do not give any indication, as they so often do in other vessels. There is very little evidence of flaring at the base, the side walls seeming to rise evenly from it. The lower sections of the side walls apparently were integral parts. of the base, there being no cleavage lines, cracks or breaks or other indications that would give any indication or distinct evidence that they were, pressed down into it.

There is evidence of smoothing at the point of juncture on the inside, but it was noted that in breaking, the base did not part cleanly from the sidewalls as night have been expected if the lower portions of the walls had been attached to the base by pressing them down into it.

There is no way to estimate accurately the chronological position of this vessel in peninsular archaeology. The skull which was turned out by the bulldozer is not known to have been associated with the vessel and so little of the skull remained that no chronological clues can be derived from it.

It can only be stated that the vessel is very old, unlike any others recovered from this area, and is unique in shape and construction.

* * * * * *

RECENT LOCAL FINDS

It is with much interest that we find an increasing amount of work being done in the field of Indian ceranics, especially in the central part of the Delmarva Peninsula. This phase of archaeology, throughout our area has been sadly neglected to date. Stone tools, implements and darts have had a more attractive appeal to collectors of Indian artifacts than have had the lowly pieces of broken meaningless clay that have been ever 1 present, in our fields and along our river shores.

Dr. Janes B. Griffith, of the Museum of Anthropology, University of Michigan, is editor of a

series of papers entitled, "Prehistoric Pottery of the Eastern United States". These papers, of which three have been published to date, are devoted to type descriptions, sumaries of coranic groups and other information pertinent to the archaeology of the To date nothing has area. appeared in this series rolative to the pottery types found in our section of the Cast.

Dr. Griffith prefaces his papers with a request for any such information relative to the ceramics of the east that may be available. The field is practically untouched and offers much in the way of recording for posterity, as well as for our own enlightenment, the types and kind of pottery used by the Indian of this area.

THE TUB ISLAND GRIT-TEMPERED POT P. S. Flogol

Tub Island is one of the few islands found in the Marshyhopo Creek. It is located about 3/4 nile up stream from Ennal's Warf (now known as the George Coventry property) on the east bank of the creek. The name given to the island is a local one and known only be a few "oldtimers" of the area. Just how it got its name has been lost in antiquity.

The island is about 1/2 mile long and 250 - 300 feet wide at its center, tapering to a point at each end. It rises about 15 feet above the mean tide level, rising sharply on the west side and sloping away to marsh and "cripples" on the east. The east side is not navigatable except during high tide, and then only by cance or skiff.

The soil is very sandy and not more the 2 or 3 inches of top soil is present.

Indications of a snall cabin have been located at about the center of the island. The remains of an English brick chinney is all that remains.

Timber was cut off the island about 40 years ago by the present owner and since that time the growth of trees has not been enough to produce another stand.

The soil has never been tilled since the advent of the White man as evidenced by the remains of sturps (cedar) still entact which were left from the first cutting. Several paths that were heavily used, at one time, are still visable today. One winds its way the entire length of the island and very close to the western side. It is several inches below the surrounding ground and indicates heavy usage at one time. *(nother equally marked bisects the island near its middle. This one ends at an obvious landing place, several others of which can still be observed.*

Many points have been found along the island's gravelled beach at low tide. Here chips and pottery are also prevelant.

About 1/4 mile from the south end of the island, and on the path on the western shore, the writer found several pieces of grit-tempered pottery. In noving the pine needles to recover them several more were also discovered. All of these fitted together. Upon subsequent visits to the island a total of 90 shards have been uncovered, both under the pine needles and down the enbankment next to the path. Of these 90 pieces 70 have been fitted together giving enough contour to complete about one-half of the vessel.

Since the island is and was uninhabited, except for the one cabin, the writer feels that the rest of the vessel must be close by. Careful sifting of much soil has failed, to date, to reveal all of the missing pieces.

The pot is grit-tempered but nade of fine hard clay and unlike the crude type described by Mr. Onwake in another article in this issue. Nor is it like the one described in the last issue of the "Mrcheolog". Incidently it is of interest to note that the vessel described by the writer in the last issue of this bulletin was found about 1/2 mile down creek from Tub Island, on the opposite bank and quite close to Ennal's Warf. The pot has a rim diameter of

The pot has a rin diameter of 9 inches and is about 10 inches deep. Much effort was made to locate some of the bottom shards in order to determine definitely its shape but todate such efforts have been unsuccessful. However, from the slant of the coiling approaching the curve at the base in all probability the bottom was conical.

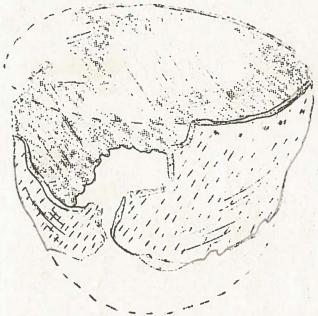
The rin is slightly curved inward and the top of the rin is rounded and unmarked. At a depth of 6 inches down from the top there appears a slight bulge outwardly around the middle of the vessel.

In its manufacture the coiling proceedure was definitely used, and all the breaks have been separated with the concave surface facing downward. It appears to the writer that this would indicate that the vessel was constructed from the bottom upward. Thus, as the coils were laid in place they probably dried out slightly causing a not quite perfect union as the clay was "sTippéd" by the maker.

The color of the clay is a light brown to dark brown and the hardness has been determined at 3.8 according to Moehs scale of hardness. This is somewhat harder than the Waddell site grit-tempered vessel.

There is no design on the pot. No cord wrapped stick impressions or weave of any kind is visable on its smooth external surface. Over the entire outer surface is a series of short lines cut into the clay and extending in a downward clockwise diagonal direction. None of these lines are over 1/2

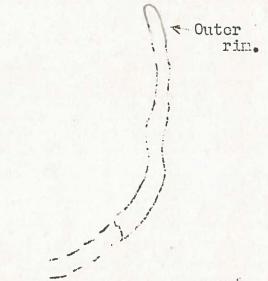
inch in length and appear to be cut into the clay with some sort of a not too sharply pointed instrument.



Sketch of the Tub Island Pot.

Around the rin of the vessel on the outer side is a series of irregular placed indentations

The vessel is fairly even in thickness throughout. This thickness is approximately 3/8 inches.



The above drawing shows the profile of the pot with incurving rin and bulge.