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A CRUSHED QUARTZ TEMPERED VESSEL FROM INDIAN RIVER

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In many issues of The Archeolog there have been reports on pots and portions of pots which have been recovered from excavations or by the careful surface collecting of disturbed areas. Of particular interest are the occassional reports on vessels that do not belong to the shell tempered Townsend Ware so well known in this area. In Vol. VI, No. 3, the issue for December, 1954, Perry S. Flegel (p. 13) reported on a grit (crushed quartz) tempered and apparently cordmarked vessel from the Waddell Site on Marshyhope Creek. The June, 1955 issue, Vol. VII, No. 1, contained reports of two vessels. One, reported by H. Geiger Omwake (p. 10) was a rather unusual flat bottomed, grit tempered pot found by Roger Vandergrift on a site east of Dagsboro on a tributary of Indian River. The other was again a grit tempered vessel, but with a rounded or conical bottom, found on Tub Island in the Marshyhope. It was reported by Perry S. Flegel (p. 12). In an anonymous comment on the cover illustration for Vol. VII, No. 1, it was noted that "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.

In the seventeen years since this was written, and despite the excavation of grit tempered pottery from the Mispillion Site (Hutchinson, et. al., 1957), little progress has been made. These potsherds are still frequently discarded by surface collectors because they are thick and crude looking and all appear mush the same. A close examination of large numbers of sherds, however, suggests that there are subtle differences that may be significant in separating the products of one culture from those of another. An effort is now being made to use these differences to define culturally significant types that can be used to isolate particular cultures for close study.

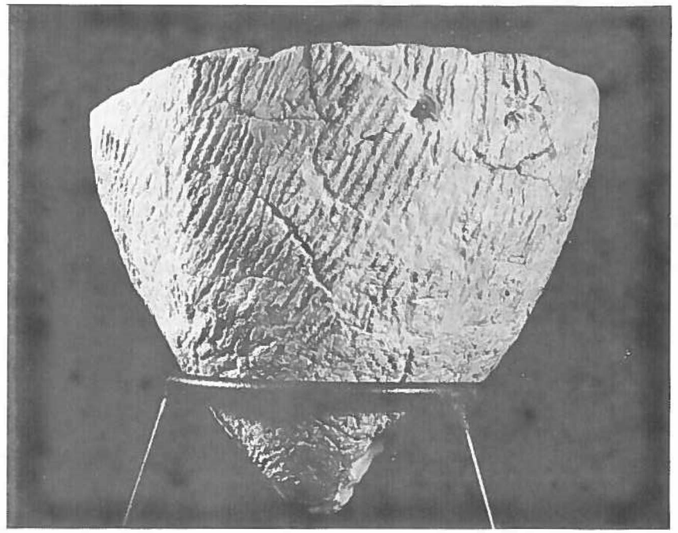
In the absence of carefully excavated and dated remains, it is necessary to rely on surface collections to provide the information for analyses of the type indicated. The writer has suggested to the editors of The Archeolog that she prepare a series of reports on early vessels and parts of vessels in the collections of the Section of Archaeology and in private collections. It is hoped that such reports will stimulate an interest in these ceramics by demonstrating the range of their variability so that information on their distribution may be more efficiently gathered.

C O N T E N T S

This society will greatly appreciate contributions from members and friends, of original articles about historical or archeological interest, particularly if of local (Delmarva) interest. Contact the President or Vice-President of the society, and include pictures and/or drawings if available. Type the manuscript.

SUGGESTIONS TO CONTRIBUTORS

When writing a report or article for publication, please answer the six "W"s, - What? Why? When? Who? Where? and sometimes How?. Not necessarily in that sequence, but somewhere in your narrative bring out the answers to as many as possible of those questions?



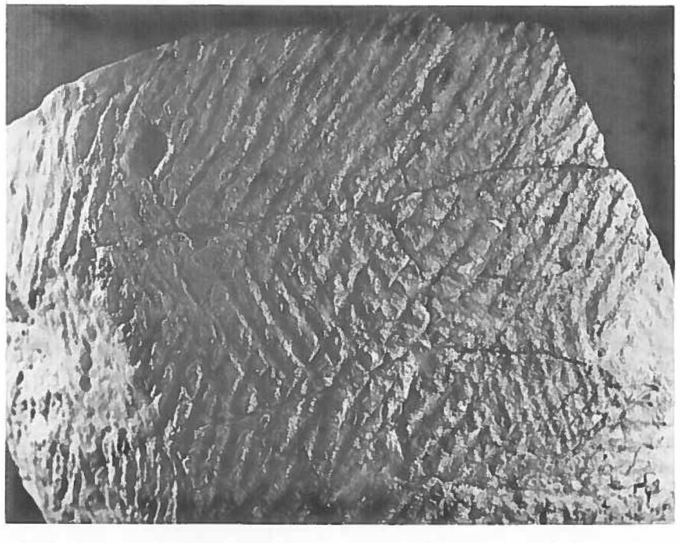


Plate I. Fig. 1, The Stein crushed quartz tempered vessel from Indian River; fig. 2, three fillets visible on the upper body of the vessel.

The subject of this first report (Plate I, fig. 1) was reconstructed from sherds collected a number of years ago by Mr. C. L. W. Stein from a site on the north side of Indian River. He kindly loaned the pot to the Section of Archaeology for study. The form followed here will be used in subsequent reports to facilitate comparison. It is based on accepted outlines for reporting ceramics.

Method of Manufacture: This pot appears to have been built up with fillets and paddled. The base was probably modelled. Coil breaks are not prominent, but at one part of the upper body, three wide fillets are also visible (Plate I, fig. 2).

Paste: The temper is crushed angular quartz, sometines with pebble surfaces present. The particles range in size from 2mm. to 7mm., and represent about 5% to 10% of the paste. Temper particles are plainly visible on both surfaces. The plastic is a fine-grained, homogeneous clay with rounded sand inclusions. The hardness on the Moh's Scale is 2.5. The texture is medium with a very slight grittiness.

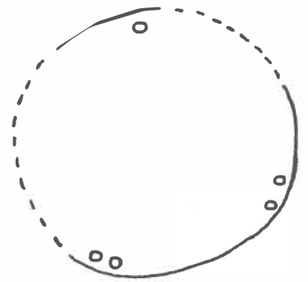
Color: The exterior surface color tanges from light yellowish brown (10YR 6/3.5 on the Munsell Soil Color Charts) to light reddish brown (2.5YR 6/5). The interior color is the same as the exterior except for the bottom 7 cm., which has been smudged black. Near the rim, the core has a central dark area, with the surface color extending inward between 3mm. and 4mm. At the base the core is divided between the exterior color and the interior color.

Surface Treatment: The exterior surfaces have been malleated with a paddle wrapped with coarse (4mm. diameter) cord. The base was paddled while still quite wet, making deep impressions. Then the pot was handled, flattening the ridges between the cordmarks and compressing them so that they look like cracks. The upper 17 cm. or so was drier when paddled, and the marks are not distinct. The exterior surface has spalled in two places. The interior has been scraped from bottom to top in long parallel strokes (Plate II, fig. 1). The very bottom has been scraped horizontally and the upper half shows some crossing and overlapping of scrape marks. Each striation is approximately 5mm. long.

Vessel Form: The lip is irregular and rounded to flattened. The rim is straight and thins toward the lip. The body expands in a cone to about the middle of the pot, then curves evenly to a vertical rim. The base is decidedly conical. The wall thickness ranges from 23mm. at the base to 10mm. at the lip. The body wall averages 13mm. in thickness.

Plate II. Fig. 1, Scraping on the interior surface of the pot.

Other Features: There are five holes, all of which were drilled after the pot was fired, located an average of 32mm. below the lip. The holes are conical with an average opening of 6mm. two have been drilled from both sides. The holes are placed so as to mark three of the quarters of the pot, as in the diagram below:



About one third of the rim is missing (indicated by a dotted line) but the uniformity of the distance from the holes to the lip and their location around the rim may indicate that they were drilled for suspension rather than for mending and that there were originally eight holes rather than five, dividing the pot into four approximately equal parts. The distance between the two holes in one pair still present is 36mm. and 50mm. between the two in the other pair.

Vessel Size: The vessel is 31.0 cm. in diameter and 26.2 cm. in exterior heighth.

Relationships: Sherds similar to those which make up this pot, including basal sherds, have been found on a number of sites in Kent and Sussex Counties. Probably some of the sherds in Cross's Thick Paddled Cord category from the Abbott Farm report (1956) are related to this group. The vessel can probably be assigned to the Early Woodland Period, although there is as yet no clear evidence to support this assignment. A Preliminary study of surface collections of the Section of Archaeology have indicated that this vessel may in fact be representative of a

definable type, but it has not been possible to isolate a complex of other traits which are associated with it. Until this can be done, it will not be possible to place this group of sherds in its cultural setting.

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Principles of Thermoluminescent Dating

Wm. Jack Hranicky
Northern Virginia Community College

Several absolute dating methods have evolved out of the nuclear revolution of post World War II. One major tool that the archaeologist now has available is the radiocarbon (C-14) method. The carbon-14 method is used to date the organic remains of man. Another similar method, in that it deals with nuclear activity, is thermoluminescent dating. A method of dating the cultural remains of historic man - his ceramic industries. With proper technical analysis of pottery samples, many uncertain or disputed relative dates can be determined. Thus, the archaeologist now can date ceramic materials which are retrieved from an archaeological site.

Principles of Thermoluminescent Dating

Pottery contains stored energy which is accumulated or trapped since the maker fired the pot in its original manufacture. Upon reheating a pottery sample to the original firing temperature, most of the trapped energy will be released. This release, called thermoluminescent glow (TL), is in the form of measurable infrared light.

During the passage of time since the original firing, pottery traps energy by absorbing alpha-particles which in turn causes ionization or an excess of free electrons (see Fig. A).

In order to date a piece of pottery, the laboratory must make the following measurements (Hall, 1970).

1. Measure the radiation-emission of the sample when heated.
2. Measure the radiaion absorption levels of the pottery.
3. Measure the radioactivity of the sample.

When a sample of pottery is heated in an apparatus under controlled conditions (see Design Note page B), the thermoluminescent glow is measured and is proportional to the total radiation dose received and also to the sensitivity of the pottery sample to an artificial dose of radiation. The ratio of natural light and artifical light emissions which are multiplied by the artificial radiation will equal the natural radiation which the pottery received since its original firing.

$$\text{Age} = \frac{\text{Natural TL}}{\text{Artificial}} \times \frac{\text{Artificial Radiation}}{\text{Natural Radiation}}$$

The final step is to correlate this natural radiation to a chronological scale - thus, the age of the pottery (Winter, 1971).

Mechanics of Thermoluminescence

Since the time of the original firing of pottery, the pottery has been subject to two sources of ionizing energy. This energy is the result of the internal breakdown of nuclear parts within the pottery and externally, the ionizing radiation from the atmosphere and areas around buried pottery. This radiation excites higher levels of energy which permit electrons to migrate

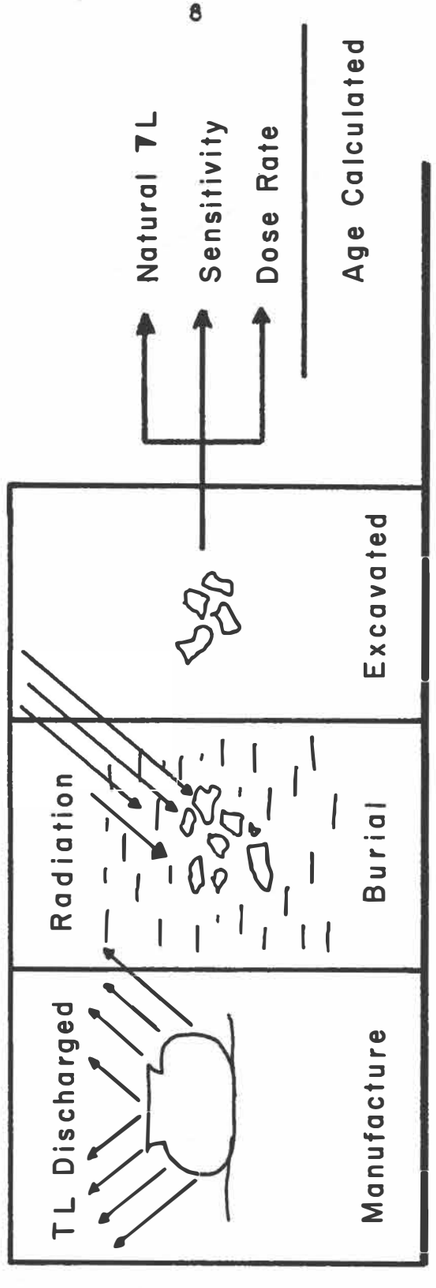


FIG A THERMOLUMINESCENT DATING

Through the nuclear lattice of the material, which in turn, leaves a positive charge vacancy. Changing energy levels traps these free electrons. These trapped electrons are said to be in "metastable" states. For one of these electrons to be freed, a certain amount of energy must be reapplied to eject it from its trap and return it to a positively charged atom.

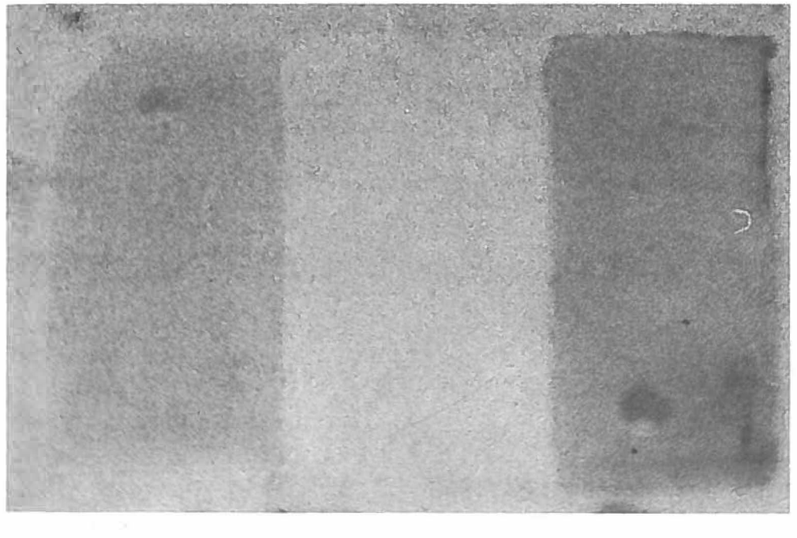
Upon heating the pottery to a high enough temperature (usually 150 - 350 o C), the free electrons will produce a thermoluminescent glow. This glow is near the visible light spectrum and can be measured with photo multiplier cells.

The photograph in this paper was taken in total darkness of prepared pottery samples on High Speed Infrared film (see Fig. C). Sample A contains no thermo-energy and sample B was exposed to X-ray energy for sixty seconds. Both samples are of equal weight, manufactured out of the same clay materials, and both were fired at the same temperature. Sample B contained artificial thermoluminescence which was induced by X-ray radiation. Sample B produced the better image.

Conclusions

The University of Pennsylvania has developed dating apparatus under the direction of Dr. Elizabeth Ralph (Ford, 1972). The dating of pottery by an absolute method has now become a reality. The last volume of Archaeometry has an article on solving a problem of relative dates of Yotoco pottery in Colombia, South America (Sampson, 1972). The physics of thermoluminescent dating still remains in part a mystery. However, the mechanics can be investigated empirically, and the phenomena can be observed and measured. Like its brother, C-14, it has the potential of becoming a regular tool for the archaeologist.

FIG C THERMOLUMINESCENT GLOW

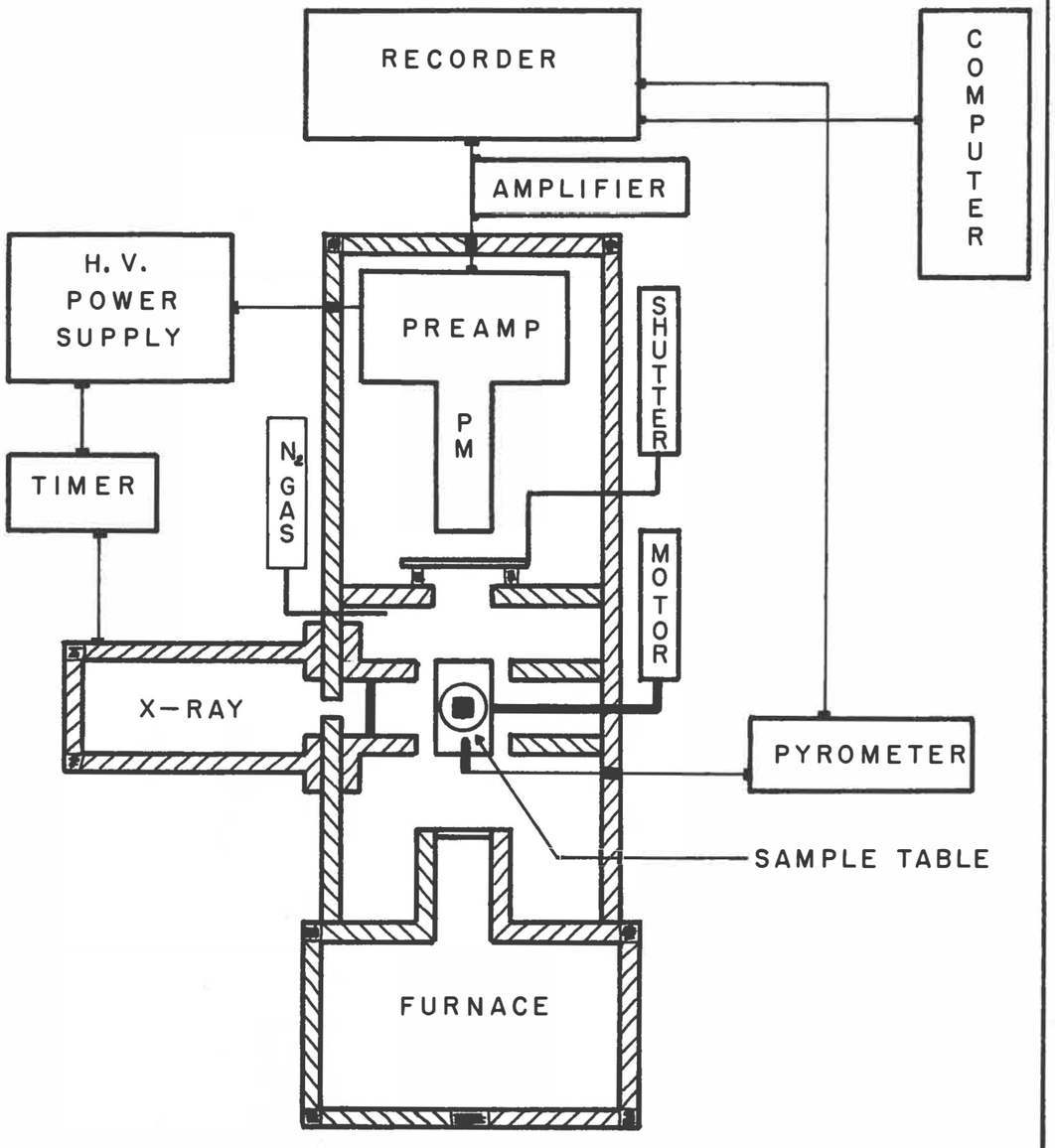


CSC

TECHNICAL DESIGN NOTE

Project # ITL22 10 Project Name LUCY-2 Page B

Program: THERMO-DATING	Programmer: J Hranicky	Date: 2-72
Subject: X-RAY	Approved:	Revision: ✓ [X] No. 2



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DELAWARE"S INDIANS WELCOMED ENGLISH TRAVELERS IN 1650

F O R E W O R D

Seldom in this day and age are we able to retrieve from the past such a narrative as Colonel Norwood's "A Voyage To Virginia".

It was raw adventure of the most frightening sort. There is History in every footstep along the paths of our land and it is well we are reminded what they did that we may enjoy it.

Avery H. Ellis

"A VOYAGE TO VIRGINIA"
by Colonel Norwood

There is very little factual evidence or eye-witness testimony giving to us a true picture of the aboriginal inhabitants of our area. Indeed, most of the early references to our Indians were by those whose sole interest was to exploit to their advantage the weaknesses of the natives already here when the settlers arrived. Too, the Europeans were, in commenting on and treating with people of a less materially advanced civilization, guilty of ascribing to and judging the natives according to their own standards of conduct and life, and by their own concepts and thoughts on all subjects, a tendancy against which the highly trained ethnologists of today must struggle, not always with success.

Except for the testimony of archeology and the limited efforts of such researchers as Frank Speck among surviving remnants, we must depend upon early written accounts in attempting to establish trait lists for these tribes. It is unfortunate that in interpreting such data many modern writers are so often as guilty of misrepresentation in their flights of imagination as were the early colonists, in presenting fancy rather than fact, or in extrapolation and distortion of the latter.

This short account has neither for its purpose the preparation of a trait list nor of discussing and comparing such traits as may be found in other early accounts. The following items present traits extracted verbatim from "A Voyage To Virginia" by Colonel Norwood, and exerpts from "Churchill's Voyages", printed in London in 1732.

The orthography has been left unchanged except to substitute modern type of the letter "S" as the old type on the original was very confusing.

Deciding to seek their fortunes in Virginia, Colonel Norwood and his two comrades "Major Frances Morrison and Major Richard Fox", accompanied by their servants, sailed on Sept. 23, 1649 from Deal, England, on the "Virginia Merchant". A description of the transaction and of the vessel may be of interest; "It fell out to be about the first day of September, Anno 1649, that we grew acquainted on the Royal-Exchange with Capt. John Locker, whose bills upon the ports made us know he was master of a good ship (untruly so call'd) The Virginia Merchant, burden three hundred tons, of force thirty guns, or more: We were not long in treaty with the captain, but agreed with

him for ourselves and servants at six pounds, a head, to be transported into James River; our goods to be paid for at the current price."

The voyage proved to be long and difficult. Except for a short stop-over at Tenerife, it was not until Jan. 4, 1650, that land was again sighted by the weary and starving passengers and crew. This proved to be an uninhabited island, later named Fenwick's Island. Mate Putts was ordered to make a first landing. "He took with him twelve sickly passengers, who fancied the shore would cure them," and Major Morrison, for "according to the intelligence that could be got from land, we were to take our measures at sea, either to proceed on in that sad condition that had in some proportion set forth, or to land ourselves, and unload the ship, and try our fortunes amongst the Indians."

Urged and accompanied by Colonel Norwood, the captain and several others also went ashore, among them having been several women. After passing the night on the island, they arose the following day to see the "Virginia Merchant" sailing away, leaving them marooned. After nine days of cold, distress and hunger, and just prior to an attempt that Norwood planned to make to secure help from the mainland, they were succored by the Indians who took them to the mainland by canoe. From there, they were eventually guided to Jamestown where the survivors arrived about the middle of February, 1650.

In some cases introductory comments have been interjected in presenting the following parts quoted from the aforesaid publication.

"But when it was told me, that Indians had been at the poor women's cabin in the night, (this while they were still on the island and before having been saved) and had given them shell-fish to eat, that was a demonstration of reality beyond all suspicion. I went immediately to be inform'd from themselves, and they both avowed it for truth, shewing the shell (the like whereof I ne'er had seen) and this I took for proof of what they said."

"The further account these women gave of the Indians, was, that they pointed to the south-east with their hands, which they knew not how to interpret, but did imagine by their several gestures, they would be with them again tomorrow. Their pointing to the south-east was like to be the time they would come, meaning nine o'clock to be their hour, where the sun will be at that time. Had the women understood their language, they could not have learned the time of the day by any other computation than pointing at the sun. It is all the clock they have for the day, as the coming and going of the Cahuncks (the geese) is their almanack or prognostic for the winter and summer seasons."

".....but if they (the Indians) came in an amicable purpose, then we would meet them unarm'd, cheerfully, which the Indians like, and hate to see a melancholy face."

"About the hours of two or three o'clock it pleased God to change the face of our condition for the best, for whilst I was busy at the fire in preparations to wait on them, the Indians, who had placed themselves behind a very great tree, discovered their faces with most cheerful smiles, without any kind of arms, or appearance of evil design; the whole number of them

(perhaps twenty or thirty in all) consisting of men, women and children; all that could speak accosting us with joyful countenances, shaking hands with every one they met. The words Ny Top, often repeated by them, made us believe they bore a friendly signification, as they were soon interpreted to signify my friend."

"After many salutations and Ny Tops interchanged, the night approaching, we fell into parley with each other; but perform's it in signs more confounded and unintelligible than any other conversation I ever met withal; as hard to be interpreted as if they had express'd their thoughts in Hebrew or Chaldean tongues."

"They did me the honour to make all applications to me, as being of the largest dimensions, and equip'd in a camlet coat glittering with galoon lace of gold and silver, it being generally true, that where knowledge informs not, the habit qualifies."

"The ears of Indian corn they gave us for present sustenance, needed no other interpreter to let them know how much more acceptable it was to us than the sight of dead and living corpses, which raised great compassion in them, especially in the women, who are observed to be of a soft tender nature."

"One of them made me a present of the leg of a swan, which I eat as privately as it was given me, and thought it so much the more excellent, by how much it was larger than the greatest limb of any fowl I ever saw."

"The Indians stayed with us about two hours, and parted not without a new appointment to see us again the next day: and the hour we were to expect them by their pointing to the sun, was to be at two o'clock in the afternoon. I made the chief of them presents of ribbon and other slight trade, which they lov'd, designing by mutual endearment, to let them see, it would gratify their interest as well as their charity, to treat us well. Ha-na Haw was their parting word, which is farewell, pointing again at the place where the sun would be at our next meeting. We took leave in their own words Ha-na Haw."

Norwood learned the following day that these Indians were subjects of the "King of Kickotamk." The one word he remembered from having "long since read Mr. Smith's travels thro' those parts of America was Werowance (a word frequently pronounced by an old man) was in English the king."

The canoe in which they were to be taken to the mainland "was very heavy for its proportion, as being made of the body of an oak or pine, some twenty-two foot in length, hollowed like a pig-trough, which is a true description of a canoe. The manner of its being put into motion is very particular; the labourers with long booms place their feet on the starboard and larboard sides of the boat, and with this fickle footing do they heave it forward."

Ashore they were first taken "to an honest fisherman's house" where fires were laid and "divers earthen pipkins were put to boil with such varieties as the season would afford." Furs and deer skins were given to them for cover during the night which they passed there. Colonel Norwood added this in regard to their overnight stay ".....our charitable hast, without the least shew of coverting any thing we had, or prospect of requital in the future, did not only treat our persons, but did also, with as much honesty, secure for us our small stores of guns, powder, &c. as if he had read and understood

the duty of the gospel, or had given his only child as a hostage to secure his dealing justly with us; so that I can never suficiently applaud the humanity of this Indian nor express the high contentment that I enjoyed in this poor man's cottage, which was nothing but mat and reeds, and bark of trees fix'd to poles."

The following morning as they proceeded to the kings house, they were stopped and caused to return, as "The good-natur'd king, being informed of our bodily weakness, and inability to walk thro' the woods to his house, on foot (which might be about four miles distant from our setting out) had a real tenderness for us, and sent canoes to carry us to the place nearest his house, by the favour of another branch of the same creek....."

"Having pass'd this new course for some three English miles in another branch of the creek, our landing place was contriv'd to be near the house of the queen then in waiting. She was a very plain lady to see to, not young, nor yet ill-favor'd. Her complexion was of a sad white: but the mearsures of beauty in those parts where they are exposed to the scorching sun from their infancy, are not taken from red and white, but from colours that will better lie upon their tawny skins, as hereafter will be seen."

"The beauty of this queen's mind (which is more permanent than that of colour) was conspicuous in her charity and generosity to us poor starved weather-beaten creatures, who were the object of it. A mat was spread without the house, upon the ground, furnished with Pone, Homini, oysters, and other things. The queen made us sit down and eat, with gestures that shewed more of courtesy than majesty, but did speak as hearty welcome as could in silence be expected: and there were the graces that, in our opinion, transcended all other beauties in the world....."

"When this collation of the queen was at an end, we took leave of her majesty with all the shews of gratitude that silence knew how to utter. We were now within half an hour's walk of the king's mansion, which we soon discovered by the smoke, and saw it was made of the same stuff with the other houses from which we had newly departed, namely, of mat and reed. Locust posts sunk in the ground at the corners and partitions, was the strength of the whole fabric. The roof was tiedfast to the body with a fort of strong rushes that grow there, which supply'd the place of nails and pins, mortises and tenants."

"The breadth of this palace was about eighteen or twenty foot, the length about twenty yards. The only furniture was several platforms for lodging, each about two yards long and more, plac'd on both sides of the house, distant from each other about five foot; the space in the middle was the chimney which had a hole in the roof over it, to receive as much of the smoke as would naturally repair to it; the rest we shared amongst us, which was the greatest part; and the sitters divided to each side, as soldiers do in their carps de garde."

"Fourteen great fires, thus situated, were burning all at once. The king's apartment had a distinction from the rest; it was twice as long, and the bank he sat on was adorn'd with deer skins finely dress'd, and the best furs of otter and beaver that the country did produce."

"The fire assigned to us was suitable to our number, to which we were conducted, without intermixture of any Indian but such as came to do us offices of friendship. There we were permitted to take our rest until the king pleased to enter into a communication with us. Previous to which he sent his daughter a well-favour'd young girl of about ten or twelve years old, with a great wooden bowl full of homini (which is the corn of that country, beat and boiled to mash). She did in a most obliging manner give me the first taste of it, which I would have handed to my next neighbor after I had eaten, but the young princess interposed her hand, and taking the bowl out of mine, delivered it to the same party I aimed to give it, and so to the rest in order. Instead of a spoon there was a well-shaped muscle-shell that accompanied the bowl."

"The linen of that country grows ready made on the branches of oak trees (or pine) the English call it moss. It is like the threads of unwhited cotton yarn ravelled, and hangs in parcels on the lower boughs, divine providence having so ordered it for the conveniency and sustenance of the deer, which is all the food they can get in times of snow. It is very soft, sweet and cleanly, and fit for the purpose of wiping clean the hands, and doing the duty of napkins."

The king had a well-developed sense of humor, as when he perceived that Norwood was discomfitted in being able to understand neither his speech nor his gestures, "he turn'd all into mirth and jollity, and never left till he made me laugh with him, tho' I knew not why." The king had received Norwood by calling him "Ny a Mutt, which is to say, My brother, and compelled me to look upon as a mighty favour." Norwood referred to the meeting as a "crotemen (so the Indians call the king's council)."

"I took that occasion to present the king with a sword and long shoulder-belt, which he received very kindly; and to witness his gracious acceptance, he threw off his Mach coat (or upper covering of skin), stood upright on his bank, and, with my aid, did accoutre his naked body with his new harness, which had no other apparel to adorn it, besides a few skins to cover his nakedness. In this dress he seem'd to be much delighted; but to me he appear'd a figure of such extraordinary shape, with sword and belt to set it off, that he needed now no other art to stir me up to laughter and mirth, than the sight of his own proper person."

"Having made this short acquaintance with the king, I took leave, and returned to my comrades. In passing the spaces betwixt fire and fire, one space amongst the rest was blinded with a traverse of mat; and by the noise I heard from thence, like the beating of hemp, I took it to be some kind of elaboratory. To satisfy a curiosity, I had to be more particularly inform'd, I edg'd close to the mat; and, by standing of tiptoe for a full discovery I saw a sight that gave me no small trouble. The same special queen (whose courtesy for our kind usage the other day, can never be enough applauded) was now employed in the hard servile labour of beating corn for the king's dinner, which raised the noise that made me thus inquisitive. I wished myself in her place for her ease: but the queens of that country do esteem it a privilege to serve their husbands in all kind of cookery, which they would be as loth to lose, as any christian queen would be to take it from them."

Another dish served to them was described as "a fort of spoon-meat, in colour and taste not unlike to almond-milk temper'd and mex'd with boiled rice. The ground still was Indian corn boiled to a pap, which they call Homini, but the ingredient which performed the milky part, was nothing but dry pokickery nuts, beaten shells and all to powder, and they are like our wal-

nuts, but thicker shell'd, and the kernel sweeter; but bing beaten in a mortar, and put into a tray, hollow'd in the middle to make place for fair water, no sooner is the water poured into the powder, but it rised again white and creamish; and after a little ferment it does partake so much of the delicate taste of the kernal of that nut, that it becomes a rarity to a miracle."

"About midnight following, the king sent to invite me to his fire." During a feast of venison, the king showed Norwood how to cook the meat, as follows: "......he broached the collop on a long skewer, thrust the sharp end into the ground (for there was no hearth but what nature made) and turning sometimes one side, sometimes the other, to the fire, it became fit in short time to be served up, had there been a dining-room of state such as that excellent king deserved."

"The rest as I had dispatch'd this midnight venison feast, and sent the rest to my comrades, the king was greatly desirous to make me comprehend, by our common dialict of signs and motions, the ingenious stratagem by which they use to take their deer in the winter season, especially when the surface of the earth is cover'd with snow. He shewed me in the first place a small leather thong, in which (said he) any kind of deer should be invited to hamper himself and lie fast ty'd on his back, until the engineer (or somebody else for him) should take quiet possession of him. I could not conceive the particular structure of this machine, so as to direct the making of it elsewhere; but thus much in the general I did understand; they would fasten a pine green branch at the end of a pole (such as hops grow upon) which should lie athwart an oak, like the pole of a turner's lath, and the green hanging dingle-dangle at the pole end, fastened by a string; it should be set at a heighth for a deer to reach, but without mounting or resting on his hinder legs, that so in pulling the branch, as at a trigger, the machine discharging, his heels are struck up to fly in the air, and there he remains on his back so straitly hamper'd, that the least child may approach to touch and take him."

Learning of the preparations being made to continue on foot to Jamestown, the king became quite concerned for their safety and eventual arrival there. He informed them that they were welcome to stay and that there was enough food for all the winter. In the face of their insistance and learning that they wished to go to the south, the king "took up a stick, with which he made divers circles by the fireside, and then holding up his finger to procure my attention, he gave to every hole a name; and it was not hard to conceive that the several holes were to supply the place of a sea-chart, shewing the situation of the most noted Indian territories that lay to the southward of Mock - otank."

"That circle that was most southerly, he called Achomack, which tho' he pronounc'd with a different accent from us, I laid hold on that word with all the demonstrations of satisfactions that I could express, giving them to understand, that was the place to which I had desire to be conducted."

"He shewed me again his stores of corn, and made such reiterated signs, by the cheerfulness of his countenance, that we should not want, whilst he had such a plenty, as made us lay aside all thoughts of stirring till he said the

word. But as oft as he look'd or pointed to the coast of Achomack, he would shake his head, with abundance of grimaces, in dislike of our design to go that way till he saw it good that we should do so. I was abundantly convinced of our folly in the resolution we were ready to take of going away without better information of the distance from Achomack, and the way that led to it; and having so frank a welcome where we were, we resolved to stay till the king should approve of our departure, which he was not able to determine till the messenger came back, that he had sent to Achomack, who, it now seemed more plainly, was dispatch'd upon my coming that place to be our home, tho' we knew it not from any cause we could rely upon, before we saw the effect."

Several days later there arrived an Englishman named Jenkin Price, accompanied by an Indian called Jack. The former told Norwood that his business was to trade for furs. "But as soon as I told him my name, and the accidents of our being there, he acknowledg'd he came under the guidance of the Kickotank Indian (which I imagin'd, but was not sure the king had sent) in quest of me and those that were left on shore, sent by the governor's order of Virginia to enquire after us, but knew not where to find us till that Indian came to his house; he gave me a large account of the ship's arrival, and the many dangers and difficulties she encountered before she could come into James River, where she ran aground, resolving there to lay her bones.....he had brought an Indian of his neighborhood with him that was very well acquainted in those parts, for our conduct back to Achomack....."

"By better acquaintance with these our deliverers, we learn'd that we were about fifty English miles from Virginia: That part of it where Jenkin did govern, was call'd Littleton's Plantation, and was the first English ground we did expect to see."

"The king was loth to let us go till the weather was better-temper'd for our bodies; but when he saw we were fully resolved and had pitch'd upon the next morning to begin our journey, he found himself much defeated in a purpose he had taken to call together all the flower of his kingdom to entertain us with a dance, to the end that nothing might be omitted on his part for our divertisement, as well as our nourishment, which his small territory could produce."

"When the good old king saw we were fully determined to be gone the next day, he desired as a pledge of my affection to him, that I would give him my camblet coat, which he vowed to wear whilst he lived for my sake; I shook hands to shew my willingness to please him in that or in any other thing he would command, and was the more willing to do my self the honour of compliance in this particular, be cause he was the first king I call to mind that had ever shew'd any inclination to wear my old cloaths."

"To the young princess, that had so signally obliged me, I presented a piece of two-penny scarlet ribbon, and a French tweezer, that I had in my pocket, which made her skip for joy, and to shew how little she fancy'd our way of carrying them concealed, she retired apart for some time, and taking out every individual piece of which it was furnish'd, she tied a snip of ribbon to each, and so came back with scissars, knives and bodkins hanging at her ears, neck and hair. The case itself was not excus'd, but bore a part of this new

dress: and to the end we might not part without leaving deep impressions of her beauty in our minds, she had prepared on her forefingers, a lick of paint on each, the colours (to my best remembrance) green and yellow, which at one motion she discharg'd on her face, beginning upon her temples, and continuing it in an oval line downwards as far as it would hold out. I could have wish'd this young princess would have contented herself with what nature had done for her, without this addition of paint (which, I thought, made her more fulsome and handsome); but I had reason to imagine the royal family were only to use this ornament exclusive of all others, for that I saw none other of her sex to set it off; and this conceit made it turn again, and appear lovely, as all things should do that are honour'd with the royal stamp."

"I was not furnish'd with any thing upon the place, fit to make a return to the two queens for the great charity they used to feed and warm me; but when I came into a place where I could be supply'd, I was not wanting that way, according to my power."

The following day they left, except for a few still too weak to make the trip and who could be sent for by boats, the date of departure is not indicated. They arrived at Jamestown about the middle of February, 1650.

EDITORS NOTE

We are greatly indebted to Mr.C.L.W.STEIN for his laboriown reading and extracting pert inent paragraphs from the original book which was printed in with old-fashioned type in 1732

A MYSTERY ARTIFACT FROM GRAVELLY BRANCH

By
Francis LEWIS

On December 26, 1970, at a point where Gravelly Branch, (Sussex County, Delaware) of the Nanticoke River, branches off into its various small watershed tributaries I came upon a very peculiar artifact. This artifact was found upon a sandy knoll, not far from Farmington, Delaware.

After examining it, I decided it was of historical interest. With this in mind, it was taken to the Smithsonian Institution, Washington, D. C.

The expert on Indian affairs at this place could not help me very much. He did say it might be blasting powder used to blast rocks open for easy handling. This I knew was not so as the hole was much too small and shallow.

This artifact has a width of two inches and breadth of 3/4 inch (this is based upon the assumption the other two sides are the same as the known sides). If this is true, then it would have to be retangular in its across dimension.. The stone has a depth over all of two and one half inches. The hole that has been bored in the stone is two inches deep and the diameter across the hole is ½ inch.

The picture of the artifact is enlarged not quite 2.8 times the original, as found.

Under a magnifying glass the stone appears to be of a basaltic nature; a blackish stone with tiny specks of titanium ferric oxides. These specks can be seen in the picture.

As to the method of drilling the hole, it appears not to have been drilled by either a stone drill or by reed sand and water.

The reason it was not drilled by a drill point, there is much to small a flange on the stone where drilling started. The reason it would not have been by reed is the rounded effect at the bottom of the hole. Question: How was it drilled?

The substance in the bottom of the hole is of a hardened yellow color. I thought that if I could only know what this substance was I would have a clue as to the identity of the object and its use. I did not want to extract this material in the stone for a chemical analysis, for to do so would destroy the historical value of it.

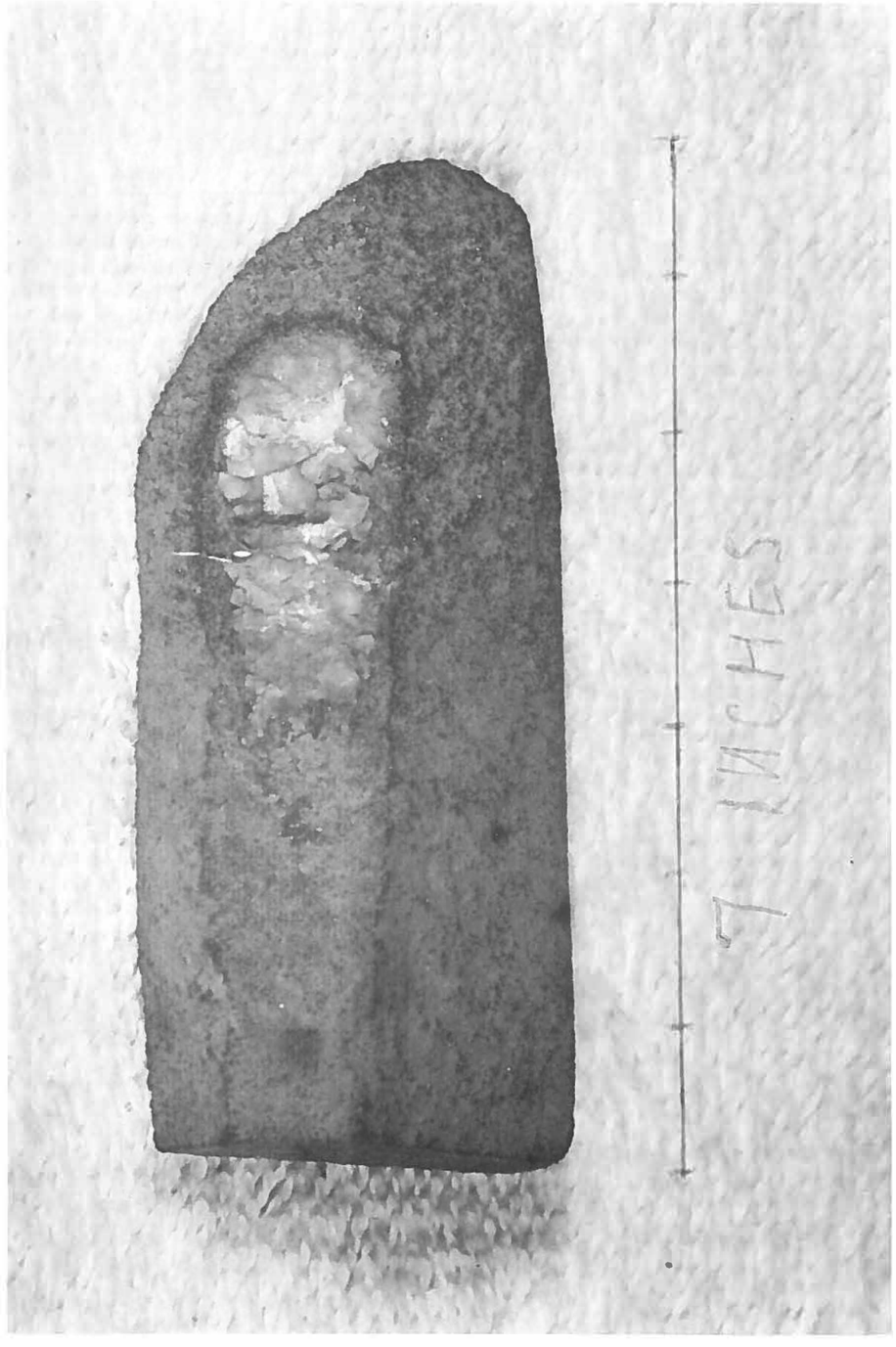
After thinking of all the natural substances that were yellow, it did occur to me that it definitely had a sulphur look. After igniting a very small portion, the acid fumes of sulphur hit my nostrils. Whether the sulphur was distilled and condensed out of our native clays, or was imported into this area, I do not know.

What was this artifact with the hardened sulphur in the bottom of the hole used for? Could it be a part of an Indian medicene man's kit or the historical miracle fire used in many Indian ceremonies?

Not 100 feet away from where I found this artifact, I found a beautiful stone hoe chipped on three sides to obtain an edge. It appears to be of basaltic compostion, without specks of titanium and iron.

If I have raised more questions than answered, you will forgive me.

(See Next page for illustration)



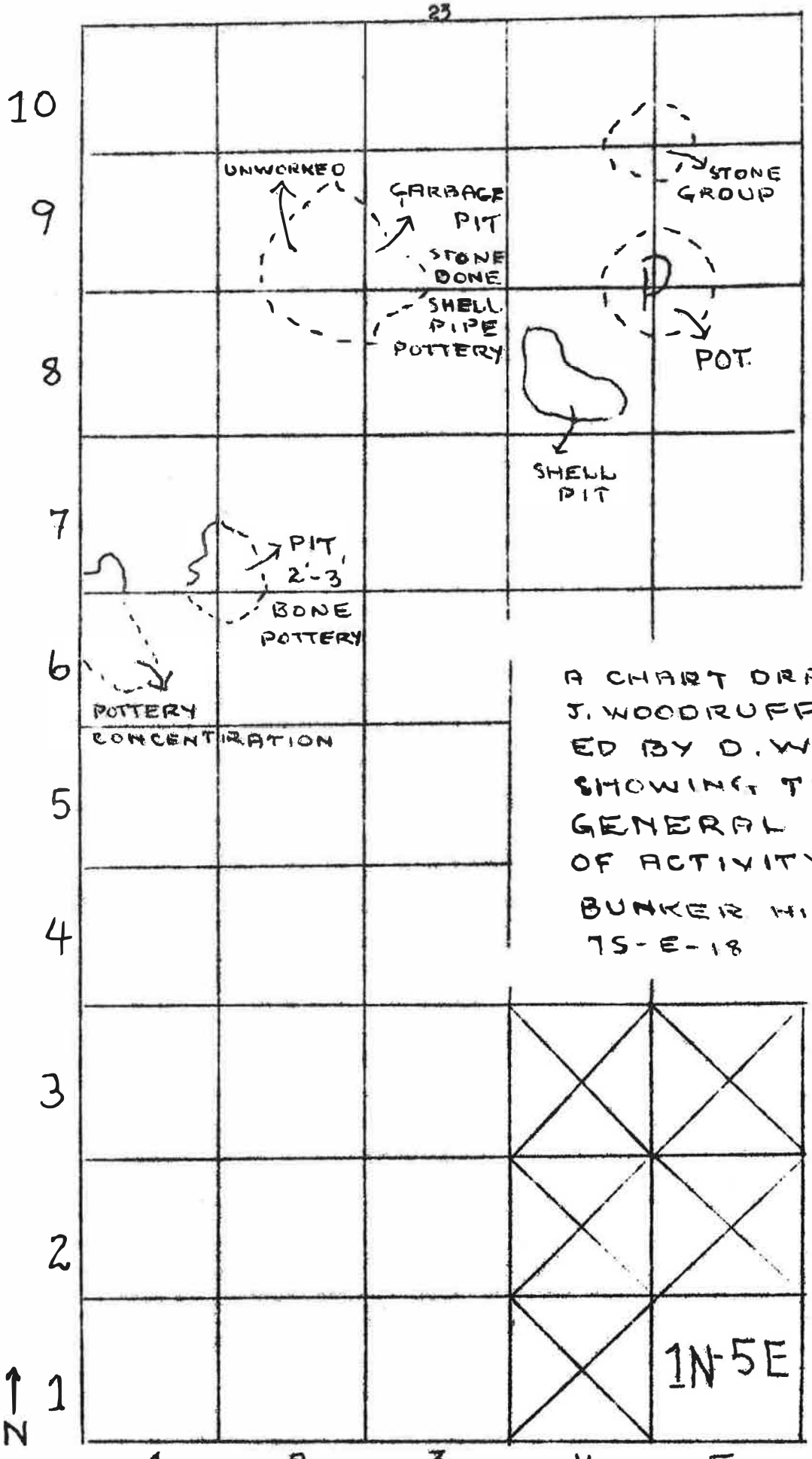
PRELIMINARY REPORT - BUNKER HILL SITE

by Madeline Arnold Dunn

In August, 1971 Donald L. Walls, senior and chairman of the Seaford Senior High School Archaeological Society, found a land area later to be designated as the Bunker Hill Site 7S-E-18. Immediate contact was made with the Delaware Archaeological Board. This site is about 150 foot triangular plot of ground newly cleared with no cultivation in the sandy, well-drained soil. This fifteen foot bluff overlooking the Nanticoke River is located on the Concord Road near Blades, Delaware. The property is owned by Mr. Edward Sellers of Blades who cooperated most willingly in giving permission for further excavation procedures which continued through the mild winter months by the founder, the assistant chairman, John F. Woodruff and other society members. State Archaeologist, Mr. Ronald Thomas and members of his staff gave guidance and encouragement and loaned equipment used in excavating. The name for the site was selected after research indicated that this area was formerly referred to by this name some years ago.

Hundreds of artifacts were found. Surface collections were made in a controlled manner; the area excavated was carefully mapped. The top soil was removed and sifted. No features were found probably due to previous disturbance. Artifacts found included small animal bones, oyster shells -- some pierced indicating that they might have been used as pendants, pipe fragments, stone artifacts mostly of jasper or quartz consisting of projectile points, flaking tools, scraping tools, knives, drills, chips and flakes. Ceramics included both body sherds and rim sherds shell tempered, sand tempered and some untempered. Some body sherds of rounded basal proportions were found as well as highly decorated rim sherds. Restorations of sherds have been attempted with one pot having an opening of about nine inches. There are indications of affinity with The Townsend Series*. It is possible that this site dates back to 900 AD to the Late Woodland Stage of the American Indian. However, a more conclusive report can be made at a later date when Donald Walls and John Woodruff have been able to continue the study of the artifacts and have made laboratory analysis.

*Omwake, H. G. and T. D. Stewart, Editors
1963 "The Townsend Site Near Lewes, Delaware", The Archeolog, Vol. XV, No. 1

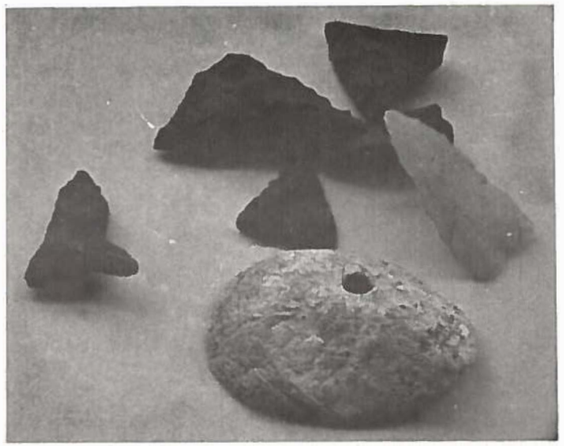


A CHART DRAWN BY J. WOODRUFF, ASSISTED BY D. WALLS, SHOWING THE GENERAL AREA OF ACTIVITY.

BUNKER HILL SITE
7S-E-18

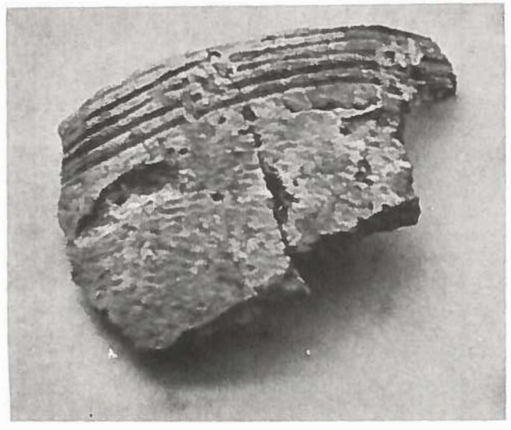
W.W.

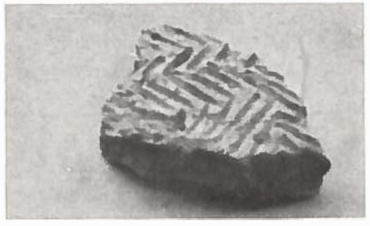
BUNKER HILL SITE ---- 78-3-18



Stone points & Drilled Shell

Trade Pipe





Shell tempered, Cord marked, Incised Pottery